

## Preliminary Determination Summary

Lyondell Chemical Company  
Permit Numbers 4121 and N282

### I. Applicant

Lyondell Chemical Company  
PO Box 777  
Channelview, TX 77530-0777

### II. Project Location

Channelview Facility  
2502 Sheldon Rd  
Harris County  
Channelview, Texas 77530

### III. Project Description

Lyondell submitted an amendment to modify the operation of the existing flare to meet future regulatory requirements. Additional natural gas is required to meet the anticipated operating limit to maintain a net heating value of the flare combustion zone gas (NHVcz) at or above 270 Btu/scf. The site anticipates future requirements for the combustion zone that match the limits currently identified in 40 CFR 63 Subpart CC. No changes to the operation of the process unit or process vent controlled by the flare are being made with this project. All increases of VOC emissions will result from the minimal non-methane and non-ethane organics present in the imported natural gas supply. Additionally, the application identifies the SO<sub>2</sub> increases resulting from the minimal sulfur present in the natural gas. No increases in emissions from maintenance, startup, and shutdown (MSS) activities are included in this project.

### IV. Emissions

Air Contaminant	Proposed Allowable Emission Rates (tpy)
VOC	98.12
NO <sub>x</sub>	25.79
SO <sub>2</sub>	2.67
CO	131.02

### V. Federal Applicability

The following chart illustrates the annual project emissions for each pollutant and whether this pollutant triggers PSD or Nonattainment (NA) review.

Preliminary Determination Summary

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Pollutant	Project Emissions (tpy)	Major Mod Trigger (tpy)	NA Triggered Y/N	PSD Triggered Y/N
VOC	0.67	25 for NA 40 for PSD	N	N
NO <sub>x</sub>	6.06	25 for NA 40 for PSD	Y	N
SO <sub>2</sub>	1.75	40	N/A	N
CO	43.71	100	N/A	N

The site is located in Harris County, which has been designated as a serious nonattainment area for ozone. The Channelview Complex is an existing major source of VOC and NO<sub>x</sub>, and the project will result in a significant net increase of NO<sub>x</sub>.

The Channelview Facility is a named source. The site is located in an attainment area for at least one pollutant, and is an existing major stationary source. The project emission increases are below the applicable significant significance threshold in 40 CFR § 52.21(b)(23)(i) for VOC, SO<sub>2</sub>, and CO. PSD BACT and air quality analysis (AQA) requirements do not apply.

Pollutant	Project Increase (tpy) <sup>1</sup>	NA Netting Trigger (tpy)	PSD Netting Trigger (tpy)	Netting Required Y/N	Net Emission Change (tpy) <sup>2</sup>	Major Mod Trigger (tpy)	PSD Triggered Y/N	NA Triggered Y/N
VOC <sup>3</sup>	0.67	5	40	N	N/A	25	N	N
NO <sub>x</sub> <sup>3,4</sup>	6.06	5	40	Y	105.43	25	N	Y
SO <sub>2</sub> <sup>4</sup>	1.75	N/A	40	N	N/A	40	N	N
CO	43.71	N/A	100	N	N/A	100	N	N

<sup>1</sup> Project Increases: Comparison of Baseline Actual to PTE (or Projected Actual) Increases only

<sup>2</sup> Net Emissions: Baseline Actual to PTE (or Projected Actual) for the project currently under review, Baseline Actual to PTE for all other increases and decreases within netting window.

- 3 Ozone precursor. Either pollutant precursor can trigger BACT/LAER and impacts analysis, as applicable.
- 4 PM<sub>2.5</sub> precursor. Not used to trigger PM<sub>2.5</sub> BACT/LAER or impacts analysis at this time.

## VI. Control Technology Review

A control technology review is required for all new and modified sources. The following controls required by the permits satisfy LAER for emissions of NO<sub>x</sub>, based on a review of recently issued permits from Texas and other states, and consideration of RACT/BACT/LAER Clearinghouse (RBLC) data provided by the applicant.

### Flare

The flare is designed to meet the requirements of 40 CFR Part 60.18 and to achieve a VOC compound destruction efficiency of 99% for compounds with up to three carbons, and 98% for compounds with four or more carbon atoms. The flare is equipped with a continuous flow monitor and composition analyzer.

## VII. Air Quality Analysis

The air quality analysis (AQA) is acceptable for all review types and pollutants. The results are summarized below.

### A. Minor Source NSR and Air Toxics Review

**Table 1. Project-Related Modeling Results for State Property Line**

Pollutant	Averaging Time	GLC <sub>max</sub> (µg/m <sup>3</sup> )	De Minimis (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	1.43	14.3

**Table 2. Modeling Results for Minor NSR De Minimis**

Pollutant	Averaging Time	GLC <sub>max</sub> (µg/m <sup>3</sup> )	De Minimis (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	1.43	7.8
SO <sub>2</sub>	3-hr	1.29	25
SO <sub>2</sub>	24-hr	0.57	5
SO <sub>2</sub>	Annual	0.11	1

Pollutant	Averaging Time	GLC <sub>max</sub> (µg/m <sup>3</sup> )	De Minimis (µg/m <sup>3</sup> )
NO <sub>2</sub>	1-hr	4.46	7.5
NO <sub>2</sub>	Annual	0.36	1
CO	1-hr	35.76	2,000
CO	8-hr	25.03	500

The GLC<sub>max</sub> are the maximum predicted concentration associated with one year of meteorological data.

The justification for selecting the EPA's interim 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> De Minimis levels was based on the assumptions underlying EPA's development of the 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> De Minimis levels. As explained in EPA guidance memoranda<sup>1,2</sup>, the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> NAAQS.

### VIII. Offsets

The site is located in Harris County, which has been designated as a serious nonattainment area for ozone. The Channelview Facility is an existing major source of VOC and NO<sub>x</sub>, and the project will result in a significant net increase of NO<sub>x</sub>.

When issued, the permit requires that the permit holder offset the project emission increase for facilities authorized by this permit prior to the commencement of operation, through participation in the TCEQ Emission Banking and Trading (EBT) Program in accordance with the rules in 30 TAC Chapter 101, Subchapter H.

The permit holder shall use 7.3 tpy of NO<sub>x</sub> credits to offset the 6.1 tpy NO<sub>x</sub> project emissions increase for the facilities authorized by this permit at a ratio of 1.2 to 1.0.

Prior to the commencement of operation, the permit holder is required to obtain approval from the TCEQ EBT Program for the credits being used and then

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<sup>1</sup> [www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf](http://www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf)

<sup>2</sup> [www.tceq.texas.gov/assets/public/permitting/air/memos/guidance\\_1hr\\_no2naaqs.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf)



submit a permit alteration or amendment request to the TCEQ Air Permits Division (and copy the TCEQ Regional Office) to identify approved credits by TCEQ credit certificate number.

**IX. Alternative Site Analysis and Compliance Certification**

The applicant has submitted the required demonstration relating to consideration of alternative sites and Clean Air Act compliance status for sites owned or operated by the applicant (or by any entity controlling, controlled by, or under common control with the applicant). The analysis demonstrated that the benefits of the proposed location and source configuration significantly outweigh the environmental and social costs of that location.

**X. Conclusion**

As described above, the applicant has demonstrated that the project meets all applicable rules, regulations and requirements of the Texas and Federal Clean Air Acts. The Executive Director's preliminary determination is that the permits should be issued.

## Special Conditions

Permit Numbers 4121 and N282

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating requirements specified in the Special Conditions of this permit.
2. The flare system, consisting of a continuous flare and an emergency flare, shall be designed and operated in accordance with the following requirements:
  - A. The flare system shall be designed such that the combined assist natural gas and waste stream to each flare meets the 40 CFR § 63.11 specifications of minimum heating value and maximum tip velocity under normal, upset, and maintenance flow conditions.

The heating value and velocity requirements shall be satisfied during operations authorized by this permit. Flare testing may be requested by the appropriate regional office to demonstrate compliance with these requirements.
  - B. The flare system shall be operated with a flame present at all times and have a constant pilot flame. The pilot flame shall be continuously monitored by a thermocouple or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with the manufacturer's specifications and recommendations.
  - C. The continuous flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. This shall be ensured by the use of steam assist to the continuous flare.
  - D. The permit holder shall install a continuous flow monitor system and an analyzer system that provide a record of the vent stream flow and composition (total VOC or Btu content) to the continuous flare. The flow monitor system and analyzer system sample points should be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed. Readings shall be taken at least once every 15 minutes and the average block hourly values of the flow and composition shall be recorded each hour. Emergency flare emissions may be determined by the use of process knowledge and/or process unit data.

The flow monitor system shall be calibrated on an annual basis to meet the following accuracy specifications: the flow monitor shall be  $\pm 5.0\%$ , temperature monitor shall be  $\pm 2.0\%$  at absolute temperature, and pressure monitor shall be  $\pm 5.0$  mm Hg.

The analyzer system (calorimeter or composition analyzer) shall be calibrated, installed, operated, and maintained, in accordance with manufacturer recommendations, to continuously measure and record the net heating value of the gas sent to the continuous flare, in British thermal units/standard cubic foot of the gas.

The flow monitor system and analyzer system shall operate as required by this section at least 95% of the time when the continuous flare is operational, averaged over a 12-month calendar period.

Records of each hourly average shall be maintained on a two years rolling basis and be made available to the TCEQ staff or representatives of any local air pollution control program having jurisdiction.
  - E. The flare (EPN EFL60731) shall operate in accordance with the 40 CFR 63 Subpart YY "National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable

Control Technology Standards Residual Risk and Technology Review for Ethylene Production” signed by the EPA Administrator as a final rule on March 12, 2020, the subsequently promulgated final version of that subpart, and Alternate Method of Control (AMOC) No. 158 issued May 12, 2020. Compliance with the requirements of this paragraph shall begin December 31, 2020 and occur as otherwise specified in the AMOC. Prior to the compliance requirements and schedule of this paragraph, Special Condition Nos. 2.A through 2.D shall apply. **(TBD)**

3. In lieu of flare testing in Special Condition No. 2A, the heating value and velocity requirements contained in the EPA’s letter referenced “Request for Waiver of Flare Performance Testing” dated December 17, 2003, may be satisfied during operations authorized by this permit.
4. The following requirements apply to organic compound waste gas capture systems serving the continuous flare.
  - A. Perform one of the following requirements:
    - (1) Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or
    - (2) Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.
  - B. If there is a bypass for the control device, comply with either of the following requirements:
    - (1) Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
    - (2) Once a month, inspect the valves, verifying that the position of the valves and the condition of the car seals prevent flow out the bypass.

A bypass does not include authorized analyzer vents, highpoint bleeder vents, low point drains, or rupture discs upstream of pressure relief valves if the pressure between the disc and relief valve is monitored and recorded at least weekly. A deviation shall be reported if the monitoring or inspections indicate bypass of the control device when it is required to be in service. **(TBD)**
  - C. Records of the inspections required shall be maintained and if the results of any of the above inspections are not satisfactory, the permit holder shall promptly take necessary corrective action.
5. Fuel for the flare system shall be either sweet natural gas or low sulfur fuel gas containing no more than 5 grains total sulfur and 0.25 grain hydrogen sulfide per 100 dry standard cubic feet. Use of any other fuel will require prior approval of the Executive Director of the TCEQ.
6. The permit holder shall keep a copy of this permit at the plant site and shall make it available to the TCEQ staff and representatives of any local program having jurisdiction.

## Offsets

7. This Nonattainment New Source Review (NNSR) permit is issued/approved based on the requirement that the permit holder offset the project emission increase for facilities authorized by this permit prior to the commencement of operation, through participation in the TCEQ Emission Banking and Trading (EBT) Program in accordance with the rules in 30 TAC Chapter 101, Subchapter H.
  - A. The permit holder shall use 7.3 tpy of NO<sub>x</sub> credits to offset the 6.1 tpy NO<sub>x</sub> project emission increase for the facilities authorized by this permit at a ratio of 1.2 to 1.0
  - B. Prior to the commencement of operation, the permit holder shall obtain approval from the TCEQ EBT Program for the credits being used and then submit a permit alteration or amendment request to the TCEQ Air Permits Division (and copy the TCEQ Regional Office) to identify approved credits by TCEQ credit certificate number.

Date: TBD

Emission Sources - Maximum Allowable Emission Rates

Permit Number 4121 and N282

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
EFL60730	Emergency Flare (pilot flame emissions)	CO	0.11	0.50
		NO <sub>x</sub>	0.02	0.10
		VOC	0.01	0.01
		SO <sub>2</sub>	0.01	0.02
EFL60731	Continuous Flare	CO	365.70	174.23
		NO <sub>x</sub>	50.65	31.75
		VOC	437.99	98.23
		SO <sub>2</sub>	4.44	4.40

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) CO                      - carbon monoxide
- NO<sub>x</sub>                 - total oxides of nitrogen
- VOC                 - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- SO<sub>2</sub>                 - sulfur dioxide
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.

Date: \_\_\_\_\_ TBD \_\_\_\_\_



November 8, 2019

**Certified Mail #7015 0640 0002 0784 8415**  
**EPERMITTS 332856**

Air Permits Review Division  
Air Permits Initial Review Team - MC 161  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, TX 78711-3087

Re: Lyondell Chemical Company - Lyondell Chemical Channelview  
TCEQ Air Quality Permits No. 4121  
Permit Amendment Application  
Channelview, Texas Harris County  
TCEQ Account ID No. HG-1575-W; RN 100633650; CN 600344402

Lyondell Chemical (Lyondell) operates the Propylene Oxide/Styrene Monomer 1 (POSMI) Unit flare under Texas Commission on Environmental Quality (TCEQ) Air Quality Permit No. 4121. Lyondell requests the amendment of this permit to update emissions from the Unit Flare.

A hard copy with the original signature of the NSR Workbook General sheet, as well, as, copies of the supporting documentation submitted through STEERS is included in this document. Required TCEQ Forms in the NSR Workbook and air dispersion modeling documentation in the EMEW Workbook have been submitted electronically. Relevant documents including emissions details, process description, flow diagrams, BACT and/or LAER analysis, area map, plot plan are included in this application submittal to assist in TCEQ's review. Lyondell is requesting this application review be expedited and is sending the Surcharge Form under separate cover letter to the Cashier's Office. The amendment application fees are sent via wire transfer. If you have any questions regarding this application submittal, please contact Teresa Peneguy at (281) 452-8330.

Sincerely,

Tom Warnement  
Environmental Team Leader – Air

Enclosure

cc: Director  
Harris County Pollution Control Services  
101 South Richey, Suite H  
Pasadena, TX 77506  
Certified Mail #7015 0640 0002 0784 8422

TCEQ Region 12  
~~submitted via STEERS~~  
7015 0640 0002 0784 8620  
U.S. EPA  
R6AirPermitsTX@EPA.gov

**NEW SOURCE REVIEW PERMIT  
AMENDMENT APPLICATION**

**Permit No. 4121**

**Submitted by:**

**Lyondell Chemical - Channelview**

**TCEQ Account Number HG-1575-W**

**Submitted to:**

**Texas Commission on Environmental Quality (TCEQ)  
Air Permits Initial Review Team (APIRT)  
Air Permits Division, MC-161  
P.O. Box 13087  
Austin, Texas 78711-3087**

**November 2019**

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# SECTION 1 INTRODUCTION

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Lyondell Chemical (Lyondell) operates a Propylene Oxide/Styrene Monomer Production (POSM1) Unit flare under Texas Commission on Environmental Quality (TCEQ) Air Quality Permit No. 4121.

## 1.1 Purpose

Lyondell requests the amend Air Quality Permit No. 4121, and is submitting this application as required under 30 TAC 116.111. Lyondell is modifying the operation of the existing flare to meet future regulatory requirements. Additional natural gas is required to meet the anticipated operating limit to maintain a net heating value of the flare combustion zone gas (NHVcz) at or above 270 British thermal units per standard cubic feet (Btu/scf). The site anticipates future requirements for the combustion zone that match the limits currently identified in 40 CFR 63 Subpart CC. No changes to the operation of the process unit or process vent controlled by the flare are being made with this project. All increases of volatile organic compounds (VOC) emissions will result from the minimal non-methane and non-ethane organics present in the imported natural gas supply. Additionally, the application identifies the sulfur dioxide (SO<sub>2</sub>) increases resulting from the minimal sulfur present in the natural gas. The combustion products oxides of nitrogen (NO<sub>x</sub>) and carbon monoxide (CO) that will be generated from the combustion of the additional natural gas are included in the emissions calculations.

The calculations and representations used in this permit amendment are based on best available estimates and should not be considered absolute values for all operating scenarios.

## 1.2 Permit History

Lyondell currently operates the POSM1 Unit flare at their Channelview, Texas manufacturing complex under TCEQ Air Permit No. 4121.

The permit was initially issued in February 1979 for POSMI Unit flare system. The permit was last renewed on August 5, 2016.

## 1.3 Facility Information

The project described in this application includes emissions related to the Propylene Oxide/Styrene Monomer 1 Production unit at the Lyondell Channelview Facility. The regulated entity number for the facility is RN100633650. The Channelview Facility includes multiple process units; however, only the POSM1 Unit flare is affected by this amendment. The Lyondell Channelview Facility is located on Sheldon Road, Channelview, TX. All units operate under a single Federal Operating Permit, Permit No. O1387.

Figure 1.1 shows the location of the Channelview Facility on the Area Map. A detailed plot plan of the Facility showing the estimated locations of emissions units at the site is also provided in Figure 1.2.

#### 1.4 PSD and Non-attainment Review

The Prevention of Significant Deterioration (PSD) regulations define a “major modification” as a physical change or a change in the method of operation of a major stationary source that would result in a significant emissions increase and a contemporaneous significant net emissions increase of any regulated pollutant. The project is not a major modification and is not subject to PSD or Non-attainment review for VOC, Carbon Monoxide CO, or Green House Gases (GHG). The project is a major modification for NOx and the associated Table 2F is included in Appendix A.

**Table 1-1 PSD and NNSR Review**

Contaminants	Emissions Increases	PSD Applicability		Non- Attainment Applicability	
		Limit	Netting?	Limit	Netting?
VOC	0.67	40	No	5	No
SO2	1.75	40	No		
CO	43.71	40	No		
NOx	6.06	100	No	5	Yes

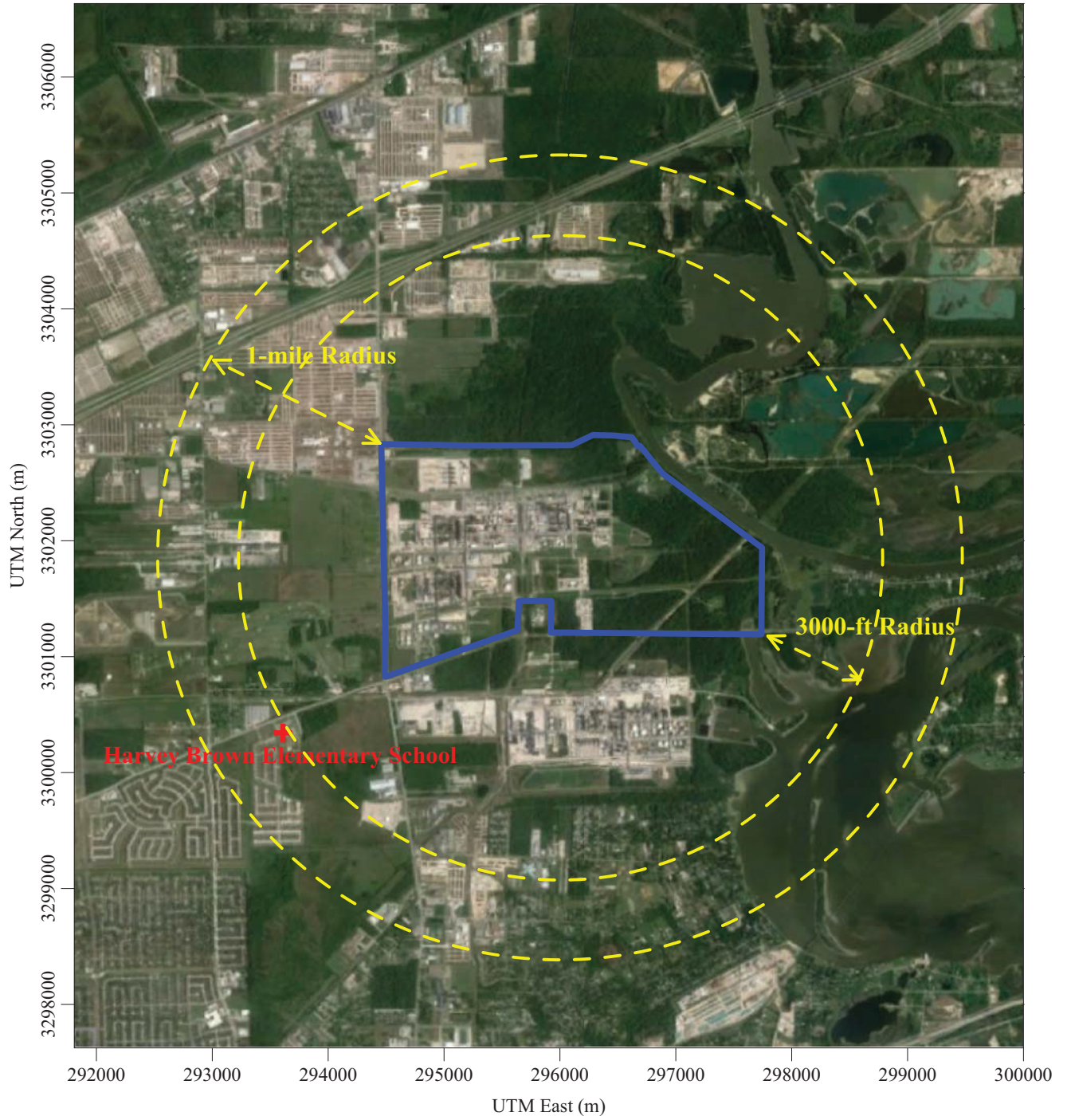
## 1.5 Application Contents

Key components of this application are organized as follows:

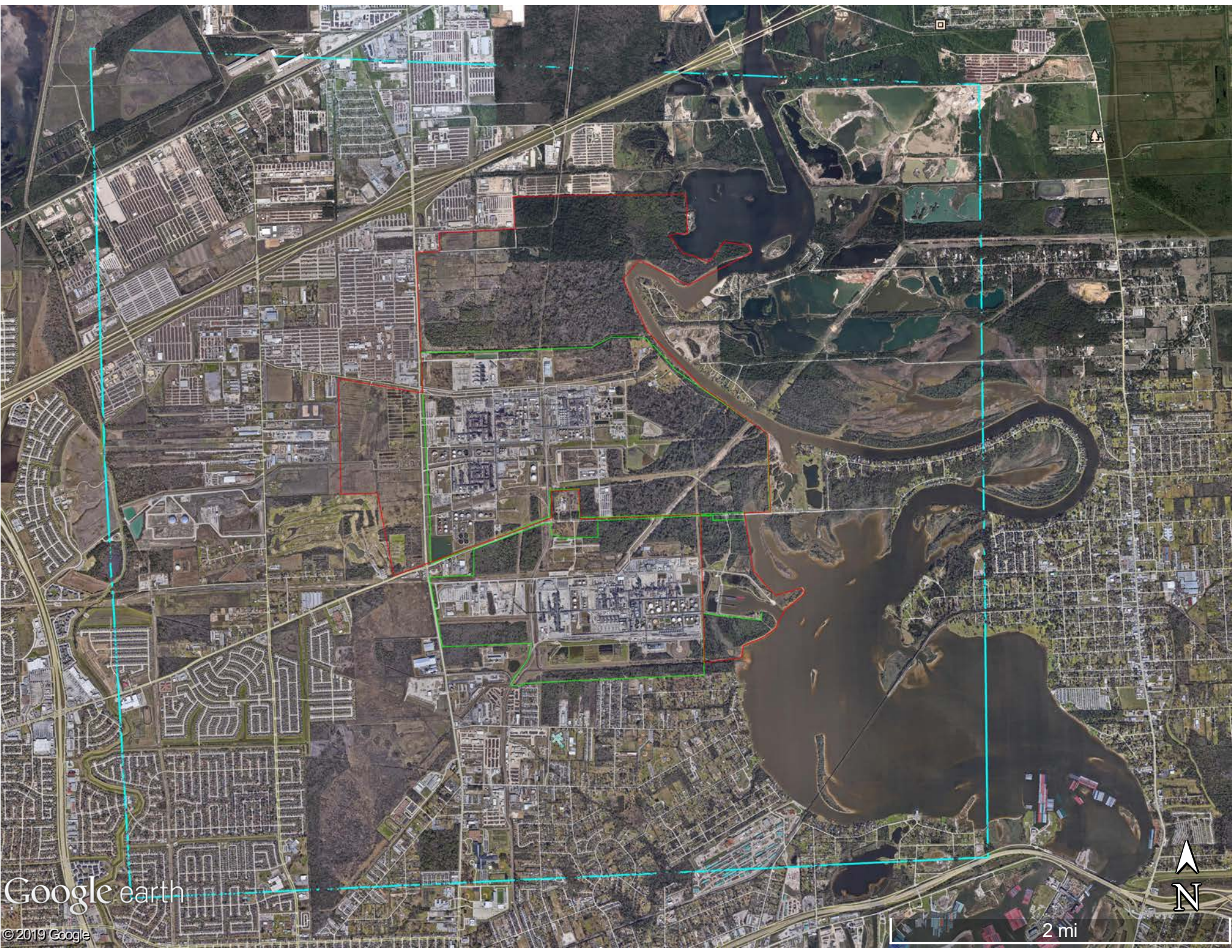
- An area map and a plot plan are provided at the end of Section 1.
- A process description and process flow diagram are included in Section 2.
- Emissions calculations methodologies are included in Section 3.
- Best Available Control Technology (BACT) and Lowest Achievable Emissions Limit (LAER) are addressed in Section 4.
- Regulatory applicability and compliance strategies are addressed in Section 5.
- Appendix A contains completed TCEQ administrative forms, PI-1 signature page from the NSR Workbook and the Expedited Permit Request Form APD-EXP
- Appendix B contains TCEQ Table 2F Project Emissions Increases.
- Appendix C contains emission rate calculations for all Emissions Points.

Figure 1-1  
Area Map

**Figure 1-1 Area Map**  
**Equistar Chemicals, L.P. - Channelview**







Google earth

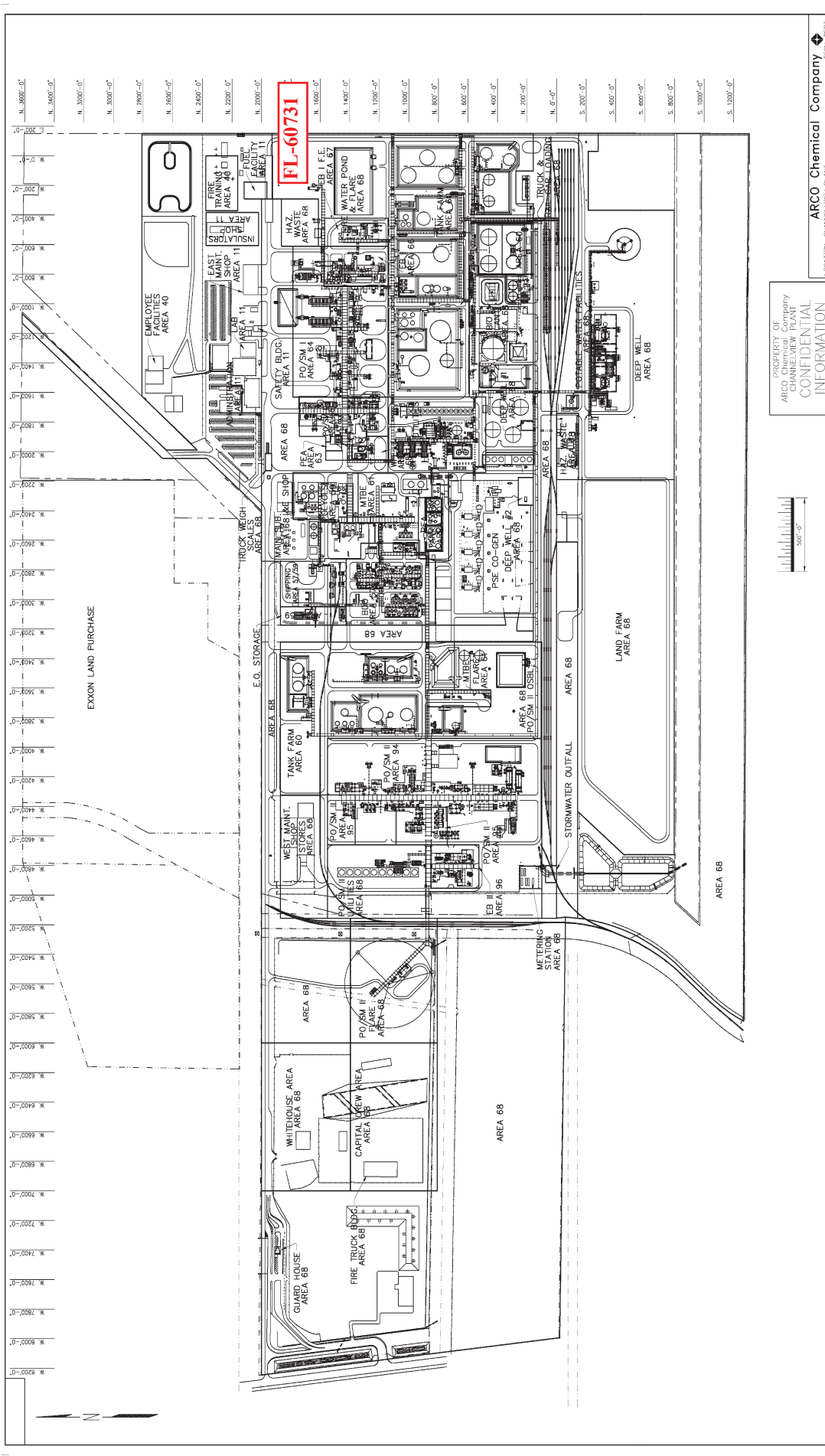
© 2019 Google



2 mi



Figure 1-2  
Plot Plan



**ARCO Chemical Company**

LOCATION: CHANNELVIEW PLANT

TECH. DEPT.

PROPERTY OF ARCO CHEMICAL COMPANY  
CHANNELVIEW PLANT  
CONFIDENTIAL INFORMATION

PLOT PLAN  
OVERALL PLANT FACILITIES

D-34-L-0101: REV FCBT P&M

DATE: 4/27/04

SCALE: 1"=100'-0"

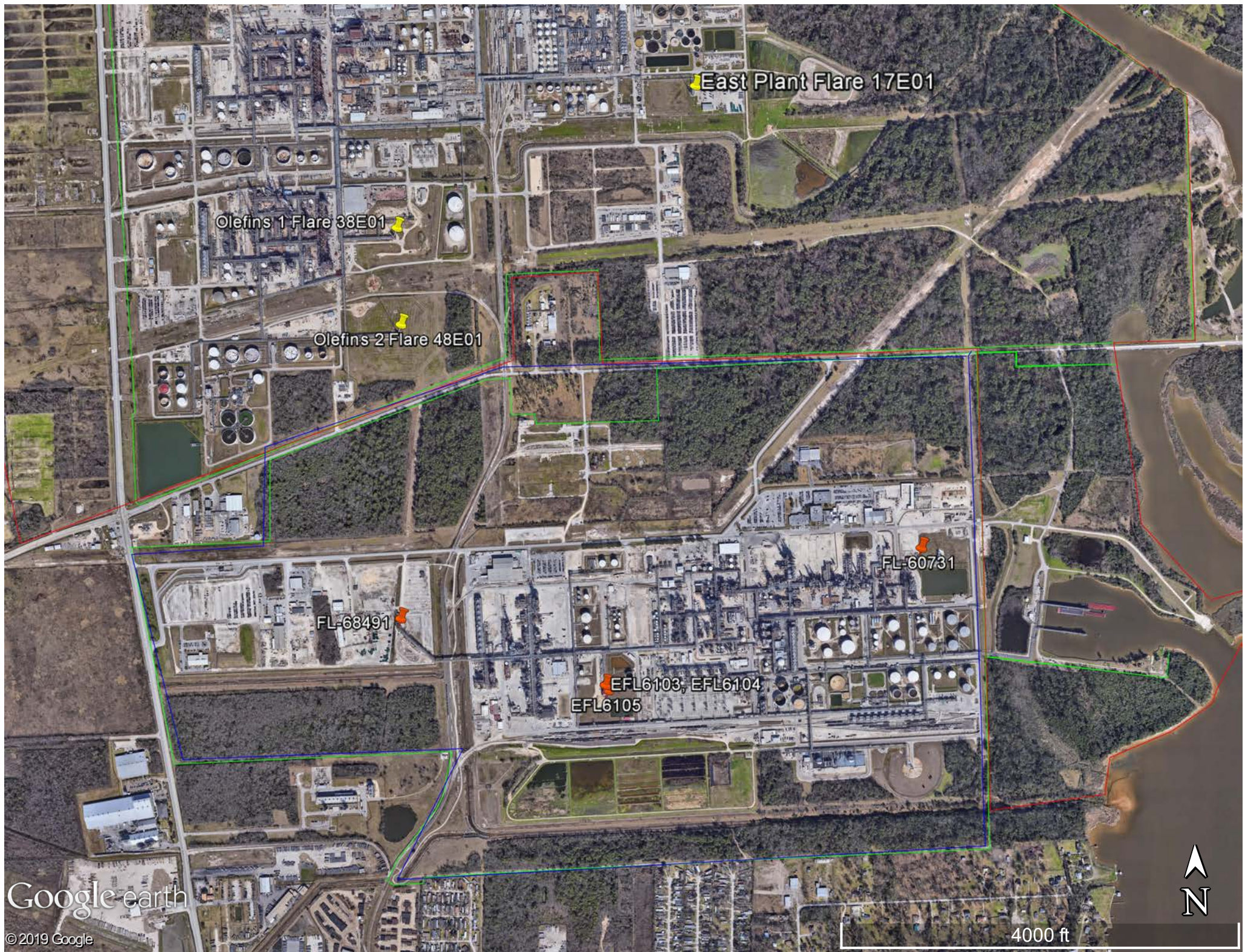
DRAWING NUMBER: D 34 L 0101

REV

NO.	DATE	BY	CHKD.	APP.	DESCRIPTION
1	4/27/04				ISSUED FOR CONSTRUCTION
2	5/17/04				ISSUED FOR CONSTRUCTION
3	4/27/04				ISSUED FOR CONSTRUCTION

NOTES:





East Plant Flare 17E01

Olefins 1 Flare 38E01

Olefins 2 Flare 48E01

FL-60731

FL-68491

EFL6103, EFL6104  
EFL6105

Google earth

© 2019 Google



4000 ft



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## SECTION 2 PROCESS DESCRIPTION

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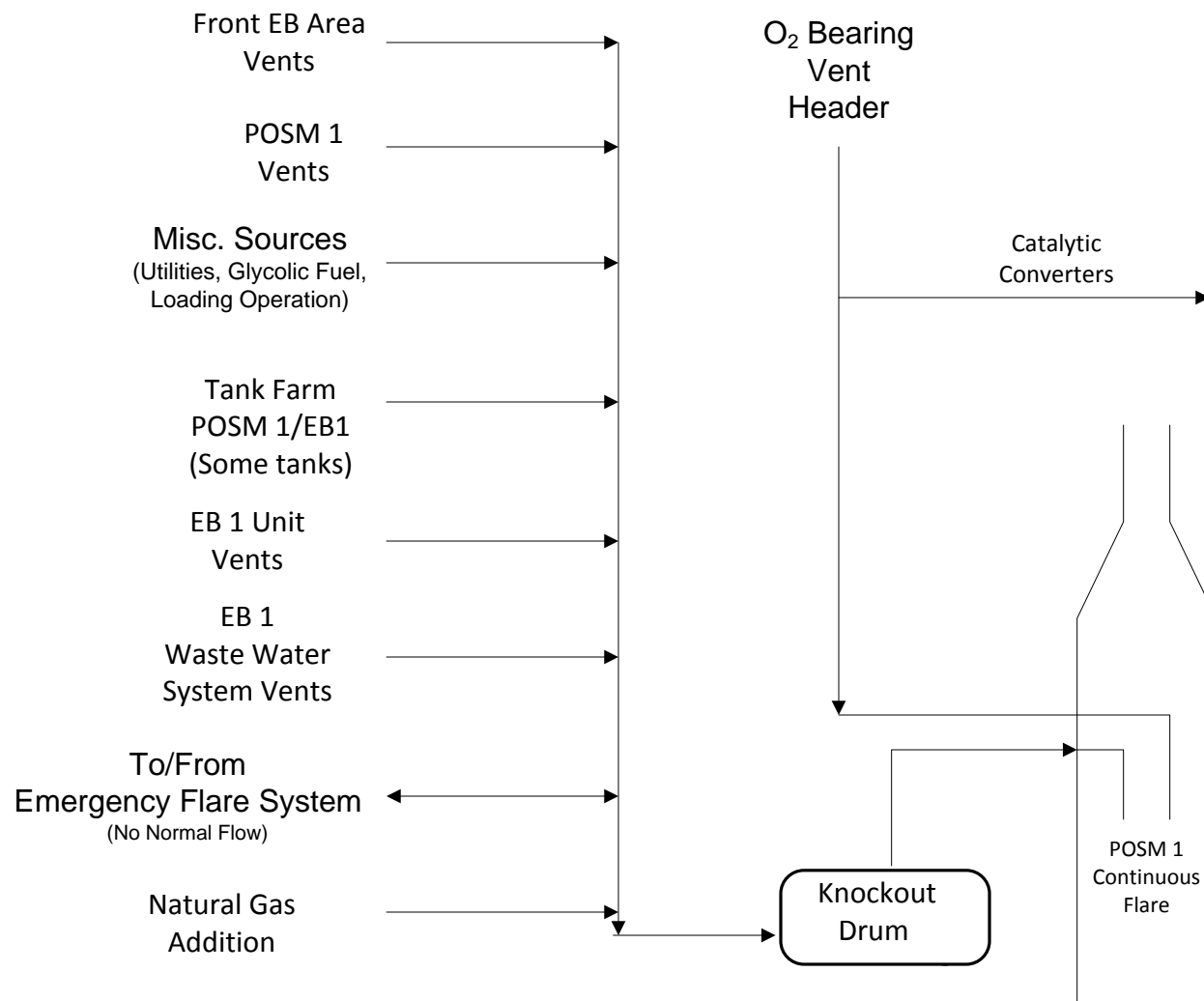
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### 2.1 Process Description

The POSM I/EB flare system consists of steam-assisted continuous and emergency flares used to control vent gases from both the POSM I Unit and the EB Unit. The POSM I Unit is authorized under TCEQ permit No. 2993 and the EB Unit is authorized under TCEQ permit No. 3346. The streams from these production units are routed to the flare system via the continuous flare header and the combined oxygen bearing vent header. In addition to these streams, several other streams tie into the flare system at the continuous flare header. Miscellaneous sources from utilities, loading, tank farm operations, POSM II and purchased natural gas may be routed to the continuous flare header. An emergency flare system vent line is also connected to the continuous flare header and is used only during emergencies and upset events.

Figure 2-1  
POSM1 Unit Flare System Flow Diagram

# Figure 2-1: Flare System Process Flow Diagram



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## SECTION 3

# EMISSION CALCULATION METHODOLOGY

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This section describes the methodology used to calculate Potential-to-Emit (PTE) emissions from the sources affected by this project using BACT level controls. Emissions calculations are being provided electronically per TCEQ guidance.

### 3.1 Flare Emissions

The VOC emissions are estimated based on natural gas flow and the emission factor in EPA AP-42 for the combustion of natural gas. The flare is designed to ensure that the flare maintains compliance with NSR Permit No. 4121 and with applicable NSPS and State regulations when in use. NO<sub>x</sub> and CO emissions are estimated using emissions factors provided in TCEQ publication RG-360A/11, Appendix A: Technical Supplement, Table A-6, “Air Permit Flare Emissions Factors,” revised February 2012. The unit operates a steam-assist flare to control vents from the process unit.

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**SECTION 4**

**BEST AVAILABLE CONTROL TECHNOLOGY AND  
LOWEST ACHIEVABLE EMISSION REDUCTION**

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In accordance with 30 TAC Chapter 116, §116.111(a)(2)(C), any new or modified facility must utilize BACT, with consideration given to the technical practicability and economic reasonableness of reducing or eliminating the emissions from the facility. Below is a BACT and LAER evaluation of the POSM1 Unit flare.

**4.1 Flare**

The flare meets at least 98% destruction efficiency for organic compounds, which meets BACT. The emission factors for NO<sub>x</sub> and CO emissions from a high BTU steam-assisted flare were used and meet BACT for CO and LAER for NO<sub>x</sub>.

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## SECTION 5

# REGULATORY APPLICABILITY

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Pursuant to TCEQ 30 TAC §116.111, Lyondell will meet all rules and regulations of the TCEQ and the intent of the TCAA for the emission sources and activities addressed in this permit amendment application, as follows:

- §116.111(a)(1) – A completed Form PI-1 has been signed by an authorized representative of Lyondell and is included in Appendix A.
- §116.111(a)(2)(A) through (L) – These items are addressed individually below.
- §116.111(b) – Lyondell will comply with applicable 30 TAC 39 and 30 TAC 55 public notice and public participation requirements for this permit amendment application.

### 5.1 General Application Requirements - §116.111

The emissions associated with the proposed POSM1 Unit project will comply with all applicable air quality rules and regulations and with the intent of the TCAA, including protection of the health and the physical property of people, as required by §116.111(a)(2)(A)(i). Following is a summary of rules and regulations as they apply to the proposed project:

30 TAC 101 - General Rules: The facility will be operated in accordance with the General Rules relating to circumvention, nuisance, traffic hazard, notification requirements for major upset, notification requirements for unplanned maintenance, sampling, sampling ports, emission inventory requirements, sampling procedures and terminology, compliance with Environmental Protection Agency (EPA) Standards, emissions fees, and all other applicable General Rules.

30 TAC 111 - Visible Emissions and Particulate Matter: Lyondell will comply with all applicable requirements under this chapter.

30 TAC 112 - Sulfur Compounds: Lyondell will comply with all applicable requirements under this chapter.

30 TAC 113 - Toxic Materials: TCEQ has incorporated MACT standards (40 CFR 63) into Chapter 113 by reference. The proposed facility will comply with all applicable provisions of Chapter 113 concerning control, recordkeeping, reporting, and monitoring requirements.

30 TAC 114 - Motor Vehicles: This provision of the rule controls the emissions from motor vehicles and does not apply to the facilities under consideration in this permit application.

30 TAC 115 - Volatile Organic Compounds: The proposed facility is located in Harris County and is regulated by the following Rules that are applicable to this permit application:

Subchapter B Division 2 – Vent Gas Control

Lyondell will comply with all the applicable control, monitoring, testing, and recordkeeping requirements listed in this subchapter.

30 TAC 116 - Permits for New Construction or Modification: Lyondell is complying with the requirements of Chapter 116 by submitting this permit application and as outlined below for each of the following sections:

Rule 116.111(a)(2)(A) Protection of public health and welfare

As outlined below, the emissions from Lyondell will comply with all air quality rules and regulations and with the intent of the TCAA, including protection of the health and physical property of the people.

Rule 116.111(a)(2)(B) Measurement of Emissions

The proposed facility will have provisions for measuring the emission of significant air contaminants as determined by the Executive Director.

Rule 116.111(a)(2)(C) Best Available Control Technology (BACT)

Section 4 of this application presents a discussion of BACT for the modified facilities associated with this application.

Rule 116.111(a)(2)(D) Federal New Source Performance Standards (NSPS)

Lyondell will comply with all applicable 40 CFR Part 60 controls, recordkeeping, reporting, and monitoring requirements.

Rule 116.111(a)(2)(E) National Emission Standards for HAPs (NESHAP)

Lyondell will comply with all applicable 40 CFR Part 61 controls, recordkeeping, reporting, and monitoring requirements.

Rule 116.111(a)(2)(F) Maximum Achievable Control Technology (MACT)

Lyondell will comply with all applicable 40 CFR Part 63 controls, recordkeeping, reporting, and monitoring requirements.

Rule 116.111(a)(2)(G) Performance Demonstration

The proposed facilities are expected to perform as represented in this application.

Rule 116.111(a)(2)(H) Nonattainment Review



The facility is located in a nonattainment area for VOC and NO<sub>x</sub>. See Section 1.4, PSD and Non-attainment Review, for details.

Rule 116.111(a)(2)(I) Prevention of Significant Deterioration (PSD) review

The facility is located in an attainment area for SO<sub>2</sub>, PM<sub>10</sub>, CO, and lead.

See Section 1.4, PSD and Non-attainment Review, for details.

Rule 116.111(a)(2)(J) Air Dispersion Modeling

Air dispersion modeling is being submitted with this application.

Rule 116.111(a)(2)(K) Hazardous Air Pollutants

Lyondell will comply with all applicable requirements under Subchapter E of this chapter.

Rule 116.111(a)(2)(L) Mass Cap and Trade Allowances

Lyondell Channelview Facility is located in the Houston/Galveston/Brazoria area. Lyondell has sufficient NO<sub>x</sub> allowances to demonstrate compliance with the mass emissions cap and trade program.

30 TAC 117 - Nitrogen Compounds: The provision of the rule does not apply to the proposed facilities considered in this permit application.

30 TAC 118 - Air Pollution Episodes: The facility will be operated in compliance with the rules relating to generalize a localized air pollution episode. An Emissions Reduction Plan is maintained as required by §118.5.

30 TAC 122 - Federal Operating Permits: The Channelview Facility operates under Federal Operating Permit No. O1426. The Title V Permit will be revised to reference the changes in applicable requirements resulting from the amendment to the NSR permit.

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## APPENDIX A

# ADMINISTRATIVE CONSIDERATIONS AND APPLICATION FORMS

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### **Permit Fee Calculation**

The amendment application fee is calculated according to 30 TAC §116.141(a), Determination of Fees, which specifies that the fee for an amendment is based on the capital cost of the project. The permit application fee is calculated and summarized on the TCEQ Table 30 included in the NSR Workbook.

The permit amendment fee of \$3,000 is provided with this application. The fee payment tracer number for the total amount including both fees is included in this appendix.

### **Compliance History**

Lyondell is an existing site greater than 5-years old. Lyondell requests that TCEQ compile the history of the site.

### **Administratively Application Forms**

The administrative information has been completed in the NSR Workbook and sent electronically to the Air Permit Initial Review Team. Additionally the project EMEW for SCREEN workbook containing the modeling review information has been provided electronically.

**Texas Commission on Environmental Quality  
Form PI-1 General Application  
General**

Date: 10/16/2019  
Permit #: 4121  
Company: Lyondell

I. Applicant Information	
<p style="color: red; margin: 0;"><b>I acknowledge that I am submitting an authorized TCEQ application workbook and any necessary attachments. Except for inputting the requested data and adjusting row height and column width, I have not changed the TCEQ application workbook in any way, including but not limited to changing formulas, formatting, content, or protections.</b></p>	I agree
<b>A. Company Information</b>	
Company or Legal Name:	Lyondell Chemical Company
<p>Permits are issued to either the facility owner or operator, commonly referred to as the applicant or permit holder. List the legal name of the company, corporation, partnership, or person who is applying for the permit. We will verify the legal name with the Texas Secretary of State at (512) 463-5555 or at:</p> <p><a href="https://www.sos.state.tx.us">https://www.sos.state.tx.us</a></p>	
Texas Secretary of State Charter/Registration Number (if given):	
<b>B. Company Official Contact Information: must not be a consultant</b>	
Prefix (Mr., Ms., Dr., etc.):	Mrs.
First Name:	Kim
Last Name:	Foley
Title:	Site Manager
Mailing Address:	PO Box 777
Address Line 2:	
City:	Channelview
State:	Texas
ZIP Code:	77530
Telephone Number:	281-862-5150
Fax Number:	
Email Address:	<a href="mailto:kim.foley@lyb.com">kim.foley@lyb.com</a>
<b>C. Technical Contact Information: This person must have the authority to make binding agreements and representations on behalf of the applicant and may be a consultant. Additional technical contact(s) can be provided in a cover letter.</b>	
Prefix (Mr., Ms., Dr., etc.):	Mrs.
First Name:	Teresa
Last Name:	Peneguy
Title:	Environmental Permitting
Company or Legal Name:	LyondellBasell
Mailing Address:	PO Box 777
Address Line 2:	
City:	Channelview
State:	Texas
ZIP Code:	77503
Telephone Number:	281-452-8330
Fax Number:	
Email Address:	<a href="mailto:teresa.peneguy@lyb.com">teresa.peneguy@lyb.com</a>
<b>D. Assigned Numbers</b>	
<p>The CN and RN below are assigned when a Core Data Form is initially submitted to the Central Registry. The RN is also assigned if the agency has conducted an investigation or if the agency has issued an enforcement action. If these numbers have not yet been assigned, leave these questions blank and include a Core Data Form with your application submittal. See Section VI.B. below for additional information.</p>	
Enter the CN. The CN is a unique number given to each business, governmental body, association, individual, or other entity that owns, operates, is responsible for, or is affiliated with a regulated entity.	600344402

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Company: Lyondell

Enter the RN. The RN is a unique agency assigned number given to each person, organization, place, or thing that is of environmental interest to us and where regulated activities will occur. The RN replaces existing air account numbers. The RN for portable units is assigned to the unit itself, and that same RN should be used when applying for authorization at a different location.	100633650
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II. Delinquent Fees and Penalties	
Does the applicant have unpaid delinquent fees and/or penalties owed to the TCEQ? This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ Web site at:  <a href="https://www.tceq.texas.gov/agency/financial/fees/delin">https://www.tceq.texas.gov/agency/financial/fees/delin</a>	No

**III. Permit Information**

**A. Permit and Action Type (multiple may be selected, leave no blanks)**

Additional information regarding the different NSR authorizations can be found at:  
<https://www.tceq.texas.gov/permitting/air/guidance/authorize.html>

Select from the drop-down the type of action being requested for each permit type. **If that permit type does not apply, you MUST select "Not applicable".**

Provide all assigned permit numbers relevant for the project. Leave blank if the permit number has not yet been assigned.

Permit Type	Action Type Requested (do not leave blank)	Permit Number (if assigned)
Minor NSR (can be a Title V major source): <i>Not applicable, Initial, Amendment, Renewal, Renewal Certification, Renewal/Amendment, Relocation/Alteration, Change of Location, Alteration, Extension to Start of Construction</i>	Amendment	4121
Special Permit: <i>Not applicable, Amendment, Renewal, Renewal Certification, Renewal/Amendment, Alteration, Extension to Start of Construction</i>	Not applicable	
De Minimis: <i>Not applicable, Initial</i>	Not applicable	
Flexible: <i>Not applicable, Initial, Amendment, Renewal, Renewal Certification, Renewal/Amendment, Alteration, Extension to Start of Construction</i>	Not applicable	
PSD: <i>Not applicable, Initial, Major Modification</i>	Not applicable	
Nonattainment: <i>Not applicable, Initial, Major Modification</i>	Initial	
HAP Major Source [FCAA § 112(g)]: <i>Not applicable, Initial, Major Modification</i>	Not applicable	
PAL: <i>Not applicable, Initial, Amendment, Renewal, Renewal/Amendment, Alteration</i>	Not applicable	
GHG PSD: <i>Not applicable, Initial, Major Modification, Voluntary Update</i>	Not applicable	

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**General**

Date: 10/16/2019  
 Permit #: 4121  
 Company: Lyondell

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**B. MSS Activities**

How are/will MSS activities for sources associated with this project be authorized?	Combination (list below)
List the permit number, registration number, and/or PBR number.	83817, 106.263

**C. Consolidating NSR Permits**

Will this permit be consolidated into another NSR permit with this action?	No
Will NSR permits be consolidated into this permit with this action?	No

**D. Incorporation of Standard Permits, Standard Exemptions, and/or Permits By Rule (PBR)**

To ensure protectiveness, previously issued authorizations (standard permits, standard exemptions, or PBRs) including those for MSS, are incorporated into a permit either by consolidation or by reference. At the time of renewal and/or amendment, consolidation (in some cases) may be voluntary and referencing is mandatory. More guidance regarding incorporation can be found in 30 TAC § 116.116(d)(2), 30 TAC § 116.615(3) and in this memo:

[https://www.tceq.texas.gov/assets/public/permitting/air/memos/pbr\\_spc06.pdf](https://www.tceq.texas.gov/assets/public/permitting/air/memos/pbr_spc06.pdf)

Are there any standard permits, standard exemptions, or PBRs to be incorporated by reference?	No
Are there any PBR, standard exemptions, or standard permits associated to be incorporated by consolidation? <b>Note:</b> Emission calculations, a BACT analysis, and an impacts analysis must be attached to this application at the time of submittal for any authorization to be incorporated by consolidation.	No

**E. Associated Federal Operating Permits**

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**General**

Date: 10/16/2019  
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 Company: Lyondell

Is this facility located at a site required to obtain a <b>site operating permit (SOP)</b> or <b>general operating permit (GOP)</b> ?	Yes
Is a <b>SOP</b> or <b>GOP</b> review pending for this source, area, or site?	Yes
If required to obtain a <b>SOP</b> or <b>GOP</b> , list all associated permit number(s). If no associated permit number has been assigned yet, enter "TBD":	O1387

**IV. Facility Location and General Information**

<b>A. Location</b>	
County: Enter the county where the facility is physically located.	Harris
TCEQ Region	Region 12
County attainment status as of Sept. 23, 2019	Serious Ozone nonattainment
Street Address:	2502 Sheldon Road
City: If the address is not located in a city, then enter the city or town closest to the facility, even if it is not in the same county as the facility.	Channelview
ZIP Code: Include the ZIP Code of the physical facility site, not the ZIP Code of the applicant's mailing address.	77530
Site Location Description: If there is no street address, provide written driving directions to the site. Identify the location by distance and direction from well-known landmarks such as major highway intersections.	
Use USGS maps, county maps prepared by the Texas Department of Transportation, or an online software application such as Google Earth to find the latitude and longitude.	
Latitude (in degrees, minutes, and nearest second (DDD:MM:SS)) for the street address or the destination point of the driving directions. Latitude is the angular distance of a location north of the equator and will always be between 25 and 37 degrees north (N) in Texas.	029:49:15
Longitude (in degrees, minutes, and nearest second (DDD:MM:SS)) for the street address or the destination point of the driving directions. Longitude is the angular distance of a location west of the prime meridian and will always be between 93 and 107 degrees west (W) in Texas.	095:06:19
Is this a project for a lead smelter, concrete crushing facility, and/or a hazardous waste management facility?	No

<b>B. General Information</b>	
Site Name:	Channelview Facility
Area Name: Must indicate the general type of operation, process, equipment or facility. Include numerical designations, if appropriate. Examples are Sulfuric Acid Plant and No. 5 Steam Boiler. Vague names such as Chemical Plant are not acceptable.	POSMI Unit Flare

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**General**

Date: 10/16/2019  
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Are there any schools located within 3,000 feet of the site boundary?	Yes
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<b>C. Portable Facility</b>	
Permanent or portable facility?	Permanent

<b>D. Industry Type</b>	
Principal Company Product/Business:	SOCMI Chemicals
A list of SIC codes can be found at: <a href="https://www.naics.com/sic-codes-industry-drilldown/">https://www.naics.com/sic-codes-industry-drilldown/</a>	
Principal SIC code:	2869
NAICS codes and conversions between NAICS and SIC Codes are available at: <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a>	
Principal NAICS code:	325199

<b>E. State Senator and Representative for this site</b>	
This information can be found at (note, the website is not compatible to Internet Explorer): <a href="https://wrm.capitol.texas.gov/">https://wrm.capitol.texas.gov/</a>	
State Senator:	John Whitmire
District:	15
State Representative:	Ana Hernandez
District:	143

<b>V. Project Information</b>
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<b>A. Description</b>	
Provide a brief description of the project that is requested. (Limited to 500 characters).	Natural gas is being added to flare to meet future regulatory flame zone heat value requirements for flares.

<b>B. Project Timing</b>	
Authorization must be obtained for many projects before beginning construction. Construction is broadly interpreted as anything other than site clearance or site preparation. Enter the date as "Month Date, Year" (e.g. July 4, 1776).	
Projected Start of Construction:	TBD
Projected Start of Operation:	TBD

<b>C. Enforcement Projects</b>	
Is this application in response to, or related to, an agency investigation, notice of violation, or enforcement action?	No

<b>D. Operating Schedule</b>	
Will sources in this project be authorized to operate 8760 hours per year?	Yes

<b>VI. Application Materials</b>
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All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. (30 TAC § 116.116)
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<b>A. Confidential Application Materials</b>
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**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**General**

Date: 10/16/2019  
 Permit #: 4121  
 Company: Lyondell

Is confidential information submitted with this application?	No
<b>B. Is the Core Data Form (Form 10400) attached?</b>	No
<a href="https://www.tceq.texas.gov/assets/public/permitting/centralregistry/10400.docx">https://www.tceq.texas.gov/assets/public/permitting/centralregistry/10400.docx</a>	
<b>C. Is a current area map attached?</b>	Yes
Is the area map a current map with a true north arrow, an accurate scale, the entire plant property, the location of the property relative to prominent geographical features including, but not limited to, highways, roads, streams, and significant landmarks such as buildings, residences, schools, parks, hospitals, day care centers, and churches?	Yes
Does the map show a 3,000-foot radius from the property boundary?	Yes
<b>D. Is a plot plan attached?</b>	Yes
Does your plot plan clearly show a north arrow, an accurate scale, all property lines, all emission points, buildings, tanks, process vessels, other process equipment, and two bench mark locations?	Yes
Does your plot plan identify all emission points on the affected property, including all emission points authorized by other air authorizations, construction permits, PBRs, special permits, and standard permits?	Yes
Did you include a table of emission points indicating the authorization type and authorization identifier, such as a permit number, registration number, or rule citation under which each emission point is currently authorized?	Yes
<b>E. Is a process flow diagram attached?</b>	Yes
Is the process flow diagram sufficiently descriptive so the permit reviewer can determine the raw materials to be used in the process; all major processing steps and major equipment items; individual emission points associated with each process step; the location and identification of all emission abatement devices; and the location and identification of all waste streams (including wastewater streams that may have associated air emissions)?	Yes
<b>F. Is a process description attached?</b>	Yes
Does the process description emphasize where the emissions are generated, why the emissions must be generated, what air pollution controls are used (including process design features that minimize emissions), and where the emissions enter the atmosphere?	Yes
Does the process description also explain how the facility or facilities will be operating when the maximum possible emissions are produced?	Yes
<b>G. Are detailed calculations attached? Calculations must be provided for each source with new or changing emission rates. For example, a new source, changing emission factors, decreasing emissions, consolidated sources, etc. You do not need to submit calculations for sources which are not changing emission rates with this project. Please note: the preferred format is an electronic workbook (such as Excel) with all formulas viewable for review. It can be emailed with the submittal of this application workbook.</b>	Yes
Are emission rates and associated calculations for planned MSS facilities and related activities attached?	N/A
<b>H. Is a material balance (Table 2, Form 10155) attached?</b>	Yes



Texas Commission on Environmental Quality  
Form PI-1 General Application  
General


Date: 10/16/2019  
Permit #: 4121  
Company: Lyondell

I. Is a list of MSS activities attached?	N/A
J. Is a discussion of state regulatory requirements attached, addressing 30 TAC Chapters 101, 111, 112, 113, 115, and 117?	Yes
For all applicable chapters, does the discussion include how the facility will comply with the requirements of the chapter?	Yes
For all not applicable chapters, does the discussion include why the chapter is not applicable?	Yes
K. Are all other required tables, calculations, and descriptions attached?	Yes

**VII. Signature**

The owner or operator of the facility must apply for authority to construct. The appropriate company official (owner, plant manager, president, vice president, or environmental director) must sign all copies of the application. The applicant's consultant cannot sign the application. **Important Note: Signatures must be original in ink, not reproduced by photocopy, fax, or other means, and must be received before any permit is issued.**

The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which application is made will not in any way violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382; the Texas Clean Air Act (TCAA); the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. I further state that I understand my signature indicates that this application meets all applicable nonattainment, prevention of significant deterioration, or major source of hazardous air pollutant permitting requirements. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.

Name:	Kim Foley
Signature:	
	<i>Original signature is required.</i>
Date:	11/12/19



# Basis2 Receipt Report by Endorsement Number

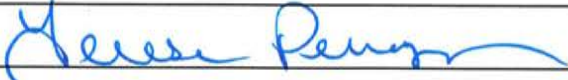
NOV-18-19 04:36 PM

Acct. #: PAF

Account Name: PERMIT AMENDMENT FEES (AIR)

<u>Paid For</u>	<u>Endors. #</u>	<u>Ref #2</u>	<u>Paid In By</u>	<u>PayTyp</u>	<u>Chk #</u>	<u>Card#</u>	<u>Bank Slip</u>	<u>Tran.Date</u>	<u>Receipt Amnt.</u>
POSM 1	WRS0019804	2993	130 LYONDELL CHE	WT	WIRE		BS00076778	18-NOV-19	\$3000.00

## Form APD-EXP Expedited Permitting Request

<b>I. Contact Information</b>	
Company or Other Legal Customer Name: Lyondell Chemical	
Customer Reference Number (CN): 600344402	
Regulated Entity Number (RN): 100633650	
Company Official or Technical Contact Name: Teresa Peneguy	
Phone Number: 281-452-8330	
Email: teresa.peneguy@lyb.com	
<b>II. Project Information</b>	
Facility Type: Channelview Facility, POSMI Unit Flare	
Permit Number: 4121	
Project Number: TBD	
<b>III. Economic Justification</b>	
The purpose of the application associated with this request to expedite will benefit the economy of this state or an area of this state.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
<b>IV. Delinquent Fees and Penalties</b>	
Applications will not be expedited if any delinquent fees and/or penalties are owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ. For more information regarding Delinquent Fees and Penalties, go to the TCEQ Web site at: <a href="http://www.tceq.texas.gov/agency/delin/index.html">www.tceq.texas.gov/agency/delin/index.html</a> .	
<b>V. Signature</b>	
The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. As the applicant, I commit to fulfilling all expectations of the expedited permitting program and application requirements promptly. Failure to meet any expectation or requirement may cause my application to be removed from the expedited permitting program and possibly voided at the discretion of the TCEQ Executive Director. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.	
Name: Teresa Peneguy	
Signature: 	
Date: 11/11/2019	

**Reset Form**



# Basis2 Receipt Report by Endorsement Number

NOV-18-19 04:35 PM

Acct. #: APS

Account Name: AIR PERMIT EXPEDITED FEE

<u>Paid For</u>	<u>Endors. #</u>	<u>Ref #2</u>	<u>Paid In By</u>	<u>PayTyp</u>	<u>Chk #</u>	<u>Card#</u>	<u>Bank Slip</u>	<u>Tran.Date</u>	<u>Receipt Amnt.</u>
2993/POSM 1	WRS0019797		130 LYONDELL CHE	WT	WIRE		BS00076778	18-NOV-19	\$20000.00

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**APPENDIX B**

**TECHNICAL APPLICATION TABLES**

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**Technical Application Tables**

The following table is included in this appendix:

Table 2F – Project Increases

TABLE 2F  
PROJECT EMISSION INCREASE

Pollutant <sup>1</sup> :	Nox	Permit:	4121
Baseline Period:	N/A new stream	to	

	Affected or Modified Facilities <sup>2</sup>		Permit No.	Actual Emissions <sup>3</sup>	Baseline Emissions <sup>4</sup>	Proposed Emissions <sup>5</sup>	Project Actual Emissions	Difference (B-A) <sup>6</sup>	Correction <sup>7</sup>	Project Increase <sup>8</sup>
	FIN	EPN								
1.	FL60731	FL60731	4121	0	0	6.06	6.06	6.06		6.06
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
Page Subtotal <sup>9</sup>										6.06

<sup>1</sup> Individual Table 2F=s should be used to summarize the project emission increase for each criteria pollutant

<sup>2</sup> Emission Point Number as designated in NSR Permit or Emissions Inventory

<sup>3</sup> All records and calculations for these values must be available upon request

Correct actual emissions for currently applicable rule or permit requirements, and periods of non-compliance. These corrections, as well as any MSS previously

<sup>4</sup> demonstrated under 30 TAC 101, should be explained in the Table 2F supplement

<sup>5</sup> If projected actual emission is used it must be noted in the next column and the basis for the projection identified in the Table 2F supplement

<sup>6</sup> Proposed Emissions (column B) minus Baseline Emissions (column A)

Correction made to emission increase for what portion could have been accommodated during the baseline period. The justification and basis for this estimate must be provided in the Table 2F supplement

<sup>8</sup> Obtained by subtracting the correction from the difference. Must be a positive number.

<sup>9</sup> Sum all values for this page.

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## **APPENDIX C EMISSION CALCULATIONS**

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Included in this appendix are the emissions calculations for the additional natural gas to the flare.

Flare Emissions  
Natural Gas addition

Emission Factors

NOx	0.0486 lb/MMBtu	TCEQ EI Guidance for Steam-assist flare
CO	0.3503 lb/MMBtu	TCEQ EI Guidance for Steam-assist flare
SO2	5 gr/100 dscf	vendor spec
VOC	5.5 lb/MMscf	AP-42 Natural Gas Combustion
	1020 Btu/scf	

EPN: EFL60731  
Avg Natural Gas 27928 scfh  
Max Natural Gas 180000 scfh

Max Hourly	Current Auth	Nat Gas Increase	Total
	lb/hr	lb/hr	lb/hr
NOx	41.73	8.92	50.65
CO	301.38	64.32	365.7
SO2	1.87	2.57	4.44
VOC	437	0.99	437.99

Annual	Current Auth	Nat Gas Increase	Total
	tpy	tpy	tpy
NOx	25.69	6.06	31.75
CO	130.52	43.71	174.23
SO2	2.65	1.75	4.4
VOC	97.56	0.67	98.23

Sample Calculation

$$\begin{array}{c}
 \text{Hourly NOx} \\
 \frac{180,000 \text{ scf}}{\text{hr}} \times \frac{1020 \text{ Btu}}{\text{scf}} \times \frac{\text{MMBtu}}{10^6 \text{ Btu}} \times \frac{0.049 \text{ lb}}{\text{MMBtu}} = \frac{8.92 \text{ lb NOx}}{\text{hr}}
 \end{array}$$

$$\begin{array}{c}
 \text{Annual SO2} \\
 \frac{27,928 \text{ scf}}{\text{hr}} \times \frac{\text{MMscf}}{10^6 \text{ scf}} \times \frac{5 \text{ gr}}{100 \text{ dscf}} \times \frac{\text{lb S}}{7000 \text{ gr}} \times \frac{2 \text{ lb SO2}}{\text{lb S}} \times \frac{8760 \text{ hr}}{\text{yr}} \times \frac{\text{ton}}{2000 \text{ lb}} = \frac{1.75 \text{ ton SO2}}{\text{hr}}
 \end{array}$$









Texas Commission on Environmental Quality  
 Form PI-1 General Application  
 Technical

Date: \_\_10/16/2019\_\_\_\_\_  
 Permit #: \_\_4121\_\_\_\_\_  
 Company: \_\_Lyondell\_\_\_\_\_


**V. Nonattainment Permits**

Complete the offsets section of the Federal Applicability sheet of this workbook.	Yes
Does the application contain a detailed LAER analysis? (attachment or as notes on the BACT sheet of this workbook)	Yes
Does the application contain an analysis of alternative sites, sizes, production processes, and control techniques for the proposed source? The analysis must demonstrate that the benefits of the proposed location and source configuration significantly outweigh the environmental and social costs of that location.	Yes


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**VIII. Federal Regulatory Questions**

Indicate if any of the following requirements apply to the proposed facility. Note that some federal regulations apply to minor sources. Enter all applicable Subparts.

**A. Title 40 CFR Part 60**

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Do NSPS subpart(s) apply to a facility in this application?	Yes
List applicable subparts you will demonstrate compliance with (e.g. Subpart M)	A
<b>B. Title 40 CFR Part 61</b>	
Do NESHAP subpart(s) apply to a facility in this application?	Yes
List applicable subparts you will demonstrate compliance with (e.g. Subpart BB)	A
<b>C. Title 40 CFR Part 63</b>	
Do MACT subpart(s) apply to a facility in this application?	Yes
List applicable subparts you will demonstrate compliance with (e.g. Subpart VVVV)	A

**IX. Emissions Review**

**A. Impacts Analysis**

Any change that results in an increase in off-property concentrations of air contaminants requires an air quality impacts demonstration. Information regarding the air quality impacts demonstration must be provided with the application and show compliance with all state and federal requirements. Detailed requirements for the information necessary to make the demonstration are listed on the Impacts sheet of this workbook.

Does this project require an impacts analysis?	Yes
--	-----

**B. Disaster Review**

If the proposed facility will handle sufficient quantities of certain chemicals which, if released accidentally, would cause off-property impacts that could be immediately dangerous to life and health, a disaster review analysis may be required as part of the application. Contact the appropriate NSR permitting section for assistance at (512) 239-1250. Additional Guidance can be found at:

<https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/disrev-factsheet.pdf>

Does this application involve any air contaminants for which a disaster review is required?	No
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**C. Air Pollutant Watch List**

Certain areas of the state have concentrations of specific pollutants that are of concern. The TCEQ has designated these portions of the state as watch list areas. Location of a facility in a watch list area could result in additional restrictions on emissions of the affected air pollutant(s) or additional permit requirements. The location of the areas and pollutants of interest can be found at:

<https://www.tceq.texas.gov/toxicology/apwl/apwl.html>

Is the proposed facility located in a watch list area?	No
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**D. Mass Emissions Cap and Trade**

Is this facility located at a site within the Houston/Galveston nonattainment area (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties)?	Yes
--	-----

Is Mass Emissions Cap and Trade applicable to the new or modified facilities?	No
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**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Unit Types - Emission Rates**

Date: 10/16/2019  
 Permit #: 4121  
 Company: Lyondell

Permit primary industry (must be selected for workbook to function) Chemical / Energy

Action Requested (only 1 action per FIN)	Include these emissions in annual (tpy) summary?	Facility ID Number (FIN)	Emission Point Number (EPN)	Source Name	Pollutant	Current Short-Term (lb/hr)	Current Long-Term (tpy)	Consolidated Current Short-Term (lb/hr)	Consolidated Current Long-Term (tpy)	Proposed Short-Term (lb/hr)	Proposed Long-Term (tpy)	Short-Term Difference (lb/hr)	Long-Term Difference (tpy)	Unit Type (Used for reviewing BACT and Monitoring Requirements)	Unit Type Notes (only if "other" unit type in Column O)
Not New/Modified	Yes	FL60730	FL60730	Emergency Flare Pilots	CO	0.11	0.5			0.11	0.5	0	0	Control: Flare	
					NOx	0.02	0.1			0.02	0.1	0	0		
					VOC	0.01	0.01			0.01	0.01	0	0		
					SO2	0.01	0.02			0.01	0.02	0	0		
New/Modified	Yes	FL60731	FL60731	Continuous Flare	CO	301.38	130.52			365.7	174.23	64.32	43.71	Control: Flare	
					NOx	41.73	25.69			50.65	31.75	8.92	6.06		
					VOC	437	97.56			437.99	98.23	0.9901	0.6701		
					SO2	1.87	2.65			4.44	4.4	2.57	1.75		

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Stack Parameters**

Date:   10/16/2019    
 Permit #:   4121    
 Company:   Lyondell  

Emission Point Discharge Parameters												
EPN	Included in EMEW?	UTM Coordinates Zone	East (Meters)	North (Meters)	Building Height (ft)	Height Above Ground (ft)	Stack Exit Diameter (ft)	Velocity (FPS)	Temperature (°F)	Fugitives - Length (ft)	Fugitives - Width (ft)	Fugitives - Axis Degrees
FL60730	No	15	296936	3300571								
FL60731	Yes											

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Public Notice**

Date: 10/16/2019  
 Permit #: 4121  
 Company: Lyondell

**I. Public Notice Applicability**

**A. Application Type**

Is this an application for a new or major modification of a PSD (including GHG), Nonattainment, or HAP permit?	Yes
Is this an application for a minor permit amendment?	Yes
Is there any change in character of emissions in this application (a new criteria pollutant or a new VOC or PM species)?	No
Is there a new air contaminant in this application?	No

**B. Project Increases and Public Notice Thresholds (for Initial and Amendment Projects)**

For public notice applicability, the agency does not include consolidation or incorporation of any previously authorized facility or activity (PBR, standard permits, etc.), changes to permitted allowable emission rates when exclusively due to changes to standardized emission factors, or reductions in emissions which are not enforceable through the amended permit. Thus, the total emissions increase would be the sum of emissions increases under the amended permit and the emissions decreases under the amended permit for each air contaminant.

The table below will generate emission increases based on the values represented on the "Unit Types - Emission Rates" sheet. Use the "yes" and "no" options in column B of the "Unit Types - Emission Rates" worksheet to indicate if a unit's proposed change of emissions should be included in these totals.

**Notes:**

1. Emissions of PM, PM10, and/or PM2.5 may have been previously quantified and authorized as PM, PM10, and/or PM2.5. These emissions will be speciated based on current guidance and policy to demonstrate compliance with current standards and public notice requirements may change during the permit review.
2. All renewals require public notice.

This row is optional. If you do not think the table below accurately represents public notice applicability increases for your project, provide discussion here (1000 characters).	
--	--

Do the facilities handle, load, unload, dry, manufacture, or process grain, seed, legumes, or vegetable fibers (agricultural facilities)?	No
---	----

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**Form PI-1 General Application**  
**Public Notice**

Date: 10/16/2019  
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 Company: Lyondell

Pollutant	Current Long-Term (tpy)	Consolidated Emissions (tpy)	Proposed Long-Term (tpy)	Project Change in Allowable (tpy)	PN Threshold	Notice required?
VOC	97.57	0.00	98.24	0.67	5	No
PM	0.00	0.00	0.00	0.00	5	No
PM <sub>10</sub>	0.00	0.00	0.00	0.00	5	No
PM <sub>2.5</sub>	0.00	0.00	0.00	0.00	5	No
NO <sub>x</sub>	25.79	0.00	31.85	6.06	5	Yes
CO	131.02	0.00	174.73	43.71	50	No
SO <sub>2</sub>	2.67	0.00	4.42	1.75	10	No
Pb	0.00	0.00	0.00	0.00	0.6	No

\* Notice is required for PM, PM10, and PM2.5 if one of these pollutants is above the threshold.

\*\* Notice of a GHG action is determined by action type. Initial and major modification always require notice. Voluntary updates require a consolidated notice if there is a change to BACT. Project emission increases of CO2e (CO2 equivalent) are not relevant for determining public notice of GHG permit actions.

<b>C. Is public notice required for this project as represented in this workbook?</b> If no, proceed to Section III Small Business Classification. Note: public notice applicability for this project may change throughout the technical review.	Yes
<b>D. Are any HAPs to be authorized/re-authorized with this project?</b> The category "HAPs" must be specifically listed in the public notice if the project authorizes (reauthorizes for renewals) any HAP pollutants.	No

II. Public Notice Information	
Complete this section if public notice is required (determined in the above section) or if you are not sure if public notice is required.	
<b>A. Contact Information</b>	
Enter the contact information for the <b>person responsible for publishing</b> . This is a designated representative who is responsible for ensuring public notice is properly published in the appropriate newspaper and signs are posted at the facility site. This person will be contacted directly when the TCEQ is ready to authorize public notice for the application.	
Prefix (Mr., Ms., Dr., etc.):	Mrs.
First Name:	Teresa
Last Name:	Peneguy
Title:	Environmental Permitting

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Public Notice**

Date: 10/16/2019  
 Permit #: 4121  
 Company: Lyondell

Company Name:	LyondellBasell
Mailing Address:	PO Box 777
Address Line 2:	
City:	Channelview
State:	Texas
ZIP Code:	77530
Telephone Number:	281-452-8330
Fax Number:	
Email Address:	teresa.peneguy@lyb.com

Enter the contact information for the **Technical Contact**. This is the designated representative who will be listed in the public notice as a contact for additional information.

Prefix (Mr., Ms., Dr., etc.):	Mrs.
First Name:	Teresa
Last Name:	Peneguy
Title:	Environmental Permitting
Company Name:	LyondellBasell
Mailing Address:	PO Box 777
Address Line 2:	
City:	Channelview
State:	Texas
ZIP Code:	77530
Telephone Number:	281-452-8330
Fax Number:	
Email Address:	teresa.peneguy@lyb.com

**B. Public place**

Place a copy of the full application (including all of this workbook and all attachments) at a public place in the county where the facilities are or will be located. You must state where in the county the application will be available for public review and comment. The location must be a public place and described in the notice. A public place is a location which is owned and operated by public funds (such as libraries, county courthouses, city halls) and cannot be a commercial enterprise. You are required to pre-arrange this availability with the public place indicated below. The application must remain available from the first day of publication through the designated comment period.

If this is an application for a PSD, nonattainment, or FCAA §112(g) permit, the public place must have internet access available for the public as required in 30 TAC § 39.411(f)(3).

If the application is submitted to the agency with information marked as Confidential, you are required to indicate which specific portions of the application are not being made available to the public. These portions of the application must be accompanied with the following statement: **Any request for portions of this application that are marked as confidential must be submitted in writing, pursuant to the Public Information Act, to the TCEQ Public Information Coordinator, MC 197, P.O. Box 13087, Austin, Texas 78711-3087.**

Name of Public Place:	North Channel Branch Library
Physical Address:	15741 Wallisville Road
Address Line 2:	
City:	Houston
ZIP Code:	77049
County:	Harris
Has the public place granted authorization to place the application for public viewing and copying?	Yes
Does the public place have Internet access available for the public?	Yes

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Public Notice**

Date: 10/16/2019  
 Permit #: 4121  
 Company: Lyondell

**C. Alternate Language Publication**

In some cases, public notice in an alternate language is required. If an elementary or middle school nearest to the facility is in a school district required by the Texas Education Code to have a bilingual program, a bilingual notice will be required. If there is no bilingual program required in the school nearest the facility, but children who would normally attend those schools are eligible to attend bilingual programs elsewhere in the school district, the bilingual notice will also be required. If it is determined that alternate language notice is required, you are responsible for ensuring that the publication in the alternate language is complete and accurate in that language.

Is a bilingual program required by the Texas Education Code in the School District?	Yes
Are the children who attend either the elementary school or the middle school closest to your facility eligible to be enrolled in a bilingual program provided by the district?	Yes
If yes to either question above, list which language(s) are required by the bilingual program?	Spanish

**D. PSD and Nonattainment Permits Only**

If this is an application for emissions of GHGs, select either "Separate Public Notice" or "Consolidated Public Notice". Note: Separate public notices requires a separate application.	Not applicable
---	----------------

We must notify the applicable county judge and presiding officer when a PSD or Nonattainment permit or modification application is received. This information can be obtained at:

<https://www.txdirectory.com>

Provide the information for the **County Judge** for the location where the facility is or will be located.

The Honorable:	Lina Hidalgo
Mailing Address:	1001 Preston, Suite 911
Address Line 2:	
City:	Houston
State:	Texas
ZIP Code:	77002

Provide the information for the **Presiding Officer(s)** of the municipality for this facility site. This is frequently the Mayor.

First Name:	
Last Name:	
Title:	
Mailing Address:	
Address Line 2:	
City:	
State:	
ZIP Code:	

Are the proposed facilities located within 100 km or less of an affected state or Class I Area?	No
---	----




**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Public Notice**

Date: 10/16/2019  
 Permit #: 4121  
 Company: Lyondell

**III. Small Business Classification**

Complete this section to determine small business classification. If a small business requests a permit, agency rules (30 TAC § 39.603(f)(1)(A)) allow for alternative public notification requirements if all of the following criteria are met. If these requirements are met, public notice does not have to include publication of the prominent (12 square inch) newspaper notice.

Does the company (including parent companies and subsidiary companies) have fewer than 100 employees or less than \$6 million in annual gross receipts?	No
Small business classification:	No

**Texas Commission on Environmental Quality  
Form PI-1 General Application  
Federal Applicability**

Date: 10/16/2019  
Permit #: 4121  
Company: Lyondell

I. County Classification	
Does the project require retrospective review?	No
County (completed for you from your response on the General sheet)	Harris
This project will be located in an area that is in attainment for ozone as of Sept. 23, 2019. Select from the drop-down list to the right if you would like the project to be reviewed under a different classification.	Ozone - Serious
<b>Determination:</b>	<b>This project will be located in a county with a Serious Ozone nonattainment classification, and the project will be reviewed under a Serious Ozone nonattainment classification. Complete the nonattainment section below and provide an analysis with the application.</b>

II. PSD and GHG PSD Applicability Summary			
Is netting required for the PSD analysis for this project?			No
Pollutant	Project Increase	Threshold	PSD Review Required?
CO	43.71	100	No
NO <sub>x</sub>	6.06	40	No
PM	0	25	No
PM <sub>10</sub>	0	15	No
PM <sub>2.5</sub>	0	10	No
SO <sub>2</sub>	1.75	40	No
Pb			
H <sub>2</sub> S			
TRS			
Reduced sulfur compounds (including H <sub>2</sub> S)			
H <sub>2</sub> SO <sub>4</sub>			
Fluoride (excluding HF)			
CO <sub>2</sub> e			

III. Nonattainment Applicability Summary			
Is netting required for the nonattainment analysis for this project?			Yes
If yes, the project increases listed below should be after netting has been performed. Attach the netting information to the application.			
Pollutant	Project Increase (after netting)	Threshold	NA Review Required?

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**Federal Applicability**

Date: 10/16/2019  
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 Company: Lyondell

Ozone (as VOC)	0.67	40	No
Ozone (as NO <sub>x</sub> )	6.06	5	Yes

**IV. Offset Summary (for Nonattainment Permits)**

Pollutant	Offset Ratio	Offset Quantity Required (tpy)	Where is the offset coming from?
Ozone (as NO <sub>x</sub> )	1.20 : 1	7.272	Purchase


**Texas Commission on Environmental Quality  
Form PI-1 General Application  
Fees**

Date: 10/16/2019  
Permit #: 4121  
Company: Lyondell

<b>I. General Information - Non-Renewal</b>	
Is this project for new facilities controlled and operated directly by the federal government? (30 TAC § 116.141(b)(1) and 30 TAC § 116.163(a))	No
A fee of \$75,000 shall be required if no estimate of capital project cost is included with the permit application. (30 TAC § 116.141(d)) Select "yes" here to use this option. Then skip sections II and III.	No
<b>Select Application Type</b>	Major Application

<b>II. Direct Costs - Non-Renewal</b>	
Type of Cost	Amount
Process and control equipment not previously owned by the applicant and not currently authorized under this chapter.	\$0.00
Auxiliary equipment, including exhaust hoods, ducting, fans, pumps, piping, conveyors, stacks, storage tanks, waste disposal facilities, and air pollution control equipment specifically needed to meet permit and regulation requirements.	\$0.00
Freight charges.	\$0.00
Site preparation, including demolition, construction of fences, outdoor lighting, road, and parking areas.	\$0.00
Installation, including foundations, erection of supporting structures, enclosures or weather protection, insulation and painting, utilities and connections, process integration, and process control equipment.	\$0.00
Auxiliary buildings, including materials storage, employee facilities, and changes to existing structures.	\$0.00
Ambient air monitoring network.	\$0.00
<b>Sub-Total:</b>	\$0.00

<b>III. Indirect Costs - Non-Renewal</b>	
Type of Cost	Amount
Final engineering design and supervision, and administrative overhead.	\$0.00
Construction expense, including construction liaison, securing local building permits, insurance, temporary construction facilities, and construction clean-up.	\$0.00
Contractor's fee and overhead.	\$0.00
<b>Sub-Total:</b>	\$0.00

<b>IV. Calculations - Non-Renewal</b>	
For GHG permits: A single PSD fee (calculated on the capital cost of the project per 30 TAC § 116.163) will be required for all of the associated permitting actions for a GHG PSD project. Other NSR permit fees related to the project that have already been remitted to the TCEQ can be subtracted when determining the appropriate fee to submit with the GHG PSD application. Identify these other fees in the GHG PSD permit application.	
<b>In signing the "General" sheet with this fee worksheet attached, I certify that the total estimated capital cost of the project as defined in 30 TAC §116.141 is equal to or less than the above figure. I further state that I have read and understand Texas Water Code § 7.179, which defines Criminal Offenses for certain violations, including intentionally or knowingly making, or causing to be made, false material statements or representations.</b>	
<b>Estimated Capital Cost</b>	<b>Major Application Fee</b>

**Texas Commission on Environmental Quality  
Form PI-1 General Application  
Fees**

Date: 10/16/2019  
Permit #: 4121  
Company: Lyondell

Less than \$300,000		\$3,000 (minimum fee)
\$300,000 - \$7,500,000		1.0% of capital cost
\$300,000 - \$25,000,000		N/A
Greater than \$7,500,000		\$75,000 (maximum fee)
Greater than \$25,000,000		N/A

<b>Your estimated capital cost:</b>	<b>\$0.00</b>	Minimum fee applies.
<b>Permit Application Fee:</b>		<b>\$3,000.00</b>


VI. Total Fees	
<b>Note: fees can be paid together with one payment or as two separate payments.</b>	
Non-Renewal Fee	\$3,000.00
Total	\$3,000.00

VII. Payment Information	
<b>A. Payment One (required)</b>	
Was the fee paid online?	No
Enter the fee amount:	\$ 3,000.00
Enter the check, money order, ePay Voucher, or other transaction number:	WRS0019804
Enter the Company name as it appears on the check:	Lyondell Chemical Company
<b>C. Total Paid</b>	<b>\$3,000.00</b>

VIII. Professional Engineer Seal Requirement	
Is the estimated capital cost of the project above \$2 million?	No
Is the application required to be submitted under the seal of a Texas licensed P.E.? Note: an electronic PE seal is acceptable.	No

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Impacts**

Date: 10/16/2019  
 Permit #: 4121  
 Company: Lyondell

Pollutant	Does this pollutant require PSD review?	How will you demonstrate that this project meets all applicable requirements?	Notes	Additional Notes (optional)
Ozone	No	Modeling: screen or refined	Attach a completed "Electronic Modeling Evaluation Workbook" (EMEW).	
VOC	No	MERA analysis, steps 0-2 only or using screening tables	Attach a detailed description of which MERA step was met for each species in the project. Include speciated emission rates with the total VOC and/or PM species corresponding to the short-term and long-term differences represented on the Unit Types-Emission Rates sheet.	
CO	No	Modeling: screen or refined	Attach a completed "Electronic Modeling Evaluation Workbook" (EMEW).	
NOx	No	Modeling: screen or refined	Attach a completed "Electronic Modeling Evaluation Workbook" (EMEW).	
SO2	No	Modeling: screen or refined	Attach a completed "Electronic Modeling Evaluation Workbook" (EMEW).	

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**BACT**

Date: 10/16/2019  
 Permit #: 4121  
 Company: Lyondell

Plant Type	Current Tier I BACT		Confirm	Additional Notes		
Plant fuel gas facility	Maximum short term H2S emissions: 0.1 gr/dscf or 160 ppmv. Maximum annual H2S		Yes			
Action Requested	FINs	Unit Type	Pollutant	Current Tier I BACT	Confirm	Additional Notes
New/Modified	FL60731	Control: Flare	CO	Provide emission factor used and reference.	Yes	Use TCEQ factor of 0.3503 lb/MMBtu for high Btu, steam-assisted flare
			NOx	Provide emission factor used and reference.	Yes	Use TCEQ factor of 0.0486 lb/MMBtu for high Btu, steam-assisted flare
			VOC	VOC: Meets 40 CFR 60.18. Destruction Efficiency: 99% for certain compounds up to three carbons, 98% otherwise. No flaring of halogenated compounds is allowed. Flow monitor required. Composition or BTU analyzer may be required.	Yes	Meets 98% control efficiency and 99% for compounds up to 3 carbons
			SO2	Provide emission factor used and reference.	Yes	Natural Gas contains < 5 grain/dscf sulfur
			<b>MSS</b>	Same as normal operation BACT requirements.	Yes	No changes to MSS



**Texas Commission on Environmental Quality  
Form PI-1 General Application  
Monitoring**

Date: 10/16/2019  
Permit #: 4121  
Company: Lyondell

**Monitoring**

This sheet provides the minimum acceptable requirements to demonstrate compliance through monitoring for each pollutant proposed to be emitted from each FIN. This sheet also includes measuring techniques for sources of significant emissions in the project.

**Instructions:**

1. The unit types listed under Unit Type (column B) include all new, modified, consolidated, and/or renewed sources as indicated on the "Unit Types - Emission Rates" sheet. Each new, modified, consolidated, and/or renewed source must address how compliance will be demonstrated.
2. The pollutants listed in Pollutant (column C) include the pollutants indicated on the "Unit Types - Emission Rates" sheet.

**Monitoring (30 TAC § 116.111(a)(2)(G))**

3. The minimum acceptable monitoring is automatically populated for each unit type and pollutant.
  - Additional monitoring may be required, particularly for Title V sources, and will be included in the NSR and/or Title V permits.
4. Fully expand the Minimum Monitoring Requirements (column D) by increasing the row heights so all text is visible. (Place the cursor on the bottom of the number line to the far left of the screen, click and drag downward until all text is visible.)
5. Review the monitoring and confirm that you will meet all representations listed on the sheet and any additional attachments by entering or selecting "Yes" in Confirm (column E).
6. Add additional notes as necessary in Additional Notes for Monitoring (column F), limited to 500 characters or fewer. Examples include the following:
  - Proposed monitoring for pollutants or units that list "See additional notes:";
  - Details requested in the populated data;
  - Alternative monitoring you are proposing; and
  - Any additional information relevant to the minimization of emissions.
7. Cap EPNs do not need monitoring (leave those rows blank).

**Measurement of Emissions (30 TAC § 116.111(a)(2)(B))**

- Note: this section will be greyed out if this project does not require PSD or nonattainment review, as represented on the General sheet.
7. For each pollutant with a project increase **greater** than the PSD significant emission rate, select the proposed measurement technique using the dropdown (column G).
  8. For each pollutant with a project increase **less** than the PSD significant emission rate: leave blank.
  9. If selecting "other", provide details in Additional Notes for Measuring (column H).
  10. You may also use the Additional Notes for Measuring (column H) to provide more details on a selection.

[Click here to return to Cover Sheet.](#)

**Important Note:** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours. All required records must be maintained in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application. The site must make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner. The applicant must comply with any additional recordkeeping requirements specified in special conditions in the permit. All records must be retained in the file for at least two years following the date that the information or data is obtained. Some permits are required to maintain records for five years. [30 TAC § 116.115(b)(2)(E)]

FIN	Unit Type	Pollutant	Minimum Monitoring Requirements	Confirm	Additional Notes for Monitoring	Proposed Measurement Technique (only complete for pollutants with a project increase above the PSD threshold)	Additional Notes for Measuring:
FL60731	Control: Flare	CO	Pilot flame presence monitored continuously. Waste gas flow and composition monitored continuously (measured at the instrument's capability or every 15 minutes, which ever is less) with hourly	Yes	Monitor vent flow and analyze vent stream		
		NOx	Pilot flame presence monitored continuously. Waste gas flow and	Yes	Monitor vent flow and analyze vent stream		
		VOC	Pilot flame presence monitored continuously. Waste gas flow and	Yes	Monitor vent flow and analyze vent stream		
		SO2	Pilot flame presence monitored continuously. Waste gas flow and	Yes	Monitor vent flow and analyze vent stream		

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Materials**

Date:   10/16/2019    
 Permit #:   4121    
 Company:   Lyondell  

Item	How submitted	Date submitted
<b>A. Administrative Information</b>		
Form PI-1 General Application	Email	11/19/2019
Hard copy of the General sheet with original (ink) signature	Mail	11/19/2019
Professional Engineer Seal	Not applicable	
<b>B. General Information</b>		
Copy of current permit (both Special Conditions and MAERT)		
Core Data Form		
Area map	Mail	11/19/2019
Plot plan	Mail	11/19/2019
Process description	Mail	11/19/2019
Process flow diagram	Mail	11/19/2019
List of MSS activities		
State regulatory requirements discussion	Mail	11/19/2019
<b>C. Federal Applicability</b>		
Summary and project emission increase determination - Tables 1F and 2F	Mail	11/19/2019
Netting analysis (if required) - Tables 3F and 4F as needed	Not applicable	
<b>D. Technical Information</b>		
BACT discussion, if additional details are attached	Email	11/19/2019
Monitoring information, if additional details are attached	Email	11/19/2019
Material Balance (if applicable)	Not applicable	
Calculations	Email	11/19/2019
<b>E. Impacts Analysis</b>		
Qualitative impacts analysis		
MERA analysis	Email	11/19/2019
Electronic Modeling Evaluation Workbook: SCREEN3	Email	11/19/2019
Electronic Modeling Evaluation Workbook: NonSCREEN3	Not applicable	
PSD modeling protocol		
<b>F. Additional Attachments</b>		
Expedited Fee	Mail	11/19/2019

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**General**

Date:   10/15/2019  
Permit #:   19155  
Company Name:   Lyondell

**EMEW Version No.:** Version 2.2

**Purpose Statement:**

This workbook is completed by the applicant and submitted to the Texas Commission on Environmental Quality (TCEQ), specifically, the Air Dispersion Modeling Team (ADMT) for review. This workbook is a tool available for all projects using SCREEN3 for an impacts review and its use is required starting June 1, 2019. Provide the workbook with the permit application submittal for any Minor New Source Review project requiring a modeling impacts demonstration.

This workbook follows the guidance outlined in the Air Quality Modeling Guidelines (APDG 6232, September 2018) which can be found here:

<https://www.tceq.texas.gov/assets/public/permitting/air/Modeling/guidance/airquality-mod-guidelines6232.pdf>

**Workbook Instructions:**

1. Save a copy of the workbook to your computer or desktop prior to entering data.
2. Complete all required sections leaving no blanks. You may use the "tab" button or the arrow keys to move to the next available cell. Use "enter" to move down a line. Note: drop-downs are case-sensitive.
3. Fill in the workbook in order, do not skip around as this will cause errors. Use caution if changing a previously entered entry.
4. Not applicable sections of this workbook will be hidden as data is entered. For example, answering "No" to "Is downwash applicable?" will hide these sections of the workbook required only for downwash entry.
5. Email the workbook electronic file (EMEW) and any attachments to the Air Permits Initial Review Team. The subject line should read "Company Name - Permit Number (if known) - NSR Permit Application". Email address:

[apirt@tceq.texas.gov](mailto:apirt@tceq.texas.gov)

6. If printing the EMEW, follow the directions below to create a workbook header.
7. Printing the EMEW is not required for submitting to the Air Permits Division (APD); however, you may need to print it for sending to the regional offices, local programs, and for public access if notice is required. To print the workbook, follow the instructions below. Please be aware, several sheets contain large amounts of data and caution should be taken if printing, such as the Speciated Emissions sheet.
8. Updates may be necessary throughout the review process. Updated workbooks must be submitted in electronic format to APD. For submittal to regional offices, local programs, or public places you only have to print sheets that had updates. Be sure to change the headers accordingly.

**Note:** Since this will be part of the permit application, follow the instructions in the Form PI-1 General Application on where to send copies of your EMEW and permit application. The NSR Application Workbook can be found

<https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/nsrapp-tools.html>

**Create Headers Before Printing:**

1. Right-click one of the workbook's sheet tabs and "Select All Sheets."
2. Enter the "Page Layout View" by using the navigation ribbon's View > Workbook Views > Page Layout, or by clicking the page layout icon in the lower-right corner of Excel.
3. Add the date, company name, and permit number (if known) to the upper-right header. Note that this may take up to a minute to update your spreadsheet. Select any tab to continue working on the spreadsheet.

**Printing Tips:**

While APD does not need a hard copy of the full workbook, you may need to print it for sending to the regional offices, local programs, and for public access if notice is required.

1. The default printing setup for each sheet in the workbook is set for the TCEQ preferred format. The print areas are set up to not include the instructions on each sheet.
2. You have access to change all printing settings to fit your needs and printed font size. Some common options include:
  - Change what area you are printing (whole active sheet or a selection);
  - Change the orientation (portrait or landscape);
  - Change the margin size; and
  - Change the scaling (all columns on one sheet, full size, your own custom selection, etc.).

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**General**

Date:   10/15/2019  
 Permit #:   19155  
 Company Name:   Lyondell

<b>Acknowledgement:</b>	<b>Select from the drop down:</b>
I acknowledge that I am submitting an authorized TCEQ Electronic Modeling Evaluation Workbook and any necessary attachments. Except for inputting the requested data, I have not changed the TCEQ Electronic Modeling Evaluation Workbook in any way, including but not limited to changing formulas, formatting, content, or protections.	Choose an item

Administrative Information:	
Data Type:	Facility Information:
Project Number (6 Digits):	
Permit Number:	4121
Regulated Entity ID (9 Digits):	100633650
Facility Name:	Lyondell Channelview
Facility Address:	2502 Sheldon Road
Facility County (select one):	Harris
Company Name:	Lyondell Chemical Company
Company Contact Name:	Teresa Peneguy
Company Contact Number:	281-452-8330
Company Contact Email:	<a href="mailto:teresa.peneguy@lyb.com">teresa.peneguy@lyb.com</a>
Modeling Contact Name:	Teresa Peneguy
Modeling Company Name, as applicable:	LyondellBasell
Modeling Contact Number:	281-452-8330
Modeling Contact Email:	<a href="mailto:teresa.peneguy@lyb.com">teresa.peneguy@lyb.com</a>
New/Existing Site (select one):	Existing Site
Modeling Date (MM/DD/YYYY):	10/15/2019
UTM Zone (select one):	15

**Sheet Instructions:** Indicate in the Table of Contents which sections are applicable and included for this modeling demonstration. Select "X" from the drop down if the item below is included in the workbook. Note: This workbook is only for SCREEN3 analyses. Please use the separate Electronic Modeling Evaluation Workbook (EMEW) for the following air dispersion models: AERSCREEN, ISC/ISCPrime, and/or AERMOD.

Table of Contents		
Section:	Sheet Title <i>(Click to jump to specific sheet):</i>	Select an X from the dropdown menu if included:
1	General	
2	<a href="#">Model Options</a>	X
3	<a href="#">Building Downwash</a>	X
4	<a href="#">Flare Source Parameters</a>	X
5	<a href="#">Point Source Parameters</a>	
6	<a href="#">Area Source Parameters</a>	
7	<a href="#">Volume Source Calculations</a>	
8	<a href="#">Volume Source Parameters</a>	
9	<a href="#">Point and Flare Source Emissions</a>	X
10	<a href="#">Area Source Emissions</a>	
11	<a href="#">Volume Source Emissions</a>	
12	<a href="#">Speciated Emissions</a>	X
13	<a href="#">Intermittent Sources</a>	
14	<a href="#">Modeling Scenarios</a>	X
15	<a href="#">Monitor Calculations</a>	
16	<a href="#">Background Justification</a>	
17	<a href="#">Secondary PM2.5 Analysis (MERPs calculations)</a>	
18	<a href="#">NAAQS/State Property Line (SPL) Modeling Results</a>	X
19	<a href="#">Unit Impact Multipliers</a>	X
20	<a href="#">Health Effects Modeling Results</a>	X
21	<a href="#">Modeling File Names</a>	X
22	<a href="#">Speciated Chemicals</a>	X

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**General**

Date:   10/15/2019  
 Permit #:   19155  
 Company Name:   Lyondell

<b>Included Attachments</b>	<b>Select an X from the dropdown menu if included:</b>
Instructions: The following are attachments that must be included with any modeling analysis. If providing the plot plan and area map with the permit application, ensure there is also a copy with the EMEW. The copy can be electronic.	
<b>Plot Plan:</b>	
Instructions: Mark all that apply in the attached plot plan. For larger properties or dense source areas, provide multiple zoomed in plot plans that are legible.	
Property/Fence Lines all visible and marked.	X
North arrow included.	X
Clearly marked scale.	X
All sources and buildings are clearly labeled.	X
<b>Area Map:</b>	
Instructions: Mark all that apply in the attached area map.	
Annotate schools within 3,000ft of source's nearest property line.	X
All property lines are included.	X
Non-industrial receptors are identified.	X
<b>Additional Attachments (as applicable):</b>	<b>Select an X from the dropdown menu if included:</b>
<i>Note: These are just a few examples of attachments that may need to be included. There may be others depending on the scope of the modeling analysis.</i>	
<b>Single Property Line Designation</b>	
Include Agreement, Order, and map defining each petitioner.	X
<b>Post Processing using Unit Impact Multipliers (UIMs)</b>	
Include documentation on any calculations used with the UIMs (i.e., Step 3 of the MERA).	
<b>Modeling Techniques</b>	
Provide documentation on modeling techniques indicated in the workbook.	
<b>Other Attachments</b>	
Provide a list in the box below of additional attachments being provided that are not listed above:	
	Choose an item

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**Model Options**

Date: \_10/15/2019  
 Permit #: \_\_19155  
 Company Name: \_\_Lyondell

**I. Project Information**

**A. Project Overview:** In the box below, give a brief Project Overview. To type or insert text in box, double click in the box below. *Please limit your response to 2000 characters.*

Natural gas is being added to flare to meet future regulatory flame zone heat value requirements for flares.

**II. Air Dispersion Modeling Preliminary Information**

**Instructions:** Fill in the information below based on your modeling setup. The selections chosen in this sheet will carry throughout the sheet and workbook. Based on selections below, only portions of the sheet and workbook will be available. Therefore, it is vital the sheet and workbook are filled out in order, do NOT skip around.

For larger text boxes, double click to type or insert text.

**A. Building Downwash**

No  Is downwash applicable? (Select "Yes" or "No")

**B. Type of Analyses:** (Select "X" in all that apply)

X  Minor NSR NAAQS      X  State Property Line

X  Health Effects

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**Model Options**

Date:   10/15/2019  
 Permit #:   19155  
 Company Name:   Lyondell

**C. Constituents Evaluating:** (Select "X" in all that apply)

**NAAQS:** List all pollutants that require an modeling review. (Select "X" in all that apply)

<input checked="" type="checkbox"/>	SO <sub>2</sub>	<input type="checkbox"/>	PM <sub>10</sub>
<input checked="" type="checkbox"/>	CO	<input type="checkbox"/>	PM <sub>2.5</sub>
<input type="checkbox"/>	Pb	<input checked="" type="checkbox"/>	NO <sub>2</sub>

Both  Identify which averaging periods are being evaluated for NO<sub>2</sub>.

Tier 2: 0.9  Identify the 1-hr NO<sub>2</sub> tier used for SCREEN3.

Tier 2: 0.9  Identify the annual NO<sub>2</sub> tier used for SCREEN3.

**State Property Line:** List all pollutants that require an modeling review. (Select "X" in all that apply)

<input type="checkbox"/>	H <sub>2</sub> S	<input checked="" type="checkbox"/>	SO <sub>2</sub>
<input type="checkbox"/>	H <sub>2</sub> SO <sub>4</sub>	<input type="checkbox"/>	

**Health Effects:** Fill in the Speciated Emissions sheet with all applicable pollutants, CAS numbers, and ESLs.

**D. Dispersion Options:** Select "X" in the box to select an option. Note: if selecting both options, be sure to explain the reasoning for this in the box below.

<input checked="" type="checkbox"/>	Urban
<input type="checkbox"/>	Rural

Provide justification on the dispersion option selected above in the following box:

Located in municipality of Channelview Texas



**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**Model Options**

Date: \_10/15/2019  
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Company Name: \_\_Lyondell

**E. Meteorological Data:**

Select Meteorological Dataset Modeled:

**F. Receptor Grid:**

Describe the receptor grid being modeled in the following text box:

10 m - 25000 m array; at ground level

**G. Terrain:**

Select the terrain option being modeled:

For justification on terrain selection, fill in the box below:

Land is costal and flat

**H. Modeling Techniques: *Briefly describe any modeling techniques used for the SCREEN3 analyses. Provide additional attachments, if needed, to support the analyses.***

Modeled emissions equivalent to 1 lb/hr increase; emissions from flares sufficient height to not be impacted by downwash structures.

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**Flare Source Parameters**

Date: \_10/15/2019  
Permit #: \_\_19155  
Company Name: \_\_Lyondell

**Facility:**

EPN	Model ID	Modeling Scenario	Easting: X [m]	Northing: Y [m]	Height [m]	Heat Release (cal/s)	Description
EFL60731	FL60731	Routine	296868.00	3300569.00	33.53	2755456.07	Continuous Flare

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**Point + Flare Emissions**

Date: \_10/15/2019  
 Permit #: \_\_19155  
 Company Name: \_\_Lyondell

Facility:

EPN	Model ID	Modeling Scenario	Pollutant	Averaging Time	Standard Type	Review Context	Intermittent Source?	Modeled Emission Rate [lb/hr]	Basis of Emission Rate	Scalars or Factors Used?	Scalar/Factor in Use	Downwash Structure Considered	Distance to Ambient Air (m)
EFL60731	FL60731	Routine	Generic	1-hr			No	1.00	Generic Modeling at 1 lb/hr	No		SBLD45	203.00

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**Speciated Emissions**

Date: \_10/15/2019  
 Permit #: \_\_19155  
 Company Name: \_\_Lyondell

**Speciated Emissions by Model ID**

CAS #	Chemical Species	Other Species	Short-Term ESL ( $\mu\text{g}/\text{m}^3$ )	Long-Term ESL ( $\mu\text{g}/\text{m}^3$ )			
74-98-6	propane		Simple Asphyxiant	Simple Asphyxiant			

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**Combined Emissions**

Date: \_10/15/2019  
Permit #: \_\_19155  
Company Name: \_\_Lyondell

EPN	Model ID	Modeling scenario	Pollutant	Modeled Averaging time	Standard Type	Review Context	Intermittent	Source Type	Modeled Emission Rate [lb/hr]	Downwash Structure Considered
EFL60731	FL60731	Routine	Generic	1-hr	NAAQS	SIL Analysis	No	Flare	1.00	SBLD45

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**Modeling Scenarios**

Date: \_10/15/2019  
Permit #: \_\_19155  
Company Name: \_\_Lyondell

Modeling Scenario	Scenario Description:
Routine	Normal operation

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**NAAQS-SPL Modeling Results**

Date: \_10/15/2019  
 Permit #: \_\_19155  
 Company Name: \_\_Lyondell

**Table 1. Project-Related Modeling Results for State Property Line**

Pollutant	Averaging Time	GLCmax ( $\mu\text{g}/\text{m}^3$ )	De Minimis ( $\mu\text{g}/\text{m}^3$ )
SO <sub>2</sub>	1-hr	1.43000	14.3
H <sub>2</sub> SO <sub>4</sub>	1-hr		1
H <sub>2</sub> SO <sub>4</sub>	24-hr		0.3
H <sub>2</sub> S	1-hr		2.16 <i>(If property is residential, recreational, business, or commercial)</i>
H <sub>2</sub> S	1-hr		3.24 <i>(If property is not residential, recreational, business, or commercial)</i>

**Table 2. Site-wide Modeling Results for State Property Line**

Pollutant	Averaging Time	GLCmax ( $\mu\text{g}/\text{m}^3$ )	Standard ( $\mu\text{g}/\text{m}^3$ )
SO <sub>2</sub>	1-hr		715
H <sub>2</sub> SO <sub>4</sub>	1-hr		50
H <sub>2</sub> SO <sub>4</sub>	24-hr		15
H <sub>2</sub> S	1-hr		108 <i>(If property is residential, recreational, business, or commercial)</i>
H <sub>2</sub> S	1-hr		162 <i>(If property is not residential, recreational, business, or commercial)</i>

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**NAAQS-SPL Modeling Results**

Date: \_10/15/2019  
 Permit #: \_\_19155  
 Company Name: \_\_Lyondell

**Table 3. Modeling Results for Minor NSR De Minimis**

Pollutant	Averaging Time	GLCmax ( $\mu\text{g}/\text{m}^3$ )	De Minimis ( $\mu\text{g}/\text{m}^3$ )
SO <sub>2</sub>	1-hr	1.43000	7.8*
SO <sub>2</sub>	3-hr	1.29000	25
SO <sub>2</sub>	24-hr	0.57000	5
SO <sub>2</sub>	Annual	0.11000	1
PM <sub>10</sub>	24-hr		5
NO <sub>2</sub>	1-hr	4.46000	7.5**
NO <sub>2</sub>	Annual	0.36000	1
CO	1-hr	35.76000	2000
CO	8-hr	25.03000	500

Additional information for the De Minimis values listed above can be found at:

\* [www.tceq.texas.gov/assets/public/permitting/air/memos/appwso2.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/memos/appwso2.pdf)

\*\* [www.tceq.texas.gov/assets/public/permitting/air/memos/guidance\\_1hr\\_no2naaqs.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf)



**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**NAAQS-SPL Modeling Results**

Date: \_10/15/2019  
 Permit #: \_\_19155  
 Company Name: \_\_Lyondell

**Table 4. PM<sub>2.5</sub> Modeling Results for Minor NSR De Minimis**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Secondary PM <sub>2.5</sub> Contribution (µg/m <sup>3</sup> )	Total Conc. = Secondary PM <sub>2.5</sub> + GLCmax (µg/m <sup>3</sup> )	De Minimis (µg/m <sup>3</sup> )
PM <sub>2.5</sub>	24-hr		0	0.00000	1.2*
PM <sub>2.5</sub>	Annual		0	0.00000	0.2*

Additional information for the De Minimis values listed above can be found at:

\* [www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html](http://www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html)

**Table 5. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	Total Conc. = [Background + GLCmax] (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr		0	0	196
SO <sub>2</sub>	3-hr		0	0	1300
SO <sub>2</sub>	24-hr		0	0	365
SO <sub>2</sub>	Annual		0	0	80
PM <sub>10</sub>	24-hr		0	0	150
Pb	3-mo		0	0	0.15
NO <sub>2</sub>	1-hr		0	0	188
NO <sub>2</sub>	Annual		0	0	100
CO	1-hr		0	0	40000
CO	8-hr		0	0	10000

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**NAAQS-SPL Modeling Results**

Date: \_10/15/2019  
 Permit #: \_\_19155  
 Company Name: \_\_Lyondell

Table 6. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)

Pollutant	Averaging Time	GLCmax ( $\mu\text{g}/\text{m}^3$ )	Secondary $\text{PM}_{2.5}$ Contribution ( $\mu\text{g}/\text{m}^3$ )	Background ( $\mu\text{g}/\text{m}^3$ )	Total Conc. = [Background + Secondary + GLCmax] ( $\mu\text{g}/\text{m}^3$ )	Standard ( $\mu\text{g}/\text{m}^3$ )
PM <sub>2.5</sub>	24-hr		0	0	0	35
PM <sub>2.5</sub>	Annual		0	0	0	12

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**Unit Impact Multipliers**

Date: \_10/15/2019  
 Permit #: \_\_19155  
 Company Name: \_\_Lyondell

**Facility:**

EPN	Model ID	Modeling Scenario	1-hr GLCmax ( $\mu\text{g}/\text{m}^3$ per lb/hr)	3-hr GLCmax ( $\mu\text{g}/\text{m}^3$ per lb/hr)	8-hr GLCmax ( $\mu\text{g}/\text{m}^3$ per lb/hr)	24-hr GLCmax ( $\mu\text{g}/\text{m}^3$ per lb/hr)	Annual GLCmax ( $\mu\text{g}/\text{m}^3$ per lb/hr)
EFL60731	FL60731	Routine	5.56E-01	0.5004	0.3892	0.2224	0.04448

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**Health Effect Modeling Results**

Date: \_10/15/2019  
 Permit #: \_\_19155  
 Company Name: \_\_Lyondell

Facility:

Modeled Health Effect Results (MERA Guidance):				Step 3	Step 4: Production	
Chemical Species	CAS Number	Averaging Time	ESL [ $\mu\text{g}/\text{m}^3$ ]	10% ESL Step 3 Modeled GLCmax [ $\mu\text{g}/\text{m}^3$ ]	25 % ESL Step 4 Production GLCmax since most recent site wide modeling [ $\mu\text{g}/\text{m}^3$ ]	10% ESL Step 4 Production Project Only GLCmax [ $\mu\text{g}/\text{m}^3$ ]
propane	74-98-6	1-hr	Simple Asphyxiant			
propane	74-98-6	Annual	Simple Asphyxiant			

**Texas Commission on Environmental Quality**  
**Electronic Modeling Evaluation Workbook for SCREEN3**  
**Modeling File Names**

Date: \_10/15/2019  
Permit #: \_\_19155  
Company Name: \_\_Lyondell

Facility:

Model File Base Name	Pollutant	Averaging Time	File Extensions	Additional File Description
POSMI DW	generic	1-hr	.s3i	project analysis

02/06/20

18:28:12

\*\*\* SCREEN3 MODEL RUN \*\*\*

\*\*\* VERSION DATED 13043 \*\*\*

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = FLARE  
EMISSION RATE (G/S) = 0.125998  
FLARE STACK HEIGHT (M) = 33.5280  
TOT HEAT RLS (CAL/S) = 0.275546E+07  
RECEPTOR HEIGHT (M) = 0.0000  
URBAN/RURAL OPTION = RURAL  
EFF RELEASE HEIGHT (M) = 38.9903  
BUILDING HEIGHT (M) = 5.4900  
MIN HORIZ BLDG DIM (M) = 10.6680  
MAX HORIZ BLDG DIM (M) = 19.2700

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.

THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 45.686 M<sup>4</sup>/S<sup>3</sup>; MOM. FLUX = 27.859 M<sup>4</sup>/S<sup>2</sup>.

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\*\*\*

\*\*\* SCREEN AUTOMATED DISTANCES \*\*\*

\*\*\*\*\*

\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*\*

DIST CONC U10M USTK MIX HT PLUME SIGMA SIGMA  
(M) (UG/M\*\*3) STAB (M/S) (M/S) (M) HT (M) Y (M) Z (M) DWASH

---

10.	0.000	1	1.0	1.1	382.3	381.28	7.67	7.08	NO
100.	0.1806E-05	5	1.0	1.6	10000.0	129.65	22.71	22.15	NO
200.	0.2456E-03	1	3.0	3.3	960.0	153.09	52.76	33.84	NO
300.	0.4313E-01	1	3.0	3.3	960.0	153.09	75.12	52.38	NO
400.	0.2185	1	3.0	3.3	960.0	153.09	96.53	76.07	NO
500.	0.3553	1	3.0	3.3	960.0	153.09	117.26	109.20	NO
600.	0.3590	1	2.5	2.7	800.0	175.91	138.51	158.83	NO
700.	0.4555	1	1.0	1.1	382.3	381.28	181.00	234.68	NO
800.	0.5471	1	1.0	1.1	382.3	381.28	197.33	299.43	NO
900.	0.5496	1	1.0	1.1	382.3	381.28	213.86	376.07	NO
1000.	0.5179	1	1.0	1.1	382.3	381.28	230.48	464.27	NO
1100.	0.4836	1	1.0	1.1	382.3	381.28	247.16	563.84	NO
1200.	0.4531	1	1.0	1.1	382.3	381.28	263.86	674.71	NO
1300.	0.4261	1	1.0	1.1	382.3	381.28	280.53	796.86	NO
1400.	0.4023	1	1.0	1.1	382.3	381.28	297.18	930.29	NO
1500.	0.3810	1	1.0	1.1	382.3	381.28	313.78	1075.06	NO
1600.	0.3619	1	1.0	1.1	382.3	381.28	330.33	1231.20	NO
1700.	0.3447	1	1.0	1.1	382.3	381.28	346.82	1398.76	NO
1800.	0.3291	1	1.0	1.1	382.3	381.28	363.24	1577.82	NO
1900.	0.3149	1	1.0	1.1	382.3	381.28	379.60	1768.43	NO
2000.	0.3054	2	1.0	1.1	382.3	381.28	302.07	253.45	NO
2100.	0.3101	2	1.0	1.1	382.3	381.28	314.06	265.36	NO

2200.	0.3121	2	1.0	1.1	382.3	381.28	326.02	277.40	NO
2300.	0.3120	2	1.0	1.1	382.3	381.28	337.97	289.58	NO
2400.	0.3102	2	1.0	1.1	382.3	381.28	349.88	301.88	NO
2500.	0.3069	2	1.0	1.1	382.3	381.28	361.77	314.28	NO
2600.	0.3026	2	1.0	1.1	382.3	381.28	373.62	326.79	NO
2700.	0.2975	2	1.0	1.1	382.3	381.28	385.45	339.39	NO
2800.	0.2918	2	1.0	1.1	382.3	381.28	397.25	352.07	NO
2900.	0.2857	2	1.0	1.1	382.3	381.28	409.01	364.84	NO
3000.	0.2795	2	1.0	1.1	382.3	381.28	420.74	377.69	NO
3500.	0.2490	2	1.0	1.1	382.3	381.28	478.92	442.96	NO
4000.	0.2356	3	1.0	1.1	368.6	367.59	373.46	236.69	NO
4500.	0.2386	3	1.0	1.1	368.6	367.59	412.63	259.56	NO
5000.	0.2346	3	1.0	1.1	368.6	367.59	451.51	282.52	NO
5500.	0.2265	3	1.0	1.1	368.6	367.59	490.09	305.52	NO
6000.	0.2163	3	1.0	1.1	368.6	367.59	528.39	328.53	NO
6500.	0.2195	5	1.0	1.6	10000.0	129.65	278.15	68.68	NO
7000.	0.2224	5	1.0	1.6	10000.0	129.65	297.07	70.93	NO
7500.	0.2240	5	1.0	1.6	10000.0	129.65	315.84	73.12	NO
8000.	0.2243	5	1.0	1.6	10000.0	129.65	334.47	75.24	NO
8500.	0.2237	5	1.0	1.6	10000.0	129.65	352.97	77.31	NO
9000.	0.2224	5	1.0	1.6	10000.0	129.65	371.35	79.32	NO
9500.	0.2205	5	1.0	1.6	10000.0	129.65	389.60	81.29	NO
10000.	0.2181	5	1.0	1.6	10000.0	129.65	407.75	83.21	NO
15000.	0.1828	5	1.0	1.6	10000.0	129.65	583.96	99.01	NO
20000.	0.1513	5	1.0	1.6	10000.0	129.65	752.77	112.33	NO
25000.	0.1298	6	1.0	2.1	10000.0	107.70	610.07	67.76	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:

850.	0.5560	1	1.0	1.1	382.3	381.28	205.74	337.05	NO
------	--------	---	-----	-----	-------	--------	--------	--------	----



DWASH= MEANS NO CALC MADE (CONC = 0.0)  
DWASH=NO MEANS NO BUILDING DOWNWASH USED  
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED  
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED  
DWASH=NA MEANS DOWNWASH NOT APPLICABLE,  $X < 3 * LB$

\*\*\*\*\*

\*\*\* REGULATORY (Default) \*\*\*

PERFORMING CAVITY CALCULATIONS  
WITH ORIGINAL SCREEN CAVITY MODEL  
(BRODE, 1988)

\*\*\*\*\*

\*\*\* CAVITY CALCULATION - 1 \*\*\*      \*\*\* CAVITY CALCULATION - 2 \*\*\*

CONC (UG/M**3) = 0.000	CONC (UG/M**3) = 0.000
CRIT WS @10M (M/S) = 99.99	CRIT WS @10M (M/S) = 99.99
CRIT WS @ HS (M/S) = 99.99	CRIT WS @ HS (M/S) = 99.99
DILUTION WS (M/S) = 99.99	DILUTION WS (M/S) = 99.99
CAVITY HT (M) = 6.19	CAVITY HT (M) = 5.58
CAVITY LENGTH (M) = 13.97	CAVITY LENGTH (M) = 12.57
ALONGWIND DIM (M) = 10.67	ALONGWIND DIM (M) = 19.27

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

\*\*\*\*\*

END OF CAVITY CALCULATIONS

\*\*\*\*\*

\*\*\*\*\*

\*\*\* SUMMARY OF SCREEN MODEL RESULTS \*\*\*

\*\*\*\*\*

CALCULATION	MAX CONC	DIST TO	TERRAIN
PROCEDURE	(UG/M**3)	MAX (M)	HT (M)

-----

SIMPLE TERRAIN	0.5560	850.	0.
----------------	--------	------	----

\*\*\*\*\*

\*\* REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS \*\*

\*\*\*\*\*

EPN

Model ID GLCmax @ 1 lb/hr  
ug/m3

EFL60731

F60731 0.56 GLC max occurs beyond property line

multiplier  
0.08

Emissions Increase

EPN		17E01	GLCmax	ESL	< 10%	17E01	GLCmax	Cmax annu	ESL	< 10%
		Project Increase			ESL	Project Increase				ESL
		lb/hr	ug/m3	ug/m3		tpy	ug/m3	ug/m3	ug/m3	
NOx		8.92	<b>4.960</b>			6.06	0.769	<b>0.0615</b>		
CO		64.32	<b>35.762</b>			43.71	5.549	<b>0.4439</b>		
SO2		2.57	<b>1.429</b>			1.75	0.222	<b>0.0178</b>		
propane	74-98-6	0.99	<b>0.550</b>	Simple Asphyxiant		0.67	0.085	<b>0.0068</b>	Simple Asphyxiant	

	1-hr		3-hr		8-hr		24-hr		Annual	
	multiplier	ug/m3	multiplier	ug/m3	multiplier	ug/m3	multiplier	ug/m3	multiplier	ug/m3
NO2	0.9	4.46							0.08	0.36
CO	1	35.76			0.7	25.03				
SO2	1	1.43	0.9	1.29			0.4	0.57	0.08	0.11



**TABLE 3F  
PROJECT CONTEMPORANEOUS CHANGES<sup>1</sup>**

Company:	Equistar Chemicals, LP & Lyondell Chemical Company	
Permit Application Number:	Various	Criteria Pollutant: NO <sub>x</sub>

Project Date <sup>2</sup>	Facility at Which Emission Change Occured <sup>3</sup>		Permit No.	Project Name or Activity	Baseline Period	Baseline Emissions <sup>4</sup> (tons/year)	Proposed Emissions <sup>4</sup> (tons/year)	Difference (A-B) <sup>5</sup>	Creditable Increase or Decrease <sup>6</sup>	
	FIN	EPN								
1	Jan-2015	F-1203	EF1203	2128	KLP Project - Regeneration Heater	N/A- New Emission	-	0.24	0.24	0.24
2	Jan-2015	F-1202	EF1202	2128	KLP Project - Thermal Oxidizer	N/A- New Emission	-	2.19	2.19	2.19
3	Jan-2015	17FI1701	17E01	2128	KLP Project - East Plant Flare	2001-2002	19.73	24.40	4.67	4.67
4	Mar-2015	FL-6104	EFL6104	20416	Polyols 60KT Expansion	2004-2005	-	0.04	0.04	0.04
5	Mar-2015	ENGUT1	ENGUT1	79542	Engine Replacement	2013-2014	0.07	1.89	1.82	1.82
6	Mar-2015	EUTEN1	EUTEN1	132729	Engine Replacement	2013-2014	0.02	1.89	1.87	1.87
7	Mar-2015	OP2EN1	OP2EN1	98647	Engine Replacement	2013-2014	1.69	4.25	2.56	2.56
8	Mar-2015	OP1EN1	OP1EN1	112230	Engine Replacement	2013-2014	3.06	4.25	1.19	1.19
Page Subtotal <sup>7</sup>									14.58	
Project Emission										
<b>Summary of Contemporaneous Changes</b>									<b>Total</b>	<b>105.43</b>



**TABLE 3F  
PROJECT CONTEMPORANEOUS CHANGES<sup>1</sup>**

Company:	Equistar Chemicals, LP & Lyondell Chemical Company	
Permit Application Number:	Various	Criteria Pollutant: NO <sub>x</sub>

Project Date <sup>2</sup>	Facility at Which Emission Change Occured <sup>3</sup>		Permit No.	Project Name or Activity	Baseline Period	Baseline Emissions <sup>4</sup> (tons/year)	Proposed Emissions <sup>4</sup> (tons/year)	Difference (A-B) <sup>5</sup>	Creditable Increase or Decrease <sup>6</sup>	
	FIN	EPN								
9	May-2015	FL68493	EFL68493	Standard Permit 131137	FLARE TIP REPLACEMENT	2005-2006	1.69	0.11	-1.58	-
10	May-2015	FL68491	FL68491	133250	FLARE TIP REPLACEMENT	2013-2014	0.03	0.04	0.01	0.01
11	Dec-2015	48E01	48E01	PBR 136396	Alky Propane Project	N/A- New Emission	-	0.01	0.01	0.01
12	Oct-2016	ZMSENAIS	ZMSENAIS	101590	Update Emission Factor	2010-2011	1.79	2.87	1.08	1.08
13	Mar-2017	17FL1701, 17FL1701F, 17FL1701P	17E01	143753	Alky vent to East Plant Flare	2014-2015	2.50	7.37	4.87	4.87
14	Jun-2017	OP2EN1	OP2EN1	147365	Engine Replacement	N/A- New Emission	-	3.88	3.88	3.88
15	Jan-2018	38FL3801F	38E01	150258	Analyzer to Flare project	N/A- New Emission	-	0.01	0.01	0.01
16	Jan-2018	48FL4801F	48E01	150257	Analyzer to Flare project	N/A- New Emission	-	0.01	0.01	0.01
Page Subtotal <sup>7</sup>									9.87	
Project Emission										
<b>Summary of Contemporaneous Changes</b>									<b>Total</b>	<b>105.43</b>

TCEQ - 10156 (Revised 10/08) Table 3F  
 These forms are for use by facilities subject to air quality permit requirements and may be revised periodically. (APDG 5913v1)



**TABLE 3F  
PROJECT CONTEMPORANEOUS CHANGES<sup>1</sup>**

Company:	Equistar Chemicals, LP & Lyondell Chemical Company	
Permit Application Number:	Various	Criteria Pollutant: NO <sub>x</sub>

Project Date <sup>2</sup>	Facility at Which Emission Change Occured <sup>3</sup>		Permit No.	Project Name or Activity	Baseline Period	Baseline Emissions <sup>4</sup> (tons/year)	Proposed Emissions <sup>4</sup> (tons/year)	Difference (A-B) <sup>5</sup>	Creditable Increase or Decrease <sup>6</sup>	
	FIN	EPN								
17	Jan-2018	17FL1701F	17E01	150031	Analyzer to Flare project	N/A- New Emission	-	0.02	0.02	0.02
18	Mar-2019	25FL2502F, 25FL2502P	25E02	22779	PolyBD Renewal & Amendment	2011-2012	4.50	6.37	1.87	1.87
19	May-2018	EFL6104	FL6104	151560	GBL/NMP Production Increase	N/A- New Emission	-	0.00	0.00	0.00
20	Aug-2018	48EFL4801F	48E01	152624	Flex Coalescors	N/A- New Emission	-	0.01	0.01	0.01
21	Nov-2018	25FL25E01	25E01	153580	IPOH change in Crude Acetone Feed Conc	N/A - Project Actual Increase	-	0.07	0.07	0.07
22	Dec-2018	48FL4801F	48E01	153835	Flex C3 Membrane	N/A - Project Actual Increase	-	0.00	0.00	0.00
23	Jan-2019	48FL4801F	48E01	154482	Y-grage feed	N/A - Project Actual Increase	-	0.00	0.00	0.00
24	Mar-2019	EUTEN1	EUTEN1	155453	Air Compressor	N/A- New Emission	-	0.41	0.41	0.41
Page Subtotal <sup>7</sup>									2.40	
Project Emission										
<b>Summary of Contemporaneous Changes</b>									<b>Total</b>	<b>105.43</b>



**TABLE 3F  
PROJECT CONTEMPORANEOUS CHANGES<sup>1</sup>**

Company:	Equistar Chemicals, LP & Lyondell Chemical Company	
Permit Application Number:	Various	Criteria Pollutant: NO <sub>x</sub>

Project Date <sup>2</sup>	Facility at Which Emission Change Occured <sup>3</sup>		Permit No.	Project Name or Activity	Baseline Period	Baseline Emissions <sup>4</sup> (tons/year)	Proposed Emissions <sup>4</sup> (tons/year)	Difference (A-B) <sup>5</sup>	Creditable Increase or Decrease <sup>6</sup>	
	FIN	EPN								
25	Jan-2019	MEOHFLARE/ MEOHFLR2	EMEHOFLAR E/EMEHOFLR 2	154481	Flare operated unassisted	11/2016- 10/2018	1.8	7.97	6.18	6.18
26	Jan-2019	FL6104	EFL6104	154220	Polyols Production Increase	N/A - Project Actual Increase	-	0.00	0.00	0.00
27	Jan-2019	FL68491	EFL68491	154483	POSMII O2	N/A - Project Actual Increase	-	0.00	0.00	0.00
28	May-2020	37E03	37E03	156142	F-3701 Burner Mod	2011-2012	1.6	10.74	9.17	9.17
29	Sep-2019	EMEHOFLAR E	EMEHOFLAR E	8125	Renewal/Amend	N/A- New Emission	-	6.70	6.70	6.70
30	Mar-2019	PPTO	PPTO	156509	HTC	N/A- New Emission	-	0.12	0.12	0.12
31	May-2019	EUTENAIR1	EUTENAIR1	157139	Air Compressor & OP1 Engine	N/A- New Emission	-	1.73	1.73	1.73
32	May-2019	OP1EN1	OP1EN1	157139	Air Compressor & OP1 Engine	N/A- New Emission	-	3.88	3.88	3.88
Page Subtotal <sup>7</sup>									27.79	
Project Emission										
<b>Summary of Contemporaneous Changes</b>									<b>Total</b>	<b>105.4</b>



**TABLE 3F  
PROJECT CONTEMPORANEOUS CHANGES<sup>1</sup>**

Company:	Equistar Chemicals, LP & Lyondell Chemical Company	
Permit Application Number:	Various	Criteria Pollutant: NO <sub>x</sub>

Project Date <sup>2</sup>	Facility at Which Emission Change Occured <sup>3</sup>	Permit No.	Project Name or Activity	Baseline Period	A		B		C	
					Baseline Emissions <sup>4</sup> (tons/year)	Proposed Emissions <sup>4</sup> (tons/year)	Difference (A-B) <sup>5</sup>	Creditable Increase or Decrease <sup>6</sup>		
	FIN	EPN								
33	Jun-2019	17FL1701	17E01	157394	Move IPOH flare to East Plant	2014/2015	-	0.72	0.72	0.72
34	Jul-2019	17FL1701	17E01	157735	Alky Production Increase	N/A- New Emission	-	0.00	0.00	0.00
35	Nov-2019	OP2EN1	OP2EN1	159310	New OP2EN1	N/A- New Emission	-	3.88	3.88	3.88
36	Nov-2019	38E01	38E01	1768	Flare Nat Gas for 270 Flare HV compliance	N/A- New Emission	-	19.37	19.37	19.37
37	Nov-2019	17E01	17E01	2128	Flare Nat Gas for 270 Flare HV compliance	N/A- New Emission	-	9.11	9.11	9.11
38	Nov-2019	48E01	48E01	2933	Flare Nat Gas for 270 Flare HV compliance	N/A- New Emission	-	5.73	5.73	5.73
39	Nov-2019	FL60731	EFL60731	4121	Flare Nat Gas for 270 Flare HV compliance	N/A- New Emission	-	6.06	6.06	6.06
40	Nov-2019	EFL6105	EFL6105	18103	Flare Nat Gas for 270 Flare HV compliance	N/A- New Emission	-	3.25	3.25	3.25





**TABLE 3F  
PROJECT CONTEMPORANEOUS CHANGES<sup>1</sup>**

Company:	Equistar Chemicals, LP & Lyondell Chemical Company	
Permit Application Number:	Various	Criteria Pollutant: NO <sub>x</sub>

Project Date <sup>2</sup>	Facility at Which Emission Change Occured <sup>3</sup>		Permit No.	Project Name or Activity	Baseline Period	A	B	C	Credible Increase or Decrease <sup>6</sup>	
	FIN	EPN				Baseline Emissions <sup>4</sup> (tons/year)	Proposed Emissions <sup>4</sup> (tons/year)	Difference (A-B) <sup>5</sup>		
								Page Subtotal <sup>7</sup>	48.1	
								Project Emission		
<b>Summary of Contemporaneous Changes</b>								<b>Total</b>	<b>105.4</b>	
41	Nov-2019	EFL6103	EFL6103	19155	Flare Nat Gas for 270 Flare HV compliance	N/A- New Emission	-	1.81	1.81	1.81
42	Nov-2019	EFL6104	EFL6104	19155	Flare Nat Gas for 270 Flare HV compliance	N/A- New Emission	-	0.76	0.76	0.76
43	Dec-2019	EFL68491	EFL68491	19613	Flare Nat Gas for 270 Flare HV compliance	N/A- New Emission	-	0.10	0.10	0.10
44	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-
								Page Subtotal <sup>7</sup>	2.7	
								Project Emission		
<b>Summary of Contemporaneous Changes</b>								<b>Total</b>	<b>105.4</b>	

# COMPREHENSIVE REPORT

Report Date:12/30/2019

## Facility Information

<b>RBLC ID:</b>	TX-0864 (draft)	<b>Date</b>	
<b>Corporate/Company Name:</b>	EQUISTAR CHEMICALS, LP	<b>Determination</b>	
<b>Facility Name:</b>	EQUISTAR CHEMICALS CHANNELVIEW COMPLEX	<b>Last Updated:</b>	10/03/2019
<b>Facility Contact:</b>	KIM FOLEY 281-862-5150	<b>Permit</b>	N266,
<b>Facility Description:</b>	new propane dehydrogenation (PDH) unit and a new polypropylene (PP) production unit: (1) The action concerns the authorization for the PDH unit is under TCEQ Project No. 286455 with assigned Permit Nos. 152181, PSDTX1540, GHGPSDTX182, and N264. (2) The action concerns the authorization for the PP unit is under TCEQ Project No. 286467 with assigned Permit Nos. 152184, PSDTX1542, GHGPSDTX183and N266. evaluated as a single project for purposes of evaluating major NSR. The project is subject to Nonattainment New Source Review (NNSR) requirements for significant increases of VOC (an ozone precursor) and is subject to Prevention of Significant Deterioration (PSD) requirements for CO and particulate (PM, PM10 and PM2.5). Affected units with no modifications include the wastewater treatment system (WWTS) and C3 Splitter project of the Olefin plants	<b>Number:</b>	PSDTX1542, GHGPSDTX183
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>Permit Date:</b>	09/09/2019 (actual)
<b>Permit URL:</b>		<b>FRS Number:</b>	110064622207
<b>EPA Region:</b>	6	<b>SIC Code:</b>	2869
<b>Facility County:</b>	HARRIS	<b>NAICS Code:</b>	325199
<b>Facility State:</b>	TX	<b>COUNTRY:</b>	USA
<b>Facility ZIP Code:</b>			
<b>Permit Issued By:</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) (Agency Name) MICHAEL PARTEE(Agency Contact) (512) 239-3312 michael.partee@tceq.texas.gov		
<b>Other Agency</b>	Ms. Xuan Zhao, (512) 239-1664, Xuan.Zhao@tceq.texas.gov		
<b>Contact Info:</b>			
<b>Permit Notes:</b>	Other listed FRSN 110006531397		
<b>Affected Boundaries:</b>	<b>Boundary Type:</b> CLASS1	<b>Class 1 Area State:</b> AR	<b>Boundary:</b> Caney Creek
			<b>Distance:</b> > 250 km

## Process/Pollutant Information

**PROCESS NAME:** Process Vents  
**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , MACT , SIP  
**Control Method:** (A) Elevated Flare, MPGF  
**Est. % Efficiency:** 98.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Multi Point Ground Flare  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** natural gas  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , MACT , SIP  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT , SIP  
**Control Method:** (P) good combustion practices, design, natural gas fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT , SIP  
**Control Method:** (P) good combustion practices, design, natural gas fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices, design, natural gas fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

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**PROCESS NAME:** Elevated Flare  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** natural gas  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , MACT , SIP  
**Control Method:** (P) good combustion practices, design, natural gas fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT , SIP

**Control Method:** (P) good combustion practices, design, natural gas fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Tetrachloride  
**CAS Number:** 56-23-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices, design, natural gas fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2e</sub>)  
**CAS Number:** CO<sub>2e</sub>  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices, design, natural gas fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Vis-broken Process Vents  
**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** MACT , SIP  
**Control Method:** (A) thermal oxidizer  
**Est. % Efficiency:** 99.990  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information



**PROCESS NAME:** Thermal Oxidizer  
**Process Type:** 19.200 (Emission Control Afterburners & Incinerators (combustion gasses only))  
**Primary Fuel:** natural gas  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices, design, natural gas fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0200 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) SCR

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 50.0000 PPM 3% O2  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices, design, natural gas fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices, design, natural gas fuel

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices, design, natural gas fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices, design, natural gas fuel

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices, design, natural gas fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** Fixed Roof Storage Tanks  
**Process Type:** 42.005 (Petroleum Liquid Storage in Fixed Roof Tanks)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:**  
**Control Method:** (P) painted white, submerged fill  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Fugitive Components  
**Process Type:** 50.007 (Petroleum Refining Equipment Leaks/Fugitive Emissions)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 500.0000 PPMV  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , SIP  
**Control Method:** (P) 28LAER & 28PI  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 500.0000 PPMV  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , SIP  
**Control Method:** (P) LDAR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** Cooling Tower  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:** SIP

**Control Method:** (P) nondirect

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0050 % DRIFT

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) drift eliminators

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0050 % DRIFT  
**Emission Limit 2:** 6000.0000 PPMV TDS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) DRIFT ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 % DRIFT  
**Emission Limit 2:** 6000.0000 PPMV TDS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) DRIFT ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** WASTEWATER SYSTEM  
**Process Type:** 64.006 (Wastewater Collection & Treatment)



**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:** SIP

**Control Method:** (P) Process wastewater drains shall be equipped with water seals or equivalent. Quarterly visual or physical inspections on water seals.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** EMERGENCY DIESEL ENGINE

**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))

**Primary Fuel:** Ultra-low sulfur diesel

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:** SIP

**Control Method:** (P) Tier 4 exhaust emission standards specified at 40 CFR § 1039.101(b), 100 HR / YR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** SIP

**Control Method:** (P) Tier 4 exhaust emission standards specified at 40 CFR § 1039.101(b)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , SIP

**Control Method:** (P) Tier 4 exhaust emission standards specified at 40 CFR § 1039.101(b)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Tier 4 exhaust emission standards specified at 40 CFR § 1039.101(b)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Tier 4 exhaust emission standards specified at 40 CFR § 1039.101(b)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , SIP

**Control Method:** (P) Tier 4 exhaust emission standards specified at 40 CFR § 1039.101(b)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Tier 4 exhaust emission standards specified at 40 CFR § 1039.101(b)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** PRODUCT HANDLING

**Process Type:** 99.190 (Other Fugitive Dust Sources)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0050 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) BAGHOUSE

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) BAGHOUSE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) BAGHOUSE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** LIQUID PRODUCT LOADING  
**Process Type:** 42.010 (Volatile Organic Liquid Marketing (except 42.009))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Zinc / Zinc Compounds  
**CAS Number:** 7440-66-6  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Heavy Metals , InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** SIP  
**Control Method:** (B) annual DOT pressure tests per requirements of 49 CFR §180.407 for the tank trucks. Collected vapors from the truck loading of any compound with the VOC vapor pressure at or beyond 0.5 psia at 95oF or at the actual liquid temperature will be controlled by the multi-point ground flare  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Facility Information

**RBLC ID:** TX-0865 (draft)

**Corporate/Company Name:** EQUISTAR CHEMICALS, LP

**Facility Name:** EQUISTAR CHEMICALS CHANNELVIEW COMPLEX

**Facility Contact:** KIM FOLEY 281-862-5150

**Facility Description:** new PDH unit. Include a four heaters, one ground flare, one steam-assisted elevated flare, one cooling tower, one CCR vent scrubber, one ammonia vent scrubber, catalyst handling systems, several tanks/drums, wastewater, fugitive components and MSS activities.

**Permit Type:** A: New/Greenfield Facility

**Permit URL:**

**EPA Region:** 6

**Facility County:** HARRIS

**Facility State:** TX

**Facility ZIP Code:**

**Permit Issued By:** TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) (Agency Name)  
MICHAEL PARTEE(Agency Contact) (512) 239-3312 michael.partee@tceq.texas.gov

**Other Agency Contact** Ms. Xuan Zhao, (512) 239-1664, Xuan.Zhao@tceq.texas.gov

**Info:**

**Permit Notes:**

<b>Affected Boundaries:</b>	<b>Boundary Type:</b>	<b>Class 1 Area State:</b>	<b>Boundary:</b>	<b>Distance:</b>
	CLASS1	AR	Caney Creek	> 250 km

### Process/Pollutant Information

**PROCESS NAME:** Process Heaters

**Process Type:** 19.600 (Misc. Boilers, Furnaces, Heaters)

**Primary Fuel:** natural gas, process gas

**Throughput:** 202.00 MMBtu/hr

**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Date**

**Determination**

**Last Updated:** 10/03/2019

**Permit Number:** N264, PSDTX1540,  
GHGPSDTX182

**Permit Date:** 09/09/2019 (actual)

**FRS Number:** 110064622207

**SIC Code:** 2869

**NAICS Code:** 325199

**COUNTRY:** USA



**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 5.0000 PPMVD 3% O2 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , SIP

**Control Method:** (A) SCR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 5.5000 LB/MMSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:** MACT

**Control Method:** (P) Good combustion practices, clean fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 50.0000 PPMV 3% O2 1-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT  
**Control Method:** (P) Good combustion practices and low-emitting gaseous fuel.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Good combustion practices and low-emitting gaseous fuel.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Good combustion practices and low-emitting gaseous fuel.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Good combustion practices and low-emitting gaseous fuel.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Good combustion practices and low-emitting gaseous fuel.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** Process Heaters MSS  
**Process Type:** 19.600 (Misc. Boilers, Furnaces, Heaters)  
**Primary Fuel:** natural gas, process gas  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0100 LB/MMBTU 1-HR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , SIP  
**Control Method:** (B) SCR  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** All other pollutant limits the same as routine operations

Process/Pollutant Information

**PROCESS NAME:** PDH PROCESS VENTS  
**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , MACT , SIP  
**Control Method:** (A) MULTIPOINT GROUND FLARE  
**Est. % Efficiency:** 99.500  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** MULTIPOINT GROUND FLARE

**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , MACT , SIP  
**Control Method:** (P) Good combustion practices, proper design and operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (P) Good combustion practices, proper design and operation  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (P) Good combustion practices, proper design and operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (P) Good combustion practices, proper design and operation  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** MEROX PROCESS VENTS  
**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (A) ELEVATED FLARE  
**Est. % Efficiency:** 98.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** MEROX ELEVATED FLARE



**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , MACT , SIP  
**Control Method:** (P) Good combustion practices, proper design and operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (P) Good combustion practices, proper design and operation  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (P) Good combustion practices, proper design and operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (P) Good combustion practices, proper design and operation  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** FUGITIVES  
**Process Type:** 50.007 (Petroleum Refining Equipment Leaks/Fugitive Emissions)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Other  
**Other Test Method:** METHOD 21  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) 28LAER & 28PI LDAR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 21

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , NESHAP , SIP  
**Control Method:** (P) 28LAER, 28PI LDAR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** COOLING TOWER  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 42.0000 PPBW  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) INDIRECT DESIGN  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 6000.0000 PPMW TDS  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (B) DRIFT ELIMINATORS  
**Est. % Efficiency:** 0.005  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 6000.0000 PPMW TDS  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (B) DRIFT ELIMINATORS  
**Est. % Efficiency:** 0.005

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 6000.0000 PPMW TDS  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (B) DRIFT ELIMINATORS  
**Est. % Efficiency:** 0.005  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Storage Tanks  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:**

**Control Method:** (P) All tanks contain a material with a VOC partial pressure less than 0.5 psia or have a capacity less than 500 gallons Fixed roof tanks painted white with submerged fill.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Wastewater Collection and Treatment

**Process Type:** 64.006 (Wastewater Collection & Treatment)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:**

**Control Method:** (B) Process wastewater will be collected via covered sumps and hard-piped to the wastewater tank (EPN: TK8511) and then piped to the existing enhanced wastewater treatment facility (under NSR Permit No. 49120) at the site that will treat the VOCs contained in the wastewater to remove greater than 90%. The wastewater tank emissions are routed to the multi-point ground flare for control at an efficiency of 98%.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Equipment MSS

**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:** NSPS , MACT , SIP

**Control Method:** (P) The uncontrolled equipment clearing is estimated on the total process vessel volume in the unit and a BACT concentration of 10,000 ppmv to opening

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**



## Facility Information

<b>RBLC ID:</b>	TX-0863 (draft)	<b>Date Determination</b>	
<b>Corporate/Company Name:</b>	THE DOW CHEMICAL COMPANY	<b>Last Updated:</b>	10/11/2019
<b>Facility Name:</b>	POLYETHYLENE 7 FACILITY	<b>Permit Number:</b>	153106 AND N268
<b>Facility Contact:</b>	FRAN FALCON 979-238-9978	<b>Permit Date:</b>	09/03/2019 (actual)
<b>Facility Description:</b>	Addition of new polyethylene manufacturing plant at the Dow Freeport Site.	<b>FRS Number:</b>	Not Found
<b>Permit Type:</b>	B: Add new process to existing facility	<b>SIC Code:</b>	2869
<b>Permit URL:</b>		<b>NAICS Code:</b>	325998
<b>EPA Region:</b>	6	<b>COUNTRY:</b>	USA
<b>Facility County:</b>	BRAZORIA		
<b>Facility State:</b>	TX		
<b>Facility ZIP Code:</b>			
<b>Permit Issued By:</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) (Agency Name) MICHAEL PARTEE(Agency Contact) (512) 239-3312 michael.partee@tceq.texas.gov		
<b>Other Agency Contact Info:</b>	Mr. Lou Malarcher, P.E., (512) 239-1151, Louis.Malarcher@tceq.texas.gov		
<b>Permit Notes:</b>			
<b>Affected Boundaries:</b>	<b>Boundary Type:</b> CLASS1	<b>Class 1 Area State:</b> OR	<b>Boundary:</b> Crater Lake NP
			<b>Distance:</b> > 250 km

## Process/Pollutant Information

<b>PROCESS NAME:</b>	Furnace
<b>Process Type:</b>	13.900 (Other Fuels and Combinations (<100 million BTU/H)(e.g., solid/liquid, liquid/gas))
<b>Primary Fuel:</b>	natural gas
<b>Throughput:</b>	84.27 MMBTU/H
<b>Process Notes:</b>	
<b>POLLUTANT NAME:</b>	Nitrogen Oxides (NOx)
<b>CAS Number:</b>	10102
<b>Test Method:</b>	Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0340 LB/MMBTU HOURLY  
**Emission Limit 2:** 0.0200 LB/MMBTU ANNUAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Ultra low NOX burners and effluent gas recirculation

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:**

**Control Method:** (P) Control of VOC in vent gas from pellet hoppers, blenders, and silos monitored with a continuous FID

**Est. % Efficiency:** 99.500

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Yes

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 50.0000 PPMV 3% O2  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 5.0000 GR/100 DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) LIMIT SULFUR IN FUEL  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** COOLING TOWER

**Process Type:** 99.009 (Industrial Process Cooling Towers)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:**

**Control Method:** (P) Monthly monitoring cooling water for VOC content

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) DRIFT ELIMINATOR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) DRIFT ELIMINATOR  
**Est. % Efficiency:** 0.001  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** WASTEWATER LOADING RACK  
**Process Type:** 99.999 (Other Miscellaneous Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:**

**Control Method:** (P) Tank trucks pressure rated greater than 15 psig and loading operations routed to flare for control of emissions

**Est. % Efficiency:** 100.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Low Pressure HDPE and LLDPE solution phase plant

**Process Type:** 63.999 (Other Polymer and Resin Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 39.3000 LB/MMLB MONTHLY

**Emission Limit 2:** 30.0000 LB/MMLB ANNUAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:** NSPS , MACT , SIP

**Control Method:** (B) Process vents upstream of pellet dryer controlled; dryer vents uncontrolled and emissions added to residual VOC emissions; residual VOC head space testing after dryer and at product loadout.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (A) Visible inspection of filter condition and connection with separate filter for each rail car spreader vent  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (P) Visible inspection of filter condition and connection with separate filter for each rail car spreader vent  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** FUGITIVES  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , SIP  
**Control Method:** (P) 28 MID  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Storage tanks content vapor pressure less than 0.5 psia



**Process Type:** 42.009 (Volatile Organic Liquid Storage)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:** SIP

**Control Method:** (A) FLARE

**Est. % Efficiency:** 98.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Storage tanks content vapor pressure greater than or equal to 0.5 psia

**Process Type:** 42.009 (Volatile Organic Liquid Storage)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:** NSPS , SIP

**Control Method:** (B) IFR AND FLARE

**Est. % Efficiency:** 98.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** PROCESS VENTS

**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** Process vents that fluctuate in VOC concentration not suitable for recycle or use as fuel

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:** SIP

**Control Method:** (A) FLARE

**Est. % Efficiency:** 98.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** FLARE  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:**

**Emission Limit 2:****Standard Emission:****Did factors, other than air pollution technology considerations influence the BACT decisions:** N**Case-by-Case Basis:** BACT-PSD**Other Applicable Requirements:****Control Method:** (P) GOOD COMBUSTION PRACTICES**Est. % Efficiency:****Cost Effectiveness:** 0 \$/ton**Incremental Cost Effectiveness:** 0 \$/ton**Compliance Verified:** Unknown**Pollutant/Compliance Notes:****Facility Information**

<b>RBLC ID:</b>	OH-0378 (final)	<b>Date Determination</b>	
<b>Corporate/Company Name:</b>	PTTGCA PETROCHEMICAL COMPLEX	<b>Last Updated:</b>	06/19/2019
<b>Facility Name:</b>	PTTGCA PETROCHEMICAL COMPLEX	<b>Permit Number:</b>	P0124972
<b>Facility Contact:</b>	PAUL WOJCIECHOWSKI (713)871-5730 PAUL.W@PTTGCAMERICA.COM	<b>Permit Date:</b>	12/21/2018 (actual)
<b>Facility Description:</b>	Petrochemical Complex	<b>FRS Number:</b>	Not Found
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>SIC Code:</b>	2869
<b>Permit URL:</b>		<b>NAICS Code:</b>	325110
<b>EPA Region:</b>	5	<b>COUNTRY:</b>	USA
<b>Facility County:</b>	BELMONT		
<b>Facility State:</b>	OH		
<b>Facility ZIP Code:</b>	43947		
<b>Permit Issued By:</b>	OHIO ENVIRONMENTAL PROTECTION AGENCY (Agency Name) MICHAEL MALESKI(Agency Contact) (614) 644-3613 Michael.Maleski@epa.ohio.gov		
<b>Permit Notes:</b>	Initial installation permit for a world-scale petrochemical complex composed of ethylene and ethylene-based derivative plants to manufacture high-density polyethylene (HDPE) and linear low-density polyethylene/HDPE (LLDPE/HDPE) with the following design capacities: Ethylene Plant: 1,500 KT/year; HDPE Units: two (2) trains of 350 KT/year for each train; and LLDPE/HDPE Units: two (2) trains of 450 KT/year for each train. The petrochemical complex will also involve onsite railcar and truck loading, supporting utilities, infrastructure, storage tanks, logistics facilities, and facilities to produce and/or provide required natural gas, water, air, nitrogen, steam, and electricity to support the operation of process units.		
<b>Facility-wide Emissions:</b>	<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>	

Carbon Monoxide	544.0000 (Tons/Year)
Nitrogen Oxides (NOx)	164.0000 (Tons/Year)
Particulate Matter (PM)	120.0000 (Tons/Year)
Sulfur Oxides (SOx)	23.0000 (Tons/Year)
Volatile Organic Compounds (VOC)	396.0000 (Tons/Year)

## Process/Pollutant Information

**PROCESS NAME:** Ethane Cracking Furnaces, 6 identical (B001 - B006)

**Process Type:** 11.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)

**Primary Fuel:** Tail gas and natural gas

**Throughput:** 552.00 MMBTU/H

**Process Notes:** Six identical Ethane Cracking Furnaces 1 through 6; 552 MMBtu/hour cracking furnace burning tail gas, natural gas and ethane (backup only) equipped with low-NOx burners (LNBS) and controlled by selective catalytic reduction (SCR). Limits are for single furnace except as noted.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** EPA/OAR Mthd 7E

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0135 LB/MMBTU HOURLY MAXIMUM. SEE NOTES.

**Emission Limit 2:** 7.4500 LB/H SEE NOTES.

**Standard Emission:** 0.0100 LB/MMBTU AS ROLLING 12-MONTH AVG. SEE NOTES.

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) low-NOx burners and SCR with a control efficiency of at least 90%

**Est. % Efficiency:** 90.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:** 0.0135 lb/MMBtu as an hourly maximum during normal operation and 7.45 lbs/hr, excluding periods of startup, shutdown and hot steam standby. 0.010 lb/MMBtu as a rolling, 12-month average, excluding periods of startup, shutdown and hot steam standby. 0.015 lb/MMBtu as a 3-hour average and 2.18 lbs/hr during decoking. 0.050 lb/MMBtu as a three-hour average and 7.20 lbs/hr during periods of startup, shutdown and hot steam standby. 144.00 tons of NOx per rolling, 12-month period for B001-B006, combined.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Other  
**Other Test Method:** CEM  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 19.3200 LB/H SEE NOTES.  
**Emission Limit 2:** 5.0800 LB/H DURING DECOKING. SEE NOTES.  
**Standard Emission:** 0.0350 LB/MMBTU AS ROLLING 12-MONTH AVG. SEE NOTES.  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Proper burner design and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 0.035 lb/MMBTu as a 12-month rolling average and 19.32 lbs/hr. 5.08 lbs/hr during decoking. 500.00 tons of CO per rolling, 12-month period for B001-B006, combined.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 4.4200 LB/H  
**Emission Limit 2:** 122.0000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Standard Emission:** 0.0080 LB/MMBTU  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Proper burner design and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 122.00 tons of VOC per rolling, 12-month period for B001-B006, combined.

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 5 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0190 LB/MMBTU DURING DECOKING. SEE NOTES  
**Emission Limit 2:** 2.7600 LB/H SEE NOTES.  
**Standard Emission:** 0.0050 LB/MMBTU EXCLUDING DECOKING. SEE NOTES.  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) All modes except decoking: Proper burner design and good combustion practices. Decoking: Good combustion and operating practices to limit the decoking event of each cracking furnace to maximum of 10 times a year (totally 360 hours per year each furnace) and recycling of decoking vent stream to furnace firebox.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 72.59 tons of PE per rolling, 12-month period for B001-B006, combined.

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201A and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0100 LB/MMBTU DURING DECOKING. SEE NOTES.  
**Emission Limit 2:** 2.7600 LB/H EXCLUDING DECOKING. SEE NOTES.  
**Standard Emission:** 0.0050 LB/MMBTU EXCLUDING DECOKING. SEE NOTES.  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) All modes except decoking: Proper burner design and good combustion practices. Decoking: Good combustion and operating practices to limit the decoking event of each cracking furnace to maximum of 10 times a year (totally 360 hours per year each furnace) and recycling of decoking vent stream to furnace firebox.



**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 0.005 lb/MMBtu and 2.76 lbs/hr, excluding periods of decoking. 0.010 lb/MMBtu and 1.45 lbs/hr during decoking. 71.89 tons per rolling, 12-month period for B001-B006, combined

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Other  
**Other Test Method:** Methods 5 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0100 LB/MMBTU DURING DECOKING. SEE NOTES.  
**Emission Limit 2:** 2.7600 LB/H EXCLUDING DECOKING. SEE NOTES.  
**Standard Emission:** 0.0050 LB/MMBTU EXCLUDING DECOKING. SEE NOTES.  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) All modes except decoking: Proper burner design and good combustion practices. Decoking: Good combustion and operating practices to limit the decoking event of each cracking furnace to maximum of 10 times a year (totally 360 hours per year each furnace) and recycling of decoking vent stream to furnace firebox.

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 0.005 lb/MMBtu and 2.76 lbs/hr, excluding periods of decoking. 0.010 lb/MMBtu and 1.45 lbs/hr during decoking. 71.89 tons per rolling, 12-month period for B001-B006, combined.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 1673240.0000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of low carbon gaseous fuels, good combustion and operating practices, and pollution prevention means by improving energy efficiency

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 1,673,240 tons of carbon dioxide equivalents (CO<sub>2</sub>e) per rolling, 12-month period for B001-B006, combined.

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9

**Pollutant Group(s):**

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:** 20.0000 % OPACITY AS A 6 MINUTE AVERAGE. SEE NOTE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** SIP

**Control Method:** (P) All modes except decoking: Proper burner design and good combustion practices. Decoking: Good combustion and operating practices to limit the decoking event of each cracking furnace to maximum of 10 times a year (totally 360 hours per year each furnace) and recycling of decoking vent stream to furnace firebox.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 20 percent opacity as a 6-minute average, except as specified by rule.

## Process/Pollutant Information

**PROCESS** Natural Gas and Ethane-Fired Steam Boilers (B007 - B009)

**NAME:**

**Process Type:** 11.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)

**Primary Fuel:** Natural gas and ethane

**Throughput:** 400.00 MMBTU/H

**Process Notes:** Three identical Steam Boilers 1 through 3; natural gas and ethane-fired steam boiler equipped with ultra-low-NOx burners and flue gas recirculation (FGR) with a maximum fuel input rating of 400 million BTU/hour and an average fuel input rating of 160 MMBtu/hour. Limits are for single boiler except as noted.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Other  
**Other Test Method:** CEM  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0200 LB/MMBTU DURING STARTUP AND SHUTDOWN. SEE NOTES.  
**Emission Limit 2:** 4.0000 LB/H AS ROLLING 30-DAY AVG. SEE NOTES.  
**Standard Emission:** 0.0100 LB/MMBTU AS ROLLING 30-DAY AVG. SEE NOTES.  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) ultra-low NOx burners (ULNB) and flue gas recirculation (FGR)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 0.010 lb/MMBtu of actual heat input as a rolling, 30-day average and 4.00 lbs/hr, excluding periods of startup and shutdown. 0.020 lb/MMBtu of actual heat input and 8.00 lbs/hr during periods of startup and shutdown. 8.76 tons of NOx per rolling, 12-month period from B007-B009, combined.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Other  
**Other Test Method:** CEM  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 14.0000 LB/H  
**Emission Limit 2:** 30.7000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Standard Emission:** 0.0350 LB/MMBTU AS ROLLING 12-MONTH AVG. SEE NOTES.  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Proper burner design, good combustion practices and use of only natural gas with ethane backup  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 0.035 lb/MMBtu of actual heat input as a rolling, 12-month average and 14.00 lbs/hr. 30.70 tons of CO per rolling, 12-month period from B007-B009, combined.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.1600 LB/H  
**Emission Limit 2:** 4.7300 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Standard Emission:** 0.0054 LB/MMBTU  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Proper burner design, good combustion practices and use of only natural gas with ethane backup  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 4.73 tons of VOC per rolling, 12-month period for B007-B009, combined.

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 5 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 2.0000 LB/H  
**Emission Limit 2:** 4.3800 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Standard Emission:** 0.0050 LB/MMBTU

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Proper burner design, good combustion practices and use of only natural gas with ethane backup

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 4.38 tons per rolling, 12-month period for B007-B009, combined.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** EPA/OAR Mthd 201A and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 2.0000 LB/H

**Emission Limit 2:** 4.3800 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Standard Emission:** 0.0050 LB/MMBTU

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Proper burner design, good combustion practices and use of only natural gas with ethane backup

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 4.38 tons per rolling, 12-month period for B007-B009, combined.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Other

**Other Test Method:** Methods 5 and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 2.0000 LB/H

**Emission Limit 2:** 4.3800 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Standard Emission:** 0.0050 LB/MMBTU  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Proper burner design, good combustion practices and use of only natural gas with ethane backup  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 4.38 tons per rolling, 12-month period for B007-B009, combined.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 102500.0000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) low carbon intensity gaseous fuels, good combusting and operating practices, and efficiency improvement measures to maximize overall unit energy efficiency.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 102,500 tons of carbon dioxide equivalents (CO<sub>2</sub>e) per rolling, 12-month period for B007-B009, combined.

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** EPA/OAR Mthd 9  
**Pollutant Group(s):**  
**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:** 20.0000 % OPACITY AS A 6 MINUTE AVERAGE. SEE NOTE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** SIP

**Control Method:** (P) Proper burner design, good combustion practices and use of only natural gas with ethane backup

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 20 percent opacity as a 6-minute average, except as specified by rule.

<b>Process/Pollutant Information</b>
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**PROCESS** Ethylene Manufacturing Unit (P801)

**NAME:**

**Process Type:** 63.999 (Other Polymer and Resin Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** 1,500 KTA ethylene manufacturing process; includes feed preheating, cracking, quenching, compression, caustic scrubbing, precooling/drying, separation, and hydrogenation. Process vents, storage tanks, and startup/shutdown/maintenance/upsets controlled by flare and thermal oxidizer.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) high pressure (HP) flare achieving a destruction efficiency of 98% for VOC emissions and thermal oxidizer (TO) achieving a destruction efficiency of 99.5% for VOC emissions. See notes.

**Est. % Efficiency:** 99.500

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** (a) use of closed vent systems controlled with high pressure (HP) flare (emission unit P003) achieving a destruction efficiency of 98% for VOC emissions from the following: (i) startup/shutdown/maintenance/upsets; (ii) spent caustic degassing drum; (iii) spent caustic drain drum; and (iv) pressure relief valve (PRV) leaks/releases. (b) use of thermal oxidizer (TO, emission units P001 and P002) achieving a destruction efficiency of 99.5% for VOC emissions from the following: (i) quench water drain drum; (ii) wet air oxidation unit; (iii) dimethyl disulphide (DMDS) tank; and (iv) wash oil tank; (c) tail gas from the hydrogenation section shall be used as fuel gas for firing in process cracking furnace(s); (d) implementation of a facility specific program reducing fugitive component equipment leaks for applicable component equipment in the ethylene manufacturing unit; (e) implementation of a program to minimize flaring.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Implementation of a facility specific program reducing fugitive component equipment leaks for applicable component equipment in the ethylene manufacturing unit. See emission unit P807 (Fugitive Emissions).  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** High-Density Polyethylene Manufacturing Unit #1 (P802)  
**Process Type:** 63.999 (Other Polymer and Resin Manufacturing Sources)



**Primary Fuel:**

**Throughput:** 0

**Process Notes:** 350 KTA high density polyethylene (HDPE) manufacturing process; includes catalyst activation & feed systems, reactor system, separation/degassing, solvent recovery and pelletizing sections, pellet blending, handling, and storage.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0980 LB/MMBTU SEE NOTES.  
**Emission Limit 2:** 0.5100 LB/H SEE NOTES.  
**Standard Emission:** SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Limits represent combustion emissions associated with the jackets of two catalyst activator furnaces. 4.47 tons per rolling 12-month period for the two activator furnaces combined.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0820 LB/MMBTU SEE NOTES.  
**Emission Limit 2:** 0.4300 LB/H SEE NOTES.  
**Standard Emission:** SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Emission limitations represent combustion emissions associated with the jackets of two catalyst activator furnaces. 3.74 tons per rolling 12-month period for the two activator furnaces combined.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU SEE NOTES.  
**Emission Limit 2:** 0.0300 LB/H SEE NOTES.  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) Use of closed vent system controlled with high pressure (HP) flare achieving a destruction efficiency of 98% for VOC emissions, use of thermal oxidizer (TO) achieving a destruction efficiency of 99.5% for VOC emissions, implementation of facility specific program reducing fugitive component equipment leaks including applicable component equipment in the polyethylene manufacturing line and implementation of a program to minimize flaring.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** For combustion emissions associated with the jackets of two catalyst activator furnaces: (i) 0.0054 lb/MMBtu; (ii) 0.03 lb/hr (for each individual furnace); and (iii) 0.25 ton per rolling 12-month period for two activator furnaces combined. For HDPE manufacturing process for VOC emissions other than the catalyst activation furnace combustion emissions: i. use of closed vent system controlled with high pressure (HP) flare achieving a destruction efficiency of 98% for VOC emissions from the following: (a) intermediate flash slurry sampler; (b) LSR lights condenser; (c) heavies column; and (d) pressure relief valve (PRV) leaks/releases; ii. use of thermal oxidizer (TO) achieving a destruction efficiency of 99.5% for VOC emissions from the following: (a) LPSR condensate separator; and (b) powder conveying package vent; iii. residual VOC in the polyethylene resin exiting the extruder shall be less than 80 ppmv; iv. The combined VOC emissions for all HDPE manufacturing process vents without VOC control (e.g. not vented to flare or TO) shall not exceed 28.00 tons per rolling 12-month period; v. implementation of facility specific program reducing fugitive component equipment leaks including applicable component equipment in the polyethylene manufacturing line (see C.12.b)(2)b. and c.); and vi. implementation of a program to minimize flaring.

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201A and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTES.  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for two catalyst activator jacket vents, two catalyst filter vents, extruder vent, additive vent, six additive feeder vents. Fabric filtration at 0.002 gr/dscf for pellet conveying hopper vent, pellet hopper vent, 24 pellet & off-spec blender/silo vents, and pellet dryer fan vent (only vent requiring stack test). Catalyst activation system vents associated with co-catalyst container changes shall be controlled by passing vent streams through a seal pot containing mineral oil resulting only in emissions of nitrogen gas used in co-catalyst transfer.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Combustion emissions associated with the jackets of two catalyst activator furnaces: 0.0075 lb/MMBtu, 0.04 lb/h (each individual furnace), 0.34 ton per rolling 12-month period for two activator furnaces combined. Catalyst activator jacket vents (R-201A and B): 0.005 gr/dscf, 0.10 lb/h and 0.44 ton per rolling 12-month period. Catalyst filter vents (S-203A and B): 0.005 gr/dscf, 0.0015 lb/hr and 0.006 ton per rolling 12-month period. Extruder vent filter (3S-603): 0.005 gr/dscf, 0.015 lb/hr and 0.065 ton per rolling 12-month period. Additive vent filter (3S-604): 0.005 gr/dscf, 0.04 lb/hr and 0.175 ton per rolling 12-month period. Additive feeder vents (3Q-602A through F): 0.005 gr/dscf, 0.001 lb/hr and 0.0044 ton per rolling 12-month period for each individual vent (6 individual vents). Pellet conveying hopper vent (3V-607): 0.002 gr/dscf, 0.004 lb/hr and 0.0175 ton per rolling 12-month period. Pellet hopper vent (3V-702): 0.002 gr/dscf, 0.06 lb/hr and 0.263 tons per rolling 12-month period. Pellet & off-spec blender/silo vents (3V-701A through E) & (PE1-19): 0.002 gr/dscf, 0.036 lb/hr & 0.162 ton per rolling 12-month period for six vents combined. Pellet dryer fan vent (3C-603): 0.002 gr/dscf, 0.134 lb/hr & 0.587 ton per rolling 12-month period.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Other

**Other Test Method:** Methods 201A and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for two catalyst activator jacket vents, two catalyst filter vents, extruder vent, additive vent, six additive feeder vents. Fabric filtration at 0.002 gr/dscf for pellet conveying hopper vent, pellet hopper vent, 24 pellet & off-spec blender/silo vents, and pellet dryer fan vent (only vent requiring stack test). Catalyst activation system vents associated with co-catalyst container changes shall be controlled by passing vent streams through a seal pot containing mineral oil resulting only in emissions of nitrogen gas used in co-catalyst transfer.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Combustion emissions associated with the jackets of two catalyst activator furnaces: 0.0075 lb/MMBtu, 0.04 lb/h (each individual furnace), 0.34 ton per rolling 12-month period for two activator furnaces combined. Catalyst activator jacket vents (R-201A and B): 0.005 gr/dscf, 0.10 lb/h and 0.44 ton per rolling 12-month period. Catalyst filter vents (S-203A and B): 0.005 gr/dscf, 0.0015 lb/hr and 0.006 ton per rolling 12-month period. Extruder vent filter (3S-603): 0.005 gr/dscf, 0.015 lb/hr and 0.065 ton per rolling 12-month period. Additive vent filter (3S-604): 0.005 gr/dscf, 0.04 lb/hr and 0.175 ton per rolling 12-month period. Additive feeder vents (3Q-602A through F): 0.005 gr/dscf, 0.001 lb/hr and 0.0044 ton per rolling 12-month period for each individual vent (6 individual vents). Pellet conveying hopper vent (3V-607): 0.002 gr/dscf, 0.004 lb/hr and 0.0175 ton per rolling 12-month period. Pellet hopper vent (3V-702): 0.002 gr/dscf, 0.06 lb/hr and 0.263 tons per rolling 12-month period. Pellet & off-spec blender/silo vents (3V-701A through E) & (PE1-19): 0.002 gr/dscf, 0.036 lb/hr & 0.162 ton per rolling 12-month period for six vents combined. Pellet dryer fan vent (3C-603): 0.002 gr/dscf, 0.134 lb/hr & 0.587 ton per rolling 12-month period.

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9

**Pollutant Group(s):**

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for two catalyst activator jacket vents, two catalyst filter vents, extruder vent, additive vent, six additive feeder vents. Fabric filtration at 0.002 gr/dscf for pellet conveying hopper vent, pellet hopper vent, 24 pellet & off-spec blender/silo vents, and pellet dryer fan vent (only vent requiring stack test). Catalyst activation system vents associated with co-catalyst container changes shall be controlled by passing vent streams through a seal pot containing mineral oil resulting only in emissions of nitrogen gas used in co-catalyst transfer.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Visible particulate emissions from each process vent stack controlled with fabric filtration shall not exceed five percent opacity, as a six-minute average. No visible emissions of fugitive particulate from the discharge of co-catalyst material to the atmospheric sand pit. SIP: 20 percent opacity as a 6-minute average, except as specified by rule.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 117.0000 LB/MMBTU  
**Emission Limit 2:** 5335.0000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Low carbon intensity gaseous fuels, good combusting and operating practices, and efficiency improvement measures to maximize overall unit energy efficiency.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 5335 t/yr per rolling 12-month period for two activator furnaces combined.

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**PROCESS** High-Density Polyethylene Manufacturing Unit #2 (P803)

**NAME:**

**Process Type:** 63.999 (Other Polymer and Resin Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** 350 KTA high density polyethylene (HDPE) manufacturing process; includes catalyst activation & feed systems, reactor system, separation/degassing, solvent recovery and pelletizing sections, pellet blending, handling, and storage.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 117.0000 LB/MMBTU

**Emission Limit 2:** 5335.0000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Low carbon intensity gaseous fuels, good combusting and operating practices, and efficiency improvement measures to maximize overall unit energy efficiency.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 5335 t/yr per rolling 12-month period for two activator furnaces combined.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0820 LB/MMBTU SEE NOTES.

**Emission Limit 2:** 0.4300 LB/H SEE NOTES.

**Standard Emission:** SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Emission limitations represent combustion emissions associated with the jackets of two catalyst activator furnaces. 3.74 tons per rolling 12-month period for the two activator furnaces combined.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0980 LB/MMBTU SEE NOTES.  
**Emission Limit 2:** 0.5100 LB/H SEE NOTES.

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Limits represent combustion emissions associated with the jackets of two catalyst activator furnaces. 4.47 tons per rolling 12-month period for the two activator furnaces combined.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201A and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTES.  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for two catalyst activator jacket vents, two catalyst filter vents, extruder vent, additive vent, six additive feeder vents. Fabric filtration at 0.002 gr/dscf for pellet conveying hopper vent, pellet hopper vent, 24 pellet & off-spec blender/silo vents, and pellet dryer fan vent (only vent requiring stack test). Catalyst activation system vents associated with co-catalyst container changes shall be controlled by passing vent streams through a seal pot containing mineral oil resulting only in emissions of nitrogen gas used in co-catalyst transfer.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Combustion emissions associated with the jackets of two catalyst activator furnaces: 0.0075 lb/MMBtu, 0.04 lb/h (each individual furnace), 0.34 ton per rolling 12-month period for two activator furnaces combined. Catalyst activator jacket vents (R-201A and B): 0.005 gr/dscf, 0.10 lb/h and 0.44 ton per rolling 12-month period. Catalyst filter vents (S-203A and B): 0.005 gr/dscf, 0.0015 lb/hr and 0.006 ton per rolling 12-month period. Extruder vent filter (3S-603): 0.005 gr/dscf, 0.015 lb/hr and 0.065 ton per rolling 12-month period. Additive vent filter (3S-604): 0.005 gr/dscf, 0.04 lb/hr and 0.175 ton per rolling 12-month period. Additive feeder vents (3Q-602A through F): 0.005 gr/dscf, 0.001 lb/hr and 0.0044 ton per rolling 12-month period for each individual vent (6 individual vents). Pellet conveying hopper vent (3V-607): 0.002 gr/dscf, 0.004 lb/hr and 0.0175 ton per rolling 12-month period. Pellet hopper vent (3V-702): 0.002 gr/dscf, 0.06 lb/hr and 0.263 tons per rolling 12-month period. Pellet & off-spec blender/silo vents (3V-701A through E) & (PE1-19): 0.002 gr/dscf, 0.036 lb/hr & 0.162 ton per rolling 12-month period for six vents combined. Pellet dryer fan vent (3C-603): 0.002 gr/dscf, 0.134 lb/hr & 0.587 ton per rolling 12-month period.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Other

**Other Test Method:** Methods 201A and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**



**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for two catalyst activator jacket vents, two catalyst filter vents, extruder vent, additive vent, six additive feeder vents. Fabric filtration at 0.002 gr/dscf for pellet conveying hopper vent, pellet hopper vent, 24 pellet & off-spec blender/silo vents, and pellet dryer fan vent (only vent requiring stack test). Catalyst activation system vents associated with co-catalyst container changes shall be controlled by passing vent streams through a seal pot containing mineral oil resulting only in emissions of nitrogen gas used in co-catalyst transfer.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Combustion emissions associated with the jackets of two catalyst activator furnaces: 0.0075 lb/MMBtu, 0.04 lb/h (each individual furnace), 0.34 ton per rolling 12-month period for two activator furnaces combined. Catalyst activator jacket vents (R-201A and B): 0.005 gr/dscf, 0.10 lb/h and 0.44 ton per rolling 12-month period. Catalyst filter vents (S-203A and B): 0.005 gr/dscf, 0.0015 lb/hr and 0.006 ton per rolling 12-month period. Extruder vent filter (3S-603): 0.005 gr/dscf, 0.015 lb/hr and 0.065 ton per rolling 12-month period. Additive vent filter (3S-604): 0.005 gr/dscf, 0.04 lb/hr and 0.175 ton per rolling 12-month period. Additive feeder vents (3Q-602A through F): 0.005 gr/dscf, 0.001 lb/hr and 0.0044 ton per rolling 12-month period for each individual vent (6 individual vents). Pellet conveying hopper vent (3V-607): 0.002 gr/dscf, 0.004 lb/hr and 0.0175 ton per rolling 12-month period. Pellet hopper vent (3V-702): 0.002 gr/dscf, 0.06 lb/hr and 0.263 tons per rolling 12-month period. Pellet & off-spec blender/silo vents (3V-701A through E) & (PE1-19): 0.002 gr/dscf, 0.036 lb/hr & 0.162 ton per rolling 12-month period for six vents combined. Pellet dryer fan vent (3C-603): 0.002 gr/dscf, 0.134 lb/hr & 0.587 ton per rolling 12-month period.

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9

**Pollutant Group(s):**

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** SIP

**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for two catalyst activator jacket vents, two catalyst filter vents, extruder vent, additive vent, six additive feeder vents. Fabric filtration at 0.002 gr/dscf for pellet conveying hopper vent, pellet hopper vent, 24 pellet & off-spec blender/silo vents, and pellet dryer fan vent (only vent requiring stack test). Catalyst activation system vents associated with co-catalyst container changes shall be controlled by passing vent streams through a seal pot containing mineral oil resulting only in emissions of nitrogen gas used in co-catalyst transfer.

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Visible particulate emissions from each process vent stack controlled with fabric filtration shall not exceed five percent opacity, as a six-minute average. No visible emissions of fugitive particulate from the discharge of co-catalyst material to the atmospheric sand pit. SIP: 20 percent opacity as a 6-minute average, except as specified by rule.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU SEE NOTES.  
**Emission Limit 2:** 0.0300 LB/H SEE NOTES.  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) Use of closed vent system controlled with high pressure (HP) flare achieving a destruction efficiency of 98% for VOC emissions, use of thermal oxidizer (TO) achieving a destruction efficiency of 99.5% for VOC emissions, implementation of facility specific program reducing fugitive component equipment leaks including applicable component equipment in the polyethylene manufacturing line and implementation of a program to minimize flaring.

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** For combustion emissions associated with the jackets of two catalyst activator furnaces: (i) 0.0054 lb/MMBtu; (ii) 0.03 lb/hr (for each individual furnace); and (iii) 0.25 ton per rolling 12-month period for two activator furnaces combined. For HDPE manufacturing process for VOC emissions other than the catalyst activation furnace combustion emissions: i. use of closed vent system controlled with high pressure (HP) flare achieving a destruction efficiency of 98% for VOC emissions from the following: (a) intermediate flash slurry sampler; (b) LSR lights condenser; (c) heavies column; and (d) pressure relief valve (PRV) leaks/releases; ii. use of thermal oxidizer (TO) achieving a destruction efficiency of 99.5% for VOC emissions from the following: (a) LPSR condensate separator; and (b) powder conveying package vent; iii. residual VOC in the polyethylene resin exiting the extruder shall be less than 80 ppmv; iv. The combined VOC emissions for all HDPE manufacturing process vents without VOC control (e.g. not vented to flare or TO) shall not exceed 28.00 tons per rolling

12-month period; v. implementation of facility specific program reducing fugitive component equipment leaks including applicable component equipment in the polyethylene manufacturing line (see C.12.b)(2)b. and c.); and vi. implementation of a program to minimize flaring.

## Process/Pollutant Information

**PROCESS** Linear Low/High-Density Polyethylene Manufacturing Unit #3 (P804)

**NAME:**

**Process Type:** 63.999 (Other Polymer and Resin Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** 450 KTA linear low-density polyethylene (LLDPE)/high density polyethylene (HDPE) manufacturing process; includes purification (ethylene & raw material), catalyst system, reactor system, resin degassing and vent recovery, seed bed & granular storage system, and additive handling and pelletizing.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 80.0000 PPM BY VOLUME. SEE NOTES.

**Emission Limit 2:** 36.0000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Standard Emission:** SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) Thermal oxidizer with a destruction efficiency of 99.5% from analyzer vents, degassing column vents, ethylene purification, low product purge bin vent filter, and high pressure accumulator vent. Closed vent system controlled with flare (high pressure (HP) and/or low pressure (LP)) with a destruction efficiency of 98% from butene dryer regen vent, hexene dryer regen vent, ICA dryer regen vent, ethylene deoxo regen vent, ethylene dryers regen vent, ethylene systems shutdown, non-emergency reactor vents, and product purge bin vent filter. Pressure safety valve (PSV) leaks/releases from raw materials supply pressure PSVs, purification PSVs, reaction PSVs, resin degassing PSVs, and vent recovery PSVs. Implementation of facility specific program reducing fugitive component equipment leaks including applicable component equipment in the polyethylene manufacturing line. Implementation of a program to minimize flaring.

**Est. % Efficiency:** 99.500

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:** Residual VOC in the polyethylene resin exiting the granular resin surge hopper shall be less than 80 ppmv. The combined VOC emissions for all LLDPE/HDPE manufacturing process vents without VOC control (e.g. not vented to flare or TO) shall not exceed 36.00 tons per rolling 12-month period.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** EPA/OAR Mthd 201A and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for the catalyst vent filter (Y-4901) and receiver bin filter vent (Y-5657) & seed bed filter vents (Y-5651 through 5655). Fabric filtration at 0.002 gr/dscf for granular resin surge hopper vent filter (D-6210), bag dump stations/dump hoppers vent filter (Y-6231 through 6235), talc surge bin filter (Y-6251), mixer vent filter (Y-6260), pellet conveying hopper (PE3-07), pellet hopper (PE3-08), and pellet blending/off-spec blending silos (PE3-09 through PE3-15). Pellet dryer vent (Y-7010) shall not exceed a maximum outlet concentration of 0.002 gr/dscf.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Catalyst vent filter (Y-4901): 0.005 gr/dscf, 0.035 lb/hr and 0.153 ton per rolling 12-month period. Receiver bin filter vent (Y-5657) & seed bed filter vents (Y-5651 through 5655): 0.005 gr/dscf, 0.08 lb/hr and 0.35 ton per rolling 12-month period. Granular resin surge hopper vent filter (D-6210): 0.002 gr/dscf, 0.042 lb/hr and 0.184 ton per rolling 12-month period. Bag dump stations/dump hoppers vent filter (Y-6231 through 6235): 0.002 gr/dscf, 0.0515 lb/hr and 0.226 ton per rolling 12-month period. Talc surge bin filter (Y-6251): 0.002 gr/dscf, 0.012 lb/hr and 0.053 ton per rolling 12-month period. Mixer vent filter (Y-6260): 0.002 gr/dscf, 0.009 lb/hr and 0.039 ton per rolling 12-month period. Pellet conveying hopper (PE3-07): 0.002 gr/dscf, 0.004 lb/hr and 0.018 ton per rolling 12-month period. Pellet hopper (PE3-08): 0.002 gr/dscf, 0.06 lb/hr and 0.26 ton per rolling 12-month period. Pellet blending/off-spec blending silos (PE3-09 through PE3-15): 0.002 gr/dscf, 0.048 lb/hr and 0.208 ton per rolling 12-month period for all vents combined. Pellet dryer vent (Y-7010) shall not exceed a maximum outlet concentration of 0.002 gr/dscf, 0.05 lb/hr and 0.11 ton per rolling 12-month period.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Other  
**Other Test Method:** Methods 201A and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for the catalyst vent filter (Y-4901) and receiver bin filter vent (Y-5657) & seed bed filter vents (Y-5651 through 5655). Fabric filtration at 0.002 gr/dscf for granular resin surge hopper vent filter (D-6210), bag dump stations/dump hoppers vent filter (Y-6231 through 6235), talc surge bin filter (Y-6251), mixer vent filter (Y-6260), pellet conveying hopper (PE3-07), pellet hopper (PE3-08), and pellet blending/off-spec blending silos (PE3-09 through PE3-15). Pellet dryer vent (Y-7010) shall not exceed a maximum outlet concentration of 0.002 gr/dscf.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Catalyst vent filter (Y-4901): 0.005 gr/dscf, 0.035 lb/hr and 0.153 ton per rolling 12-month period. Receiver bin filter vent (Y-5657) & seed bed filter vents (Y-5651 through 5655): 0.005 gr/dscf, 0.08 lb/hr and 0.35 ton per rolling 12-month period. Granular resin surge hopper vent filter (D-6210): 0.002 gr/dscf, 0.042 lb/hr and 0.184 ton per rolling 12-month period. Bag dump stations/dump hoppers vent filter (Y-6231 through 6235): 0.002 gr/dscf, 0.0515 lb/hr and 0.226 ton per rolling 12-month period. Talc surge bin filter (Y-6251): 0.002 gr/dscf, 0.012 lb/hr and 0.053 ton per rolling 12-month period. Mixer vent filter (Y-6260): 0.002 gr/dscf, 0.009 lb/hr and 0.039 ton per rolling 12-month period. Pellet conveying hopper (PE3-07): 0.002 gr/dscf, 0.004 lb/hr and 0.018 ton per rolling 12-month period. Pellet hopper (PE3-08): 0.002 gr/dscf, 0.06 lb/hr and 0.26 ton per rolling 12-month period. Pellet blending/off-spec blending silos (PE3-09 through PE3-15): 0.002 gr/dscf, 0.048 lb/hr and 0.208 ton per rolling 12-month period for all vents combined. Pellet dryer vent (Y-7010) shall not exceed a maximum outlet concentration of 0.002 gr/dscf, 0.05 lb/hr and 0.11 ton per rolling 12-month period.

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9

**Pollutant Group(s):**

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:** 5.0000 % OPACITY AS A 6 MINUTE AVERAGE. SEE NOTE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for the catalyst vent filter (Y-4901) and receiver bin filter vent (Y-5657) & seed bed filter vents (Y-5651 through 5655). Fabric filtration at 0.002 gr/dscf for granular resin surge hopper vent filter (D-6210), bag dump stations/dump hoppers vent filter (Y-6231 through 6235), talc surge bin filter (Y-6251), mixer vent filter (Y-6260), pellet conveying hopper (PE3-07), pellet hopper (PE3-08), and pellet blending/off-spec blending silos (PE3-09 through PE3-15). Pellet dryer vent (Y-7010) shall not exceed a maximum outlet concentration of 0.002 gr/dscf.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 5% opacity as a 6 minute average from the following stacks: Catalyst vent filter (Y-4901), Receiver bin filter vent (Y-5657) & seed bed filter vents (Y-5651 through 5655), Granular resin surge hopper vent filter (D-6210), Bag dump stations/dump hoppers vent filter (Y-6231 through 6235), Talc surge bin filter (Y-6251), Mixer vent filter (Y-6260), Pellet conveying hopper (PE3-07), Pellet hopper (PE3-08), Pellet blending/off-spec blending silos (PE3-09 through PE3-15), and Pellet dryer vent (Y-7010)

## Process/Pollutant Information

**PROCESS NAME:** Linear Low/High-Density Polyethylene Manufacturing Unit #4 (P805)

**NAME:**

**Process Type:** 63.999 (Other Polymer and Resin Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** 450 KTA linear low-density polyethylene (LLDPE)/high density polyethylene (HDPE) manufacturing process; includes purification (ethylene & raw material), catalyst system, reactor system, resin degassing and vent recovery, seed bed & granular storage system, and additive handling and pelletizing.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 80.0000 PPM BY VOLUME. SEE NOTES.

**Emission Limit 2:** 36.0000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Standard Emission:** SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions: U**

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) Thermal oxidizer with a destruction efficiency of 99.5% from analyzer vents, degassing column vents, ethylene purification, low product purge bin vent filter, and high pressure accumulator vent. Closed vent system controlled with flare (high pressure (HP) and/or low pressure (LP)) with a destruction efficiency of 98% from butene dryer regen vent, hexene dryer regen vent, ICA dryer regen vent, ethylene deoxo regen vent, ethylene dryers regen vent, ethylene systems shutdown, non-emergency reactor vents, and product purge bin vent filter. Pressure safety valve (PSV) leaks/releases from raw materials supply pressure PSVs, purification PSVs, reaction PSVs, resin degassing PSVs, and vent recovery PSVs. Implementation of facility specific program reducing fugitive component equipment leaks including applicable component equipment in the polyethylene manufacturing line. Implementation of a program to minimize flaring.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Residual VOC in the polyethylene resin exiting the granular resin surge hopper shall be less than 80 ppmv. The combined VOC emissions for all LLDPE/HDPE manufacturing process vents without VOC control (e.g. not vented to flare or TO) shall not exceed 36.00 tons per rolling 12-month period.

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** EPA/OAR Mthd 201A and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions: U**

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for the catalyst vent filter (Y-4902) and receiver bin filter vent (Y-5957) & seed bed filter vents (Y-5651 through 5655). Fabric filtration at 0.002 gr/dscf for granular resin surge hopper vent filter (D-6510), bag dump stations/dump hoppers vent filter (Y-6531 through 6535), talc surge bin filter (Y-6551), mixer vent filter (Y-6560), pellet conveying hopper (PE4-07), pellet hopper (PE4-08), and pellet blending/off-spec blending silos (PE4-09 through PE4-15). Pellet dryer vent (Y-7310) shall not exceed a maximum outlet concentration of 0.002 gr/dscf.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton



**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Catalyst vent filter (Y-4902): 0.005 gr/dscf, 0.035 lb/hr and 0.153 ton per rolling 12-month period. Receiver bin filter vent (Y-5957) & seed bed filter vents (Y-5651 through 5655): 0.005 gr/dscf, 0.08 lb/hr and 0.35 ton per rolling 12-month period. Granular resin surge hopper vent filter (D-6510): 0.002 gr/dscf, 0.042 lb/hr and 0.184 ton per rolling 12-month period. Bag dump stations/dump hoppers vent filter (Y-6531 through 6535): 0.002 gr/dscf, 0.0515 lb/hr and 0.226 ton per rolling 12-month period. Talc surge bin filter (Y-6551): 0.002 gr/dscf, 0.012 lb/hr and 0.053 ton per rolling 12-month period. Mixer vent filter (Y-6560): 0.002 gr/dscf, 0.009 lb/hr and 0.039 ton per rolling 12-month period. Pellet conveying hopper (PE4-07): 0.002 gr/dscf, 0.004 lb/hr and 0.018 ton per rolling 12-month period. Pellet hopper (PE4-08): 0.002 gr/dscf, 0.06 lb/hr and 0.26 ton per rolling 12-month period. Pellet blending/off-spec blending silos (PE4-09 through PE4-15): 0.002 gr/dscf, 0.048 lb/hr and 0.208 ton per rolling 12-month period for all vents combined. Pellet dryer vent (Y-7310) shall not exceed a maximum outlet concentration of 0.002 gr/dscf, 0.05 lb/hr and 0.11 ton per rolling 12-month period.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Other

**Other Test Method:** Methods 201A and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for the catalyst vent filter (Y-4902) and receiver bin filter vent (Y-5957) & seed bed filter vents (Y-5651 through 5655). Fabric filtration at 0.002 gr/dscf for granular resin surge hopper vent filter (D-6510), bag dump stations/dump hoppers vent filter (Y-6531 through 6535), talc surge bin filter (Y-6551), mixer vent filter (Y-6560), pellet conveying hopper (PE4-07), pellet hopper (PE4-08), and pellet blending/off-spec blending silos (PE4-09 through PE4-15). Pellet dryer vent (Y-7310) shall not exceed a maximum outlet concentration of 0.002 gr/dscf.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown



**Pollutant/Compliance Notes:** Catalyst vent filter (Y-4902): 0.005 gr/dscf, 0.035 lb/hr and 0.153 ton per rolling 12-month period. Receiver bin filter vent (Y-5957) & seed bed filter vents (Y-5651 through 5655): 0.005 gr/dscf, 0.08 lb/hr and 0.35 ton per rolling 12-month period. Granular resin surge hopper vent filter (D-6510): 0.002 gr/dscf, 0.042 lb/hr and 0.184 ton per rolling 12-month period. Bag dump stations/dump hoppers vent filter (Y-6531 through 6535): 0.002 gr/dscf, 0.0515 lb/hr and 0.226 ton per rolling 12-month period. Talc surge bin filter (Y-6551): 0.002 gr/dscf, 0.012 lb/hr and 0.053 ton per rolling 12-month period. Mixer vent filter (Y-6560): 0.002 gr/dscf, 0.009 lb/hr and 0.039 ton per rolling 12-month period. Pellet conveying hopper (PE4-07): 0.002 gr/dscf, 0.004 lb/hr and 0.018 ton per rolling 12-month period. Pellet hopper (PE4-08): 0.002 gr/dscf, 0.06 lb/hr and 0.26 ton per rolling 12-month period. Pellet blending/off-spec blending silos (PE4-09 through PE4-15): 0.002 gr/dscf, 0.048 lb/hr and 0.208 ton per rolling 12-month period for all vents combined. Pellet dryer vent (Y-7310) shall not exceed a maximum outlet concentration of 0.002 gr/dscf, 0.05 lb/hr and 0.11 ton per rolling 12-month period.

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9

**Pollutant Group(s):**

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:** 5.0000 % OPACITY AS A 6 MINUTE AVERAGE. SEE NOTE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.005 gr/dscf for the catalyst vent filter (Y-4902) and receiver bin filter vent (Y-5957) & seed bed filter vents (Y-5651 through 5655). Fabric filtration at 0.002 gr/dscf for granular resin surge hopper vent filter (D-6510), bag dump stations/dump hoppers vent filter (Y-6531 through 6535), talc surge bin filter (Y-6551), mixer vent filter (Y-6560), pellet conveying hopper (PE4-07), pellet hopper (PE4-08), and pellet blending/off-spec blending silos (PE4-09 through PE4-15). Pellet dryer vent (Y-7310) shall not exceed a maximum outlet concentration of 0.002 gr/dscf.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 5% opacity as a 6 minute average from the following stacks: Catalyst vent filter (Y-4902), Receiver bin filter vent (Y-5957) & seed bed filter vents (Y-5651 through 5655), Granular resin surge hopper vent filter (D-6510), Bag dump stations/dump hoppers vent filter (Y-6531 through 6535), Talc surge bin filter (Y-6551), Mixer vent filter (Y-6560), Pellet conveying hopper (PE4-07), Pellet hopper (PE4-08), Pellet blending/off-spec blending silos (PE4-09 through PE4-15), and Pellet dryer vent (Y-7310)

## Process/Pollutant Information

**PROCESS** OSBL Thermal Oxidizers (P001 and P002)

**NAME:**

**Process** 63.999 (Other Polymer and Resin Manufacturing Sources)

**Type:**

**Primary** Natural gas

**Fuel:**

**Throughput:** 6.20 MMBTU/H

**Process** Two identical OSBL Thermal Oxidizers 1 and 2; 6.2 MMBtu/hr thermal oxidizer. Thermal oxidizer control is used to meet control requirements

**Notes:** associated with BACT, NSPS, BAT, MACT, and NESHAP for affected facility operations, storage tanks, and process vents. For efficient permitting structure, the thermal oxidizer has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The thermal oxidizer controls VOC emissions from units P801, P802, P803, P804, P805, and J001. It should be noted that the thermal oxidizer control system consists of two identical thermal oxidizers (P001 and P002). One thermal oxidizer will be operational and providing required control at all times while the other unit is ready for use as a backup. Limits are for single oxidizer except as noted.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** EPA/OAR Mthd 10

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.5100 LB/H SEE NOTES.

**Emission Limit 2:** 2.2200 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of pipeline natural gas for TO pilots

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Thermal oxidizer control is used to meet control requirements associated with BACT, New Source Performance Standards (NSPS), BAT, Maximum Achievable Control Technology, and National Emission Standards for Hazardous Air Pollutants for affected facility operations, storage tanks, and process vents. For efficient permitting structure, the thermal oxidizer has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The thermal oxidizer controls VOC emissions from units P801, P802, P803, P804, P805,

and J001.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** EPA/OAR Mthd 7  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.6100 LB/H SEE NOTES.  
**Emission Limit 2:** 2.6700 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) use of pipeline natural gas for TO pilots  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Thermal oxidizer control is used to meet control requirements associated with BACT, New Source Performance Standards (NSPS), BAT, Maximum Achievable Control Technology, and National Emission Standards for Hazardous Air Pollutants for affected facility operations, storage tanks, and process vents. For efficient permitting structure, the thermal oxidizer has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The thermal oxidizer controls VOC emissions from units P801, P802, P803, P804, P805, and J001.

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201A and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0500 LB/H SEE NOTES.  
**Emission Limit 2:** 0.2000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) use of pipeline natural gas for TO pilots  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Thermal oxidizer control is used to meet control requirements associated with BACT, New Source Performance Standards (NSPS), BAT, Maximum Achievable Control Technology, and National Emission Standards for Hazardous Air Pollutants for affected facility operations, storage tanks, and process vents. For efficient permitting structure, the thermal oxidizer has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The thermal oxidizer controls VOC emissions from units P801, P802, P803, P804, P805, and J001.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Other  
**Other Test Method:** Methods 201A and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0500 LB/H SEE NOTES.  
**Emission Limit 2:** 0.2000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) use of pipeline natural gas for TO pilots  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Thermal oxidizer control is used to meet control requirements associated with BACT, New Source Performance Standards (NSPS), BAT, Maximum Achievable Control Technology, and National Emission Standards for Hazardous Air Pollutants for affected facility operations, storage tanks, and process vents. For efficient permitting structure, the thermal oxidizer has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The thermal oxidizer controls VOC emissions from units P801, P802, P803, P804, P805, and J001.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0300 LB/H SEE NOTES.  
**Emission Limit 2:** 0.1400 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) The thermal oxidizer controls VOC emissions from units P801, P802, P803, P804, P805, and J001. The control efficiency is 99.5%.

**Est. % Efficiency:** 99.500

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Thermal oxidizer control is used to meet control requirements associated with BACT, New Source Performance Standards (NSPS), BAT, Maximum Achievable Control Technology, and National Emission Standards for Hazardous Air Pollutants for affected facility operations, storage tanks, and process vents. For efficient permitting structure, the thermal oxidizer has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The thermal oxidizer controls VOC emissions from units P801, P802, P803, P804, P805, and J001.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 3161.0000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of pipeline natural gas for TO pilots

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Thermal oxidizer control is used to meet control requirements associated with BACT, New Source Performance Standards (NSPS), BAT, Maximum Achievable Control Technology, and National Emission Standards for Hazardous Air Pollutants for affected facility operations, storage tanks, and process vents. For efficient permitting structure, the thermal oxidizer has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The thermal oxidizer controls VOC emissions from units P801, P802, P803, P804, P805, and J001.

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** EPA/OAR Mthd 9  
**Pollutant Group(s):**  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:** 5.0000 % OPACITY AS A 6 MINUTE AVERAGE. SEE NOTE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) use of pipeline natural gas for TO pilots  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Thermal oxidizer control is used to meet control requirements associated with BACT, New Source Performance Standards (NSPS), BAT, Maximum Achievable Control Technology, and National Emission Standards for Hazardous Air Pollutants for affected facility operations, storage tanks, and process vents. For efficient permitting structure, the thermal oxidizer has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The thermal oxidizer controls VOC emissions from units P801, P802, P803, P804, P805, and J001.

**PROCESS** High Pressure Ground Flare (P003)

**NAME:**

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:** Natural gas

**Throughput:** 1.80 MMBTU/H

**Process** 1.8 MMBtu/hr high-pressure, multi-point, staged ground flare. The high pressure (HP) ground flare is used to meet control requirements associated with  
**Notes:** BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the HP ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The high pressure (HP) flare controls VOC emissions from units P801, P802, P803, P804, and P805.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 2.9171 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of natural gas as pilot light fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The high pressure (HP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the HP ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The high pressure (HP) flare controls VOC emissions from units P801, P802, P803, P804, and P805.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.5360 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of natural gas as pilot light fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The high pressure (HP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the HP ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The high pressure (HP) flare controls VOC emissions from units P801, P802, P803, P804, and P805.

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0590 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of natural gas as pilot light fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The high pressure (HP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the HP ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The high pressure (HP) flare controls VOC emissions from units P801, P802, P803, P804, and P805.



**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0590 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of natural gas as pilot light fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The high pressure (HP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the HP ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The high pressure (HP) flare controls VOC emissions from units P801, P802, P803, P804, and P805.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 4.4940 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) The high pressure (HP) flare controls VOC emissions from units P801, P802, P803, P804, and P805. The control efficiency is 98%

**Est. % Efficiency:** 98.000

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** The high pressure (HP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the HP ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The high pressure (HP) flare controls VOC emissions from units P801, P802, P803, P804, and P805.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 923.0000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) use of natural gas as pilot light fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The high pressure (HP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the HP ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The high pressure (HP) flare controls VOC emissions from units P801, P802, P803, P804, and P805.

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:**  
**Emission Limit 2:**

**Standard Emission:** SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of natural gas as pilot light fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** No visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

## Process/Pollutant Information

**PROCESS** Low Pressure Ground Flare (P004)

**NAME:**

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:** Natural gas

**Throughput:** 0.78 MMBTU/H

**Process** 0.78 MMBtu/hr low-pressure, multi-point, staged ground flare. The low pressure (LP) ground flare is used to meet control requirements associated with

**Notes:** BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the ECU ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The low pressure (LP) flare controls VOC emissions from units P804 and P805.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 1.9700 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) The low pressure (LP) flare controls VOC emissions from units P804 and P805. The control efficiency is 98%.

**Est. % Efficiency:** 98.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The low pressure (LP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the ECU ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The low pressure (LP) flare controls VOC emissions from units P804 and P805.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 1.2600 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) use of natural gas as pilot light fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The low pressure (LP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the ECU ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The low pressure (LP) flare controls VOC emissions from units P804 and P805.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.2320 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of natural gas as pilot light fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The low pressure (LP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the ECU ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The low pressure (LP) flare controls VOC emissions from units P804 and P805.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0260 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of natural gas as pilot light fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The low pressure (LP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the ECU ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The low pressure (LP) flare controls VOC emissions from units P804 and P805.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0260 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of natural gas as pilot light fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The low pressure (LP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the ECU ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The low pressure (LP) flare controls VOC emissions from units P804 and P805.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 400.0000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) use of natural gas as pilot light fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The low pressure (LP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the ECU ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The low pressure (LP) flare controls VOC emissions from units P804 and P805.

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:** SEE NOTES  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) use of natural gas as pilot light fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** No visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. The low pressure (LP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the ECU ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements. The low pressure (LP) flare controls VOC emissions from units P804 and P805.

### Process/Pollutant Information

**PROCESS NAME:** Wastewater Collection and Treatment (P806)  
**Process Type:** 64.006 (Wastewater Collection & Treatment)

**Primary**

**Fuel:**

**Throughput:** 0

**Process** Wastewater treatment plant and associated collection and treatment systems for treatment of wastewater generated in the ethylene manufacturing

**Notes:** process, the high-density polyethylene units, the linear low-density polyethylene units, the air separation unit, and all sanitary wastewater; includes an oily water treatment plant, a process biological treatment plant and a sanitary treatment plant; emissions sources include: a 12% NaClO<sub>2</sub> storage tank (T-5205) and a 98% sulfuric acid storage tank (T-3502) vented to atmosphere, a wet air oxidation unit, an equalization tank (T-6503), an oily wastewater storage tank (T-6501), a corrugated plate interceptor (CPI) package, a waste oil tank (T-6502), a dissolved gas floatation (DGF) unit and GCF/CPI sump covered and vented to one primary and one backup 1.0 MMBtu/hr thermal oxidizers

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0100 LB/H  
**Emission Limit 2:** 0.0200 T/YR PER ROLLING 12 MONTH PERIOD

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT

**Control Method:** (B) i. Use an enhanced biodegradation unit to maintain the annual benzene quantity from facility waste at less than 10 megagrams (MG; 11 tons) by combining waste streams with greater than 10 ppmw benzene with waste streams with less than 10 ppmw benzene to form a combined waste stream with a benzene concentration less than 10 ppmw; ii. Route emissions from wastewater generated in the ethylene manufacturing process to a thermal oxidizer designed to achieve >99.5% destruction efficiency for volatile organic compounds (VOC); iii. Cover and route emissions from the process wastewater equalization tank (T-6503), the waste oil drum (T-6502), the oily wastewater storage tank (T-6501) and the wet air oxidation unit to a thermal oxidizer designed to achieve >99.5% destruction efficiency for VOC; iv. Emissions from wastewater generated in the high-density polyethylene units must comply with the applicable requirements of 40 CFR Part 63, Subpart FFFF.

**Est. % Efficiency:** 99.500

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102



**Test Method:** EPA/OAR Mthd 7  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0980 LB/H  
**Emission Limit 2:** 0.4300 T/YR PER ROLLING 12 MONTH PERIOD

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** EPA/OAR Mthd 10

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0820 LB/H

**Emission Limit 2:** 0.3600 T/YR PER ROLLING 12 MONTH PERIOD

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** EPA/OAR Mthd 5 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0080 LB/H  
**Emission Limit 2:** 0.0300 T/YR PER ROLLING 12 MONTH PERIOD  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201A and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0080 LB/H  
**Emission Limit 2:** 0.0300 T/YR PER ROLLING 12 MONTH PERIOD  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM

**Test Method:** Other  
**Other Test Method:** Methods 201 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0080 LB/H  
**Emission Limit 2:** 0.0300 T/YR PER ROLLING 12 MONTH PERIOD

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9

**Pollutant Group(s):**

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:** 5.0000 % OPACITY AS A 6 MINUTE AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 513.0000 T/YR PER ROLLING 12 MONTH PERIOD  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Fugitive Emissions (P807)  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** Facility-wide fugitive emissions from equipment and process unit leaks

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 99.3800 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT

**Control Method:** (A) Enhanced connector monitoring requirements to the most stringent leak detection and repair (LDAR) regulation applicable to affected equipment/process units. The following identifies LDAR requirements for affected equipment/process units which have been determined to be representative of BACT: i. 40 CFR Part 63 Subpart UU as applicable to the ethylene manufacturing process with enhanced connector monitoring; ii. 40 CFR Part 60 Subpart VVa as applicable to the polyethylene manufacturing process with enhanced connector monitoring; The LDAR programs indicated above which are representative of BACT shall implement the following enhanced connector monitoring requirements: i. connector monitoring subsequent to the initial monitoring required shall be performed on a quarterly basis; ii. if following the initial four (4) consecutive quarters, the percent leaking connectors in a process unit is less than 0.5 percent during the most recent quarterly monitoring event, then the frequency of connector monitoring can be reduced to semi-annual; iii. if following two (2) consecutive semi-annual periods, the percent leaking connectors in a process unit is less than 0.5 percent during the most recent semi-annual monitoring event, then the frequency of connector monitoring can be reduced to annual. iv. If more than or equal to 0.5 percent of the connectors in a process unit are determined to be leaking during any one of the semi-annual or annual monitoring events then the frequency of monitoring shall be returned to a quarterly basis.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Enhanced connector monitoring requirements to the most stringent leak detection and repair (LDAR) regulation applicable to affected equipment/process units. The following identifies LDAR requirements for affected equipment/process units which have been determined to be representative of BACT: i. 40 CFR Part 63 Subpart UU as applicable to the ethylene manufacturing process with enhanced connector monitoring; ii. 40 CFR Part 60 Subpart VVa as applicable to the polyethylene manufacturing process with enhanced connector monitoring; The LDAR programs indicated above which are representative of BACT shall implement the following enhanced connector monitoring requirements: i. connector monitoring subsequent to the initial monitoring required shall be performed on a quarterly basis; ii. if following the initial four (4) consecutive quarters, the percent leaking connectors in a process unit is less than 0.5 percent during the most recent quarterly monitoring event, then the frequency of connector monitoring can be reduced to semi-annual; iii. if following two (2) consecutive semi-annual periods, the percent leaking connectors in a process unit is less than 0.5 percent during the most recent semi-annual monitoring event, then the frequency of connector monitoring can be reduced to annual. iv. If more than or equal to 0.5 percent of the connectors in a process unit are determined to be leaking during any one of the semi-annual or annual monitoring events then the frequency of monitoring shall be returned to a quarterly basis.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**CAS Number:** CO<sub>2</sub>e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 35.0000 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) i. an LDAR program for leaks of methane from equipment and piping components in tail gas (fuel gas) and natural gas service. The LDAR program will involve sensory monitoring methods for leaks; ii. methane contained in leaks associated with fugitive VOCs will be minimized by the implementation of BACT for fugitive leaks of VOC.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** CO2e emissions from leaks of methane from equipment and piping components in tail gas (fuel gas) and natural gas service at the entire facility shall not exceed 35 tons per rolling 12-month period.

**Process/Pollutant Information**

**PROCESS NAME:** Light and Heavy Pygas Railcar Loading (J001)

**Process Type:** 64.005 (Transfer of SOCM Chemicals (loading/unloading, filling, etc.))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** Loading of railcars (2 loading arms) with light and heavy pygas controlled by the OSBL thermal oxidizer (P001 or P002).

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (A) Thermal oxidizer (TO) achieving a destruction efficiency of >99.5%. The TO controlling heavy and light pygas railcar loading operations is permitted as a separate and individual emissions unit (emissions unit P001 or P002). For efficient permitting structure, the applicable operational restrictions, monitoring, record keeping, reporting, and testing associated with TO control are contained within the requirements of emissions unit P001 and P002. A separate emissions unit (P807) associated with fugitive leaks of VOC, HAP\*, VHAP/Benzene\*, and GHGs\* from all component equipment at the facility subject to the leak control and repair regulations above has been established. For efficient permitting structure, the applicable requirements (limitations, operational restrictions, monitoring, record keeping, reporting, and testing) associated with equipment leak control and repair for VOC, HAP\*, VHAP/Benzene\*, and GHGs\* are contained within the requirements of emissions unit P807.

**Est. % Efficiency:** 99.500

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The TO controlling heavy and light pygas railcar loading operations is permitted as a separate and individual emissions unit (emissions unit P001 or P002). For efficient permitting structure, the applicable operational restrictions, monitoring, record keeping, reporting, and testing associated with TO control are contained within the requirements of emissions unit P001 and P002. A separate emissions unit (P807) associated with fugitive leaks of VOC, HAP\*, VHAP/Benzene\*, and GHGs\* from all component equipment at the facility subject to the leak control and repair regulations above has been established. For efficient permitting structure, the applicable requirements (limitations, operational restrictions, monitoring, record keeping, reporting, and testing) associated with equipment leak control and repair for VOC, HAP\*, VHAP/Benzene\*, and GHGs\* are contained within the requirements of emissions unit P807.

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** HDPE Railcar Loading 1 (P901)

**Process Type:** 64.005 (Transfer of SOCOMI Chemicals (loading/unloading, filling, etc.))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** Railcar loading of high-density polyethylene (HDPE) pellets controlled with baghouse

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.002 gr/dscf for PE Railcar Loading Bin (PE1-21), PE Railcar Loading Bin (PE2-21), PE Railcar Loading (PE1-22), and PE Railcar Loading (PE2-22). Fabric filtration at 0.001 gr/dscf for the pellet cleaning package vent (PE-RPC).

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** PE Railcar Loading Bin (PE1-21): 0.002 gr/dscf, 0.018 lb/hr and 0.081ton per rolling 12-month period. PE Railcar Loading Bin (PE2-21): 0.002 gr/dscf, 0.018 lb/hr and 0.081 ton per rolling 12-month period. PE Railcar Loading (PE1-22): 0.002 gr/dscf, 0.0002 lb/hr and 0.0009 ton per rolling 12-month period. PE Railcar Loading (PE2-22): 0.002 gr/dscf, 0.0002 lb/hr and 0.0009 ton per rolling 12-month period. PE Pellet Elutricator & Cyclone Separator (PE1-20): 0.002 gr/dscf, 0.018 lb/hr and 0.081 ton per rolling 12-month period. PE Pellet Elutricator & Cyclone Separator (PE2-20): 0.002 gr/dscf, 0.018 lb/hr and 0.081 ton per rolling 12-month period. Pellet cleaning package vent (PE-RPC): 0.001 gr/dscf, 0.009 lb/hr and 0.038 ton per rolling 12-month period.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.002 gr/dscf for PE Railcar Loading Bin (PE1-21), PE Railcar Loading Bin (PE2-21), PE Railcar Loading (PE1-22), and PE Railcar Loading (PE2-22). Fabric filtration at 0.0005 gr/dscf for the pellet cleaning package vent (PE-RPC).

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown



**Pollutant/Compliance Notes:** PE Railcar Loading Bin (PE1-21): 0.002 gr/dscf, 0.018 lb/hr and 0.081ton per rolling 12-month period. PE Railcar Loading Bin (PE2-21): 0.002 gr/dscf, 0.018 lb/hr and 0.081 ton per rolling 12-month period. PE Railcar Loading (PE1-22): 0.002 gr/dscf, 0.0002 lb/hr and 0.0009 ton per rolling 12-month period. PE Railcar Loading (PE2-22): 0.002 gr/dscf, 0.0002 lb/hr and 0.0009 ton per rolling 12-month period. PE Pellet Elutricator & Cyclone Separator (PE1-20): 0.002 gr/dscf, 0.018 lb/hr and 0.081 ton per rolling 12-month period. PE Pellet Elutricator & Cyclone Separator (PE2-20): 0.002 gr/dscf, 0.018 lb/hr and 0.081 ton per rolling 12-month period. Pellet cleaning package vent (PE-RPC): 0.0005 gr/dscf, 0.004 lb/hr and 0.019 ton per rolling 12-month period.

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** Unspecified

**Pollutant Group(s):**

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:** 5.0000 % OPACITY AS A 6 MINUTE AVERAGE.

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.002 gr/dscf for PE Railcar Loading Bin (PE1-21), PE Railcar Loading Bin (PE2-21), PE Railcar Loading (PE1-22), and PE Railcar Loading (PE2-22). Fabric filtration at 0.001 gr PM10/dscf for the pellet cleaning package vent (PE-RPC).

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS** HDPE Railcar Loading 2 (P902)

**NAME:**

**Process Type:** 64.005 (Transfer of SOCM Chemicals (loading/unloading, filling, etc.))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** Railcar loading of linear low-density polyethylene/high density polyethylene (LLDPE/HDPE) pellets controlled with baghouse. Loading operations include pellet cleaning package process.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.002 gr/dscf for PE Railcar Loading Bin (PE3-17), PE Railcar Loading Bin (PE4-17), PE Railcar Loading (PE3-18), and PE Railcar Loading (PE4-18). Fabric filtration at 0.001 gr/dscf for the pellet cleaning package vent (PE-RPC).

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** PE Railcar Loading Bin (PE3-17): 0.002 gr/dscf, 0.024 lb/hr and 0.0104 ton per rolling 12-month period. PE Railcar Loading Bin (PE4-17): 0.002 gr/dscf, 0.024 lb/hr and 0.104 ton per rolling 12-month period. PE Railcar Loading (PE3-18): 0.002 gr/dscf, 0.0003 lb/hr and 0.0013 ton per rolling 12-month period. PE Railcar Loading (PE4-18): 0.002 gr/dscf, 0.003 lb/hr and 0.0013 ton per rolling 12-month period. PE Pellet Elutriator & Cyclone Separator (PE3-16): 0.002 gr/dscf, 0.024 lb/hr and 0.104 ton per rolling 12-month period. PE Pellet Elutriator & Cyclone Separator (PE4-16): 0.002 gr/dscf, 0.024 lb/hr and 0.104 ton per rolling 12-month period. Pellet cleaning package vent (PE-RPC): 0.001 gr/dscf, 0.009 lb/hr and 0.038 ton per rolling 12-month period.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTES.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.002 gr/dscf for PE Railcar Loading Bin (PE3-17), PE Railcar Loading Bin (PE4-17), PE Railcar Loading (PE3-18), and PE Railcar Loading (PE4-18). Fabric filtration at 0.0005 gr/dscf for the pellet cleaning package vent (PE-RPC).

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** PE Railcar Loading Bin (PE3-17): 0.002 gr/dscf, 0.024 lb/hr and 0.0104 ton per rolling 12-month period. PE Railcar Loading Bin (PE4-17): 0.002 gr/dscf, 0.024 lb/hr and 0.104 ton per rolling 12-month period. PE Railcar Loading (PE3-18): 0.002 gr/dscf, 0.0003 lb/hr and 0.0013 ton per rolling 12-month period. PE Railcar Loading (PE4-18): 0.002 gr/dscf, 0.003 lb/hr and 0.0013 ton per rolling 12-month period. PE Pellet Elutricator & Cyclone Separator (PE3-16): 0.002 gr/dscf, 0.024 lb/hr and 0.104 ton per rolling 12-month period. PE Pellet Elutricator & Cyclone Separator (PE4-16): 0.002 gr/dscf, 0.024 lb/hr and 0.104 ton per rolling 12-month period. Pellet cleaning package vent (PE-RPC): 0.0005 gr/dscf, 0.004 lb/hr and 0.019 ton per rolling 12-month period.

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** Unspecified

**Pollutant Group(s):**

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:** 5.0000 % OPACITY AS A 6 MINUTE AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fabric filtration at 0.002 gr/dscf for PE Railcar Loading Bin (PE3-17), PE Railcar Loading Bin (PE4-17), PE Railcar Loading (PE3-18), and PE Railcar Loading (PE4-18). Fabric filtration at 0.001 gr PM10/dscf for the pellet cleaning package vent (PE-RPC).

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

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**PROCESS NAME:** Facility Roadways (F001)  
**Process Type:** 99.140 (Paved Roads)  
**Primary Fuel:**  
**Throughput:** 182865.00 MI/YR  
**Process Notes:** Facility roadways and parking areas; maximum of 182,865 annual vehicle miles traveled

**POLLUTANT NAME:** Particulate matter, fugitive  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 1.8800 T/YR PER ROLLING 12 MONTH PERIOD  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) i. Pave all in-plant haul roads and parking areas; ii. Implement best management practices including posting and limiting vehicle speeds to 20 miles per hour and water spraying or sweeping as needed based on the daily inspections conducted

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3800 T/YR PER ROLLING 12 MONTH PERIOD  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) i. Pave all in-plant haul roads and parking areas; ii. Implement best management practices including posting and limiting vehicle speeds to 20 miles per hour and water spraying or sweeping as needed based on the daily inspections conducted

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0900 T/YR PER ROLLING 12 MONTH PERIOD

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) i. Pave all in-plant haul roads and parking areas; ii. Implement best management practices including posting and limiting vehicle speeds to 20 miles per hour and water spraying or sweeping as needed based on the daily inspections conducted

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** Unspecified

**Pollutant Group(s):**

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:** SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) i. Pave all in-plant haul roads and parking areas; ii. Implement best management practices including posting and limiting vehicle speeds to 20 miles per hour and water spraying or sweeping as needed based on the daily inspections conducted

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** No visible particulate emissions from any paved roadway or parking area except for a period of time not to exceed one minute during any 60-minute observation period.

## Process/Pollutant Information

**PROCESS** Firewater Pumps (P005 and P006)

**NAME:**

**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))

**Primary Fuel:** Diesel fuel

**Throughput:** 402.00 HP

**Process Notes:** Two identical Firewater Pumps 1 and 2; 300 kW (402 HP) emergency diesel-fired firewater pump engine. Limits are for single pump except as noted.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 2.6400 LB/H SEE NOTES.

**Emission Limit 2:** 0.1300 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Standard Emission:** 3.0000 G/BHP-H SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII and employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Emission limits are for non-methane hydrocarbon plus nitrogen oxides (NMHC + NOx). Non-methane hydrocarbon plus nitrogen oxides (NMHC + NOx) emissions shall not exceed 4.0 g/kW-hour (3.0 g/HP-hour), 2.64 pounds per hour and 0.13 ton per rolling, 12-month period.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 2.6400 LB/H SEE NOTES.

**Emission Limit 2:** 0.1300 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Standard Emission:** 3.0000 G/BHP-H SEE NOTES

**Did factors, other then air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII and employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Emission limits are for non-methane hydrocarbon plus nitrogen oxides (NMHC + NOx). Non-methane hydrocarbon plus nitrogen oxides (NMHC + NOx) emissions shall not exceed 4.0 g/kW-hour (3.0 g/HP-hour), 2.64 pounds per hour and 0.13 ton per rolling, 12-month period.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 2.3100 LB/H

**Emission Limit 2:** 0.1200 T/YR PER ROLLING 12 MONTH PERIOD

**Standard Emission:** 2.6000 G/BHP-H SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII and employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** CO Standard limit is 3.5 g/kW-hr (2.6 g/hp-hr).

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1300 LB/H

**Emission Limit 2:** 0.0066 T/YR PER ROLLING 12 MONTH PERIOD

**Standard Emission:** 0.1500 G/BHP-H SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII and employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** PM Standard limit is 0.20 g/kW-hr (0.15 g/hp-hr).

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )



**Emission Limit 1:** 0.1300 LB/H  
**Emission Limit 2:** 0.0066 T/YR PER ROLLING 12 MONTH PERIOD  
**Standard Emission:** 0.1500 G/BHP-H SEE NOTES  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) Certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII and employ good combustion practices per the manufacturer's operating manual  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PM Standard limit is 0.20 g/kW-hr (0.15 g/hp-hr).

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1300 LB/H  
**Emission Limit 2:** 0.0066 T/YR PER ROLLING 12 MONTH PERIOD  
**Standard Emission:** 0.1500 G/BHP-H SEE NOTES  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) Certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII and employ good combustion practices per the manufacturer's operating manual  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PM Standard limit is 0.20 g/kW-hr (0.15 g/hp-hr).

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 23.0000 T/YR PER ROLLING 12 MONTH PERIOD  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good operating practices (proper maintenance and operation)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:** 20.0000 % OPACITY AS A 6 MINUTE AVERAGE. SEE NOTE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** N/A  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) Certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII and employ good combustion practices per the manufacturer's operating manual  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 20 percent opacity as a 6-minute average, except as specified by rule.

Process/Pollutant Information

**PROCESS NAME:** Emergency Diesel-fired Generator Engine (P007)  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Diesel fuel  
**Throughput:** 3353.00 HP  
**Process Notes:** 2,500 kW (3,353 HP) emergency diesel-fired generator engine

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NO<sub>x</sub>) , Particulate Matter (PM) )  
**Emission Limit 1:** 37.4100 LB/H SEE NOTES.  
**Emission Limit 2:** 1.8700 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Standard Emission:** 4.8000 G/BHP-H SEE NOTES  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Emission limits are for non-methane hydrocarbon plus nitrogen oxides (NMHC + NO<sub>x</sub>). Non-methane hydrocarbon plus nitrogen oxides (NMHC + NO<sub>x</sub>) emissions shall not exceed 6.4 g/kW-hour (4.8 g/HP-hour), 37.41 pounds per hour and 1.87 tons per rolling, 12-month period.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 37.4100 LB/H SEE NOTES.  
**Emission Limit 2:** 1.8700 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.  
**Standard Emission:** 4.8000 G/BHP-H SEE NOTES  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Emission limits are for non-methane hydrocarbon plus nitrogen oxides (NMHC + NOx). Non-methane hydrocarbon plus nitrogen oxides (NMHC + NOx) emissions shall not exceed 6.4 g/kW-hour (4.8 g/HP-hour), 37.41 pounds per hour and 1.87 tons per rolling, 12-month period.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 19.2500 LB/H

**Emission Limit 2:** 0.9600 T/YR PER ROLLING 12 MONTH PERIOD

**Standard Emission:** 2.6000 G/BHP-H SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** CO Standard limit is 3.5 g/kW-hr (2.6 g/hp-hr).

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.1000 LB/H

**Emission Limit 2:** 0.0550 T/YR PER ROLLING 12 MONTH PERIOD

**Standard Emission:** 0.1500 G/BHP-H SEE NOTES  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PM Standard limit is 0.20 g/kW-hr (0.15 g/hp-hr).

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.1000 LB/H  
**Emission Limit 2:** 0.0550 T/YR PER ROLLING 12 MONTH PERIOD  
**Standard Emission:** 0.1500 G/BHP-H SEE NOTES  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PM Standard limit is 0.20 g/kW-hr (0.15 g/hp-hr).

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.1000 LB/H

**Emission Limit 2:** 0.0550 T/YR PER ROLLING 12 MONTH PERIOD  
**Standard Emission:** 0.0150 G/BHP-H SEE NOTES  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PM Standard limit is 0.20 g/kW-hr (0.15 g/hp-hr).

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** Unspecified

**Pollutant Group(s):**

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:** SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 20 percent during the acceleration mode; 15 percent during the lugging mode; and 50 percent during the peaks in either the acceleration or lugging modes.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 200.0000 T/YR PER ROLLING 12 MONTH PERIOD  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good operating practices (proper maintenance and operation)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS** 1,000 kW Emergency Generators (P008 - P010)

**NAME:**

**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))

**Primary Fuel:** Diesel fuel

**Throughput:** 1341.00 HP

**Process Notes:** Three identical ECU Generators 1 to 3; 1,000 kW (1,341 HP) emergency diesel-fired generator engine. Limits are for single generator except as noted.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 14.9600 LB/H SEE NOTES.

**Emission Limit 2:** 0.7500 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Standard Emission:** 4.8000 G/BHP-H SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Emission limits are for non-methane hydrocarbon plus nitrogen oxides (NMHC + NOx). Non-methane hydrocarbon plus nitrogen oxides (NMHC + NOx) emissions shall not exceed 6.4 g/kW-hour (4.8 g/HP-hour), 14.96 pounds per hour and 0.75 ton per rolling, 12-month period.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 14.9600 LB/H SEE NOTES.

**Emission Limit 2:** 0.7500 T/YR PER ROLLING 12 MONTH PERIOD. SEE NOTES.

**Standard Emission:** 4.8000 G/BHP-H SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Emission limits are for non-methane hydrocarbon plus nitrogen oxides (NMHC + NOx). Non-methane hydrocarbon plus nitrogen oxides (NMHC + NOx) emissions shall not exceed 6.4 g/kW-hour (4.8 g/HP-hour), 14.96 pounds per hour and 0.75 ton per rolling, 12-month period.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 7.7000 LB/H

**Emission Limit 2:** 0.3900 T/YR PER ROLLING 12 MONTH PERIOD



**Standard Emission:** 2.6000 G/BHP-H SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** CO Standard limit is 3.5 g/kW-hr (2.6 g/hp-hr).

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.4400 LB/H

**Emission Limit 2:** 0.0220 T/YR PER ROLLING 12 MONTH PERIOD

**Standard Emission:** 0.1500 G/BHP-H SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** PM Standard limit is 0.20 g/kW-hr (0.15 g/hp-hr).

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.4400 LB/H  
**Emission Limit 2:** 0.0220 T/YR PER ROLLING 12 MONTH PERIOD  
**Standard Emission:** 0.1500 G/BHP-H SEE NOTES  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PM Standard limit is 0.20 g/kW-hr (0.15 g/hp-hr).

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.4400 LB/H  
**Emission Limit 2:** 0.0220 T/YR PER ROLLING 12 MONTH PERIOD  
**Standard Emission:** 0.1500 G/BHP-H SEE NOTES  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PM Standard limit is 0.20 g/kW-hr (0.15 g/hp-hr).

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified

**Pollutant Group(s):**

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:** SEE NOTES

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 20 percent during the acceleration mode; 15 percent during the lugging mode; and 50 percent during the peaks in either the acceleration or lugging modes.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 80.0000 T/YR PER ROLLING 12 MONTH PERIOD

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good operating practices (proper maintenance and operation)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS** Cooling Tower (P011)

**NAME:**

**Process Type:** 99.009 (Industrial Process Cooling Towers)

**Primary Fuel:**

**Throughput:** 13.88 MMGAL/H

**Process Notes:** Multi-cell, induced-draft, counter-flow evaporative cooling tower with side stream filtration system and high efficiency mist/drift eliminator.

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 5.0700 T/YR PER ROLLING 12 MONTH PERIOD

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) High efficiency drift eliminator designed to achieve a 0.0005% drift rate and maintenance of a total dissolved solids (TDS) content not to exceed 2,000 ppm in the circulating cooling water based on a rolling 12-month average.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 3.2200 T/YR PER ROLLING 12 MONTH PERIOD

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) High efficiency drift eliminator designed to achieve a 0.0005% drift rate and maintenance of a total dissolved solids (TDS) content not to exceed 2,000 ppm in the circulating cooling water based on a rolling 12-month average.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0100 T/YR PER ROLLING 12 MONTH PERIOD

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) High efficiency drift eliminator designed to achieve a 0.0005% drift rate and maintenance of a total dissolved solids (TDS) content not to exceed 2,000 ppm in the circulating cooling water based on a rolling 12-month average.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 42.5500 T/YR PER ROLLING 12 MONTH PERIOD

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT

**Control Method:** (P) (a) VOC content in cooling water shall not exceed a concentration of 0.7 lb/MMgal; (b) Compliance with heat exchange leak monitoring and repair requirements for affected ethylene manufacturing process units contained in 40 CFR Part 63 Subpart XX

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	TX-0838 (draft)	<b>Date</b>	
<b>Corporate/Company Name:</b>	EXXONMOBIL OIL CORPORATION	<b>Determination</b>	
<b>Facility Name:</b>	BEAUMONT CHEMICAL PLANT	<b>Last Updated:</b>	11/04/2019
<b>Facility Contact:</b>	MARC RAIMBAULT 409-240-7046	<b>Permit Number:</b>	PSDTX843M2, PSDTX860M2, GHGPSD
<b>Facility Description:</b>	Increase in supplemental natural gas to two flares in a cap, 3 other flares, with attendant increase in fugitive and MSS emissions from associated piping.	<b>Permit Date:</b>	06/13/2018 (actual)
<b>Permit Type:</b>	C: Modify process at existing facility	<b>FRS Number:</b>	110000464131
<b>Permit URL:</b>		<b>SIC Code:</b>	2869
<b>EPA Region:</b>	6	<b>NAICS Code:</b>	325110
<b>Facility County:</b>	JEFFERSON	<b>COUNTRY:</b>	USA
<b>Facility State:</b>	TX		
<b>Facility ZIP Code:</b>			
<b>Permit Issued By:</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) (Agency Name) MICHAEL PARTEE(Agency Contact) (512) 239-3312 michael.partee@tceq.texas.gov		
<b>Other Agency Contact Info:</b>	Mr. Joe Janecka, P.E., (512) 239-1541, Joseph.Janecka@tceq.texas.gov		



**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Meet the design and operating requirements of 40 CFR §60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** MACT YY

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Meet the design and operating requirements of 40 CFR §60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:**

UDEX FLARE

**Process Type:**

19.310 (Chemical Plant Flares)

**Primary Fuel:**



**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Meet the design and operating requirements of 40 CFR §60.18.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Meet the design and operating requirements of 40 CFR §60.18.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Meet the design and operating requirements of 40 CFR §60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** PARAXYLENE FLARE

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Meet the design and operating requirements of 40 CFR §60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**CAS Number:** CO<sub>2</sub>e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Meet the design and operating requirements of 40 CFR §60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NO<sub>x</sub>) , Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Meet the design and operating requirements of 40 CFR §60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** C & S FLARE

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Meet the design and operating requirements of 40 CFR §60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Meet the design and operating requirements of 40 CFR §60.18.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Meet the design and operating requirements of 40 CFR §60.18.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** fugitives  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) 28MID LDAR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) 28MID LDAR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	TX-0815 (final)	<b>Date Determination</b>	
<b>Corporate/Company Name:</b>	TOTAL PETROCHEMICALS & REFINING USA, INC.	<b>Last Updated:</b>	11/16/2017
<b>Facility Name:</b>	PORT ARTHUR ETHANE SIDE CRACKER	<b>Permit Number:</b>	122353, PSDTX1426, GHGPSDTX114
<b>Facility Contact:</b>	DOROTHY BARTOL (409) 963-6800	<b>Permit Date:</b>	01/17/2017 (actual)
<b>Facility Description:</b>	Ethylene Production	<b>FRS Number:</b>	Not Found
<b>Permit Type:</b>	B: Add new process to existing facility	<b>SIC Code:</b>	2869
<b>Permit URL:</b>		<b>NAICS Code:</b>	325110
<b>EPA Region:</b>	6	<b>COUNTRY:</b>	USA
<b>Facility County:</b>	JEFFERSON		
<b>Facility State:</b>	TX		
<b>Facility ZIP Code:</b>			
<b>Permit Issued By:</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) (Agency Name) MICHAEL PARTEE(Agency Contact) (512) 239-3312 michael.partee@tceq.texas.gov		
<b>Other Agency Contact Info:</b>	Mr. Daniel Guthrie, (512) 239-1319, Daniel.Guthrie@tceq.texas.gov		
<b>Permit Notes:</b>			
<b>Affected Boundaries:</b>	<b>Boundary Type:</b> CLASS1	<b>Class 1 Area State:</b> LA	<b>Boundary:</b> Breton
			<b>Distance:</b> > 250 km

## Process/Pollutant Information

**PROCESS NAME:** Pyrolysis Furnaces  
**Process Type:** 11.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 1000.00 kT / YR  
**Process Notes:** 7 furnaces

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 24.6800 T/YR  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NSPS RRR

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0100 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (A) Low NOx burners with selective catalytic reduction



**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 461.7000 T/YR  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 30.8000 T/YR ROUTINE  
**Emission Limit 2:** 1.9600 T/YR MSS  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (B) Routine Operations - Good Combustion Practices, Firing Gaseous Fuel MSS-cyclones

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** High Pressure Process Vents  
**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , SIP

**Control Method:** (A) Multi-Point Ground Flare. Applicant will obtain an AMOC and AMEL prior to startup of the MPGF

**Est. % Efficiency:** 98.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 99% - 2 carbons or less, 98%– 3 carbons or more Emission rate of 158.09 tpy is the sum of 59.93 tpy VOC for routine operations and 98.16 tpy for MSS operations. NSPS NNN, RRR MACT YY SIP (115 Subchapter B)

Process/Pollutant Information

**PROCESS NAME:** Low Pressure Process Vents  
**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , SIP  
**Control Method:** (A) Thermal Oxidizer  
**Est. % Efficiency:** 99.900  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NSPS NNN, RRR MACT YY SIP 115 Subchapter B

### Process/Pollutant Information

**PROCESS NAME:** Multi Point Ground Flare  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 0  
**Process Notes:** Applicant will obtain an AMOC and AMEL prior to startup of the MPGF

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 94.2700 T/YR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Good Combustion Practices & Design  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Emission rate of 94.27 tpy is the sum of 35.86 tpy NOx for routine operations and 58.41 tpy NOx for MSS operations.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 375.4600 T/YR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) .Good Combustion Practices & Design  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Emission rate of 375.46 tpy is the sum of 142.82 tpy CO for routine operations and 232.64 tpy CO for MSS operations.

**PROCESS NAME:** Thermal Oxidizer  
**Process Type:** 19.200 (Emission Control Afterburners & Incinerators (combustion gasses only))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 3.0000 T/YR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Good Combustion Practices and Design  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 1.9000 T/YR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Good Combustion Practices and Design

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 µ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1700 T/YR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Good Combustion Practices and Design  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** STORAGE TANKS  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** Slop oil/wastewater/sludge fixed roof tanks routed a thermal oxidizer

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP , MACT , SIP  
**Control Method:** (A) THERMAL OXIDIZER  
**Est. % Efficiency:** 99.900  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NSPS Kb NESHAP FF MACT YY, EEEE SIP 115 Subchapter B

Process/Pollutant Information
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**PROCESS NAME:** Cooling Tower  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 27.9500 T/YR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT  
**Control Method:** (P) cooling water VOC concentration NON CONTACT  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** MACT XX

**POLLUTANT NAME:** Particulate matter, filterable < 10 µ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Drift Eliminators  
**Est. % Efficiency:** 99.999  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FUGITIVES  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )



**Emission Limit 1:** 17.2000 T/YR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP , MACT , SIP  
**Control Method:** (P) 28VHP LDAR Program  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NSPS VVa, NESHAP J,V,FF, MACT UU, YY, SIP(115 Subchapter D

## Facility Information

<b>RBLC ID:</b>	LA-0323 (final)	<b>Date Determination</b>								
<b>Corporate/Company Name:</b>	MONSANTO COMPANY	<b>Last Updated:</b> 05/11/2018								
<b>Facility Name:</b>	MONSANTO LULING PLANT	<b>Permit Number:</b> PSD-LA-890								
<b>Facility Contact:</b>	ENRIQUE WEHLEN 9857858211 ENRIQUE.WEHLLEN@MONSANTO.COM	<b>Permit Date:</b> 01/09/2017 (actual)								
<b>Facility Description:</b>	Chemical Manufacture	<b>FRS Number:</b> 110067118274								
<b>Permit Type:</b>	D: Both B (Add new process to existing facility) &C (Modify process at existing facility)	<b>SIC Code:</b> 2879								
<b>Permit URL:</b>	<a href="http://edms.deq.louisiana.gov/app/doc/view.aspx?doc=10460194&amp;ob=yes">http://edms.deq.louisiana.gov/app/doc/view.aspx?doc=10460194&amp;ob=yes</a>	<b>NAICS Code:</b> 325320								
<b>EPA Region:</b>	6	<b>COUNTRY:</b> USA								
<b>Facility County:</b>	ST. CHARLES PARISH									
<b>Facility State:</b>	LA									
<b>Facility ZIP Code:</b>	70070									
<b>Permit Issued By:</b>	LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name) MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV									
<b>Permit Notes:</b>	Dicamba Manufacturing Facility expansion project.									
<b>Affected Boundaries:</b>	<table border="0"> <tr> <td><b>Boundary Type:</b></td> <td><b>Class 1 Area State:</b></td> <td><b>Boundary:</b></td> <td><b>Distance:</b></td> </tr> <tr> <td>CLASS1</td> <td>LA</td> <td>Breton</td> <td>100km - 50km</td> </tr> </table>	<b>Boundary Type:</b>	<b>Class 1 Area State:</b>	<b>Boundary:</b>	<b>Distance:</b>	CLASS1	LA	Breton	100km - 50km	
<b>Boundary Type:</b>	<b>Class 1 Area State:</b>	<b>Boundary:</b>	<b>Distance:</b>							
CLASS1	LA	Breton	100km - 50km							
<b>Facility-wide Emissions:</b>	<table border="0"> <tr> <td><b>Pollutant Name:</b></td> <td><b>Facility-wide Emissions Increase:</b></td> </tr> <tr> <td>Carbon Monoxide</td> <td>118.3000 (Tons/Year)</td> </tr> </table>	<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>	Carbon Monoxide	118.3000 (Tons/Year)					
<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>									
Carbon Monoxide	118.3000 (Tons/Year)									

Nitrogen Oxides (NOx)	84.2400 (Tons/Year)
Particulate Matter (PM)	20.8600 (Tons/Year)
Sulfur Oxides (SOx)	1.6100 (Tons/Year)
Volatile Organic Compounds (VOC)	39.4900 (Tons/Year)

## Process/Pollutant Information

**PROCESS NAME:** No. 9 Boiler - Natural Gas Fired  
**Process Type:** 11.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** Natural Gas  
**Throughput:** 325.00 MMBTU/h

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) Good combustion practices and Boiler MACT  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Other  
**Other Test Method:** Method 201A  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0075 LB/MMBTU ANNUAL AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NESHAP , NSPS

**Control Method:** (P) Good combustion practices and Boiler MACT

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** EPA/OAR Mthd 7E

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0350 LB/MMBTU ANNUAL AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , NESHAP

**Control Method:** (A) Ultra Low NOx Burners

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** EPA/OAR Mthd 10

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0450 LB/MMBTU ANNUAL AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) Good combustion practices and Boiler MACT  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 0.1670 LB/LB ANNUAL AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) Good combustion practices and energy efficient operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Units are lb of CO2e/lb of steam generated.

Process/Pollutant Information
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**PROCESS NAME:** No. 10 Boiler - Natural Gas Fired  
**Process Type:** 11.310 (Natural Gas (includes propane and liquefied petroleum gas))

**Primary Fuel:** Natural Gas  
**Throughput:** 325.00 MMBTU/h  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201A and OTM 28  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) Good combustion practices and Boiler MACT  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Other  
**Other Test Method:** Method 201A  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) Good combustion practices and Boiler MACT  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** EPA/OAR Mthd 7E  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0350 LB/MMBTU ANNUAL AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (A) Ultra Low NOx Burners  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** EPA/OAR Mthd 10  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0450 LB/MMBTU ANNUAL AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) Good combustion practices and Boiler MACT  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 0.1670 LB/LB ANNUAL AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) Good combustion practices and energy efficient operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Units are lb of CO2e/lb of steam generated.

### Process/Pollutant Information

**PROCESS NAME:** Cooling Water Tower  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 18000.00 gal/m  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0030 %  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (A) Drift Eliminators with Draft Factor of 0.003%  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Drift Eliminators with Drift Factor of 0.003%

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (A) Drift Eliminators with Drift Factor of 0.003%  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Drift Eliminators with Drift Factor of 0.003%

Process/Pollutant Information
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**PROCESS NAME:** Emergency Flare  
**Process Type:** 19.310 (Chemical Plant Flares)



**Primary Fuel:** Natural Gas  
**Throughput:** 0.40 mmbtu/h  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) Proper design and operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) Proper design and operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) Proper design and operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) Proper design and operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) Proper design and operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Thermal Oxidizer with Caustic Scrubber  
**Process Type:** 19.900 (Other Misc. Combustion)  
**Primary Fuel:**  
**Throughput:** 33.50 mmbtu/h  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (B) Good combustion practices, Compliance with applicable NESHAP, and Caustic Scrubber.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (B) Good combustion practices, Compliance with applicable NESHAP, and Caustic Scrubber.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NESHAP

**Control Method:** (B) Good combustion practices, Compliance with applicable NESHAP, and Caustic Scrubber.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NESHAP

**Control Method:** (B) Good combustion practices, Compliance with applicable NESHAP, and Caustic Scrubber.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) Good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** Fire Water Diesel Pump No. 3 Engine  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Diesel Fuel  
**Throughput:** 600.00 hp  
**Process Notes:** Emergency engine with a limit of 100 hours/yr on operating hours for ready testing.

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) Proper operation and limits on hours operation for emergency engines and compliance with 40 CFR 60 Subpart IIII  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) Proper operation and limits on hours operation for emergency engines and compliance with 40 CFR 60 Subpart III

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) Proper operation and limits on hours operation for emergency engines and compliance with 40 CFR 60 Subpart III

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) Proper operation and limits on hours operation for emergency engines and compliance with 40 CFR 60 Subpart III

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS



**Control Method:** (P) Proper operation and limits on hours operation for emergency engines and compliance with 40 CFR 60 Subpart IIII  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Fire Water Diesel Pump No. 4 Engine  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Diesel Fuel  
**Throughput:** 600.00 hp  
**Process Notes:** Emergency Engine limited to 100 hours/yr for ready tests

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Proper operation and limits on hours of operation for emergency engines and compliance with 40 CFR 60 Subpart IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Proper operation and limits on hours of operation for emergency engines and compliance with 40 CFR 60 Subpart IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Proper operation and limits on hours of operation for emergency engines and compliance with 40 CFR 60 Subpart IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) Proper operation and limits on hours of operation for emergency engines and compliance with 40 CFR 60 Subpart III  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) Proper operation and limits on hours of operation for emergency engines and compliance with 40 CFR 60 Subpart III  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Standby Generator No. 9 Engine  
**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Diesel Fuel  
**Throughput:** 400.00 hp  
**Process Notes:** Operating hours limited to 100 hours/yr for ready testing.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Proper operation and limits on hours of operation for emergency engines and compliance with 40 CFR 60 Subpart III

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Proper operation and limits on hours of operation for emergency engines and compliance with 40 CFR 60 Subpart IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Proper operation and limits on hours of operation for emergency engines and compliance with 40 CFR 60 Subpart IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Proper operation and limits on hours of operation for emergency engines and compliance with 40 CFR 60 Subpart III

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**CAS Number:** CO<sub>2</sub>e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Proper operation and limits on hours of operation for emergency engines and compliance with 40 CFR 60 Subpart III

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Process Baghouse Dust Collector Filter

**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 700.00 cfm

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0003 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0003 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Building Vent 1 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )



**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Building Vent 2 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Building Vent 3 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0020 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** Building Vent 4 Baghouse Dust Collector

**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 12000.00 cfm

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0002 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0002 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** Building Vent 5 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** Building Vent 6 Baghouse Dust Collector

**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 12000.00 cfm

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0002 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Building Vent 7 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** Building Vent 8 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm



**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Building Vent 9 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0002 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0002 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Building Vent 10 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Building Vent 11 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0002 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** Building Vent 12 Baghouse Dust Collector

**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 12000.00 cfm

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

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**PROCESS NAME:** Building Vent 13 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0002 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0002 GR/DSCF

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Building Vent 14 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM



**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Building Vent 15 Baghouse Dust Collector  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 12000.00 cfm  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 GR/DSCF  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Baghouse Dust Collector Filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	LA-0317 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	METHANEX USA, LLC	<b>Last Updated:</b> 04/28/2017
<b>Facility Name:</b>	METHANEX - GEISMAR METHANOL PLANT	<b>Permit Number:</b> PSD-LA-761(M4)
<b>Facility Contact:</b>	GLYNN FONTENOT 225-402-0301 GFONTENOT@METHANEX.COM	<b>Permit Date:</b> 12/22/2016 (actual)
<b>Facility Description:</b>	methanol plant (Unit I and Unit II) to produce 6000 metric tons of methanol by steam reforming natural gas	<b>FRS Number:</b> 110046528227
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>SIC Code:</b> 2869
		<b>NAICS Code:</b> 325199

**Permit URL:****EPA Region:** 6**COUNTRY:** USA**Facility County:** ASCENSION**Facility State:** LA**Facility ZIP Code:** 70734**Permit Issued By:** LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name)  
MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV**Other Agency Contact** permit writer: Dr. Qingming Zhang (225)-219-3457**Info:****Permit Notes:** psd-la-761, issued 11/07/12, for relocation Unit I (3000 mt/yr) from punta arenas (chile); psd-la-761(M1), issued 07/12/13, for relocation Unit II (3000 mt/yr); psd-la-761(M2) (issued 01/15/16), psd-la-761(M3) (issued 01/14/16), and psd-la-761(M4) (issued 12/22/16) are for miscellaneous reconciliation

<b>Facility-wide Emissions:</b>	<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>
	Carbon Monoxide	175.2200 (Tons/Year)
	Nitrogen Oxides (NOx)	178.7000 (Tons/Year)
	Particulate Matter (PM)	137.1900 (Tons/Year)
	Sulfur Oxides (SOx)	10.5600 (Tons/Year)
	Volatile Organic Compounds (VOC)	68.4000 (Tons/Year)

**Process/Pollutant Information****PROCESS NAME:** Steam methane reformers (I-H-101, II-H-101)**Process Type:** 11.310 (Natural Gas (includes propane and liquefied petroleum gas))**Primary Fuel:** natural gas**Throughput:** 2364.00 mm btu/hr**Process Notes:****POLLUTANT NAME:** Nitrogen Oxides (NOx)**CAS Number:** 10102**Test Method:** EPA/OAR Cond. Test Mthd 022**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )**Emission Limit 1:** 0.0070 LB/MM BTU**Emission Limit 2:****Standard Emission:****Did factors, other than air pollution technology considerations influence the BACT decisions:** U**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) SCR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT = LAER (Permit 0180-00210-V4, dated 12/22/2016)

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) proper burner design and operations

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) proper burner design and operations

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) proper burner design and operations

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Energy efficiency measures with the installation of heat recovery steam generators  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** flares (I-X-703, II-X-703)  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** natural gas  
**Throughput:** 3723.00 mm btu/hr  
**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) complying with 40 CFR 63.11  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT = LAER (Permit 0180-00210-V4, dated 12/22/2016)

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NESHAP

**Control Method:** (P) complying with 40 CFR 63.11

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NESHAP

**Control Method:** (P) complying with 40 CFR 63.11

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63.11  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63.11  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**



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**PROCESS NAME:** Emergency Generator Engines (4 units)  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Diesel  
**Throughput:** 0  
**Process Notes:** I-GDE-1201, II-GDE-1201 = 2346 hp I-GDE-1202 = 755 hp I-GDE-1203 = 1193 hp

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) complying with 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT = LAER (Permit 0180-00210-V4, dated 12/22/2016)

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP

**Control Method:** (P) complying with 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) complying with 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP

**Control Method:** (P) complying with 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) complying with 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Firewater pump Engines (4 units)  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** diesel  
**Throughput:** 896.00 hp (each)  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) complying with 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) complying with 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) complying with 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) complying with 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102

**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) complying with 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT = LAER (Permit 0180-00210-V4, dated 12/22/2016)

### Process/Pollutant Information

**PROCESS NAME:** Compressor Vents (I-C-601, II-C-601)  
**Process Type:** 64.999 (Other SOCOMI Processes)  
**Primary Fuel:**  
**Throughput:** 11820.00 kg/hr  
**Process Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) proper equipment design, good operating and maintenance practices

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) energy efficiency measures  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** cooling towers (I-CT-621, II-CT-621)  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 66000.00 gpm (each)  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0010 % DRIFT RATE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Drift eliminators  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0010 % DIRFT RATE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) drift eliminators  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** wastewater treatment plant (I-X-922)



**Process Type:** 22.200 (Industrial Wastewater Treatment)

**Primary Fuel:**

**Throughput:** 750000.00 gallons/day

**Process Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Energy efficiency measures

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Process Fugitives (I-G-1000, II-G-1000)

**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NESHAP

**Control Method:** (P) complying with 40 CFR 63 Subpart H

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	LA-0314 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	INDORAMA VENTURES OLEFINS, LLC	<b>Last Updated:</b> 04/28/2017
<b>Facility Name:</b>	INDORAMA LAKE CHARLES FACILITY	<b>Permit Number:</b> PSD-LA-813
<b>Facility Contact:</b>	SUSAN WEDEMEYER 337-476-7451 SUSAN.WEDEMEYER@US.INDORAMA.NET	<b>Permit Date:</b> 08/03/2016 (actual)
<b>Facility Description:</b>	modify and restart-up a mothballed facility to produce 1,009 million lbs/yr of ethylene	<b>FRS Number:</b> 110000748040
<b>Permit Type:</b>	C: Modify process at existing facility	<b>SIC Code:</b> 2869
<b>Permit URL:</b>		<b>NAICS Code:</b> 325199
<b>EPA Region:</b>	6	<b>COUNTRY:</b> USA
<b>Facility County:</b>	CALCASIEU	
<b>Facility State:</b>	LA	
<b>Facility ZIP Code:</b>	70669	
<b>Permit Issued By:</b>	LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name) MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV	
<b>Other Agency Contact Info:</b>	Permit Writer: Dan Nguyen (225)219-3395	
<b>Permit Notes:</b>		
<b>Affected Boundaries:</b>	<b>Boundary Type:</b> CLASS1	<b>Class 1 Area State:</b> LA
		<b>Boundary:</b> Breton
		<b>Distance:</b> > 250 km

<b>Facility-wide Emissions:</b>	<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>
	Carbon Monoxide	432.0000 (Tons/Year)
	Nitrogen Oxides (NOx)	303.0000 (Tons/Year)
	Particulate Matter (PM)	60.0000 (Tons/Year)
	Sulfur Oxides (SOx)	20.0000 (Tons/Year)
	Volatile Organic Compounds (VOC)	189.0000 (Tons/Year)

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Modular Ethylene Cracking Furnaces - 001

**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Primary Fuel:** natural gas/fuel gas

**Throughput:** 1028.00 MM BTU/hr

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices; fueled by natural gas or process fuel gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices; fueled by natural gas or process fuel gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0100 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) good combustion practices; fueled by natural gas or process fuel gas; LNB + SCR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0400 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices and proper operation and maintenance  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices and proper operation and maintenance  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices and proper operation and maintenance; gaseous fuels; economizers & Insulation

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Ethylene Cracking Furnace - 015

**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Primary Fuel:** natural gas/fuel gas

**Throughput:** 168.00 mm btu

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices, fueled by natural gas and/or fuel gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices, fueled by natural gas and/or fuel gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0980 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) LNB, good combustion practices, fueled by natural gas and/or fuel gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0400 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices and proper operation and maintenance  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices and proper operation and maintenance  
**Est. % Efficiency:**



**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices and proper operation and maintenance; gaseous fuels; economizers & insulation

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Dryer Regenerator Heater - 005  
**Process Type:** 13.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** process fuel gas  
**Throughput:** 29.00 mm btu/hr  
**Process Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0820 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices and proper operation and maintenance

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0054 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices and proper operation and maintenance

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices and proper operation and maintenance; gaseous fuels; Insulation

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices; fueled by process fuel gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices; fueled by process fuel gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0600 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices; ULNB

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** boiler A and B (010 and 011)

**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))

**Primary Fuel:** natural gas/fuel gas  
**Throughput:** 248.00 mm btu/hr (each)  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices; fueled by natural gas or process fuel gas  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices; fueled by natural gas or process fuel gas  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0600 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices; fueled by natural gas or process fuel gas; ULNB (FGR and economizer)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0820 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices and proper operation and maintenance  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices and proper operation and maintenance  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices and proper operation and maintenance; gaseous fuels; economizers & Insulation; combustion air preheating; condensate return system  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** boiler B-201  
**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** natural gas/fuel gas  
**Throughput:** 229.00 mm btu  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices; fueled by natural gas or process fuel gas  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )



**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices; fueled by natural gas or process fuel gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0600 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices; fueled by natural gas or process fuel gas; ULNB (FGR and economizer)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0370 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices and proper operation and maintenance

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0054 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices and proper operation and maintenance

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices and proper operation and maintenance; gaseous fuels; economizers & Insulation; combustion air preheating; condensate return system

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Flare No. 1 - 008  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** natural gas  
**Throughput:** 85097.00 MM BTU/yr  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0070 LB/MM BTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) complying with 40 CFR 60.18; good combustion practices (including establishment of flare minimization practices); steam assisted

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0070 LB/MM BTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) complying with 40 CFR 60.18; good combustion practices (including establishment of flare minimization practices); steam assisted

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0680 LB/MM BTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) complying with 40 CFR 60.18; good combustion practices (including establishment of flare minimization practices)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.3100 LB/MM BTU  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) complying with 40 CFR 60.18; good combustion practices (including establishment of flare minimization practices)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 98.0000 % REMOVAL EFFICIENCY  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS  
**Control Method:** (P) complying with 40 CFR 60.18; good combustion practices (including establishment of flare minimization practices)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good management practices, good combustion practices, proper flare design  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** Pyrolysis Gasoline Tank Flare - 009  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** natural gas  
**Throughput:** 0.66 mm btu/hr  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0070 LB/MM BTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , NESHAP

**Control Method:** (P) complying with 40 CFR 60.18 and 63.11; good combustion practices (including establishment of flare minimization practices); steam assisted

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0070 LBS/MM BTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , NESHAP

**Control Method:** (P) complying with 40 CFR 60.18 and 63.11; good combustion practices (including establishment of flare minimization practices); steam assisted

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0680 LB/MM BTU  
**Emission Limit 2:**

**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP , NSPS  
**Control Method:** (P) complying with 40 CFR 60.18 and 63.11; good combustion practices (including establishment of flare minimization practices)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.3100 LB/MM BTU  
**Emission Limit 2:**

**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NESHAP  
**Control Method:** (P) complying with 40 CFR 60.18 and 63.11; good combustion practices (including establishment of flare minimization practices)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown



**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 98.0000 % REMOVAL EFFICIENCY

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , NESHAP

**Control Method:** (P) complying with 40 CFR 60.18 and 63.11; good combustion practices (including establishment of flare minimization practices)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good management practices, good combustion practices, proper flare design

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
--------------------------------------

**PROCESS NAME:** vessel evacuation flare - 018  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** natural gas  
**Throughput:** 3.04 mm btu/hr  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices (including establishment of flare minimization practices)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0070 LB/MM BTU THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices (including establishment of flare minimization practices)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0680 LB/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices (including establishment of flare minimization practices)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.3100 LBS/MM BTU THREE ONE-HOUR TEST AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices (including establishment of flare minimization practices)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 98.0000 % REMOVAL EFFICIENCY

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices (including establishment of flare minimization practices)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Insulation, Gaseous fuels, good combustion practices, and proper operation and maintenance

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** Diesel Firewater pump engines (6 units)

**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))

**Primary Fuel:** diesel

**Throughput:** 425.00 hp

**Process Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63 subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63 subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63 subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63 subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63 subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
--------------------------------------

**PROCESS NAME:** Diesel emergency generator engine - EGEN  
**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** diesel  
**Throughput:** 350.00 hp  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**



**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63 subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63 subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63 subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63 subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) complying with 40 CFR 63 subpart ZZZZ  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** cooling towers - 007  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 86500.00 gpm

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT RATE  
**Emission Limit 2:** 1400.0000 PPM TDS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) drift eliminators  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT RATE  
**Emission Limit 2:** 1400.0000 PPM TDS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) drift eliminators  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) monitored as required by 40 CFR 63 subpart XX  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** oil tank FA-712 - 012  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 66150.00 gal  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) IFR with liquid mounted seal, double seal, or mechanical seal  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** storm water surge tank TK-9 - 013  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 291410.00 gallons  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) fixed roof  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** process water storage tanks TK-301A/B - 017  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 350000.00 gallons  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NESHAP

**Control Method:** (P) EFR with primary and secondary seal, submerged fill pipe, and complying with 40 CFR 63 Subpart WW

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Unleaded Gasoline Tank TK-33  
**Process Type:** 42.005 (Petroleum Liquid Storage in Fixed Roof Tanks)  
**Primary Fuel:**  
**Throughput:** 1000.00 gallons  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Submerged fill pipe and LAC 33:III.2103  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Methanol Tank TK-2  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 1469.00 gallons  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**



**Control Method:** (P) Submerged fill pipe and LAC 33:III.2103  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** pyrolysis gasoline tank V-410  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 946996.00 gallons  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (A) Closed vent system and routed to a flare, Complying with 40 CFR 60 Subpart Kb and LAC 33:III.2103  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** wastewater treatment system  
**Process Type:** 22.200 (Industrial Wastewater Treatment)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) Complying with 40 CFR 63 Subpart XX  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** Fugitive Emissions  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP  
**Control Method:** (P) proper piping design, complying with LAC 33:III.2111, and conduct an LDAR meeting requirements of 40 CFR 63 Subpart UU  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	LA-0295 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	EQUISTAR CHEMICALS, LP	<b>Last Updated:</b> 09/19/2016
<b>Facility Name:</b>	WESTLAKE FACILITY	<b>Permit Number:</b> PSD-LA-806
<b>Facility Contact:</b>	JOSEPH BUSH (337) 882-1615 JOE.BUSH@LYONDELLBASELL.COM	<b>Permit Date:</b> 07/12/2016 (actual)
<b>Facility Description:</b>	Polypropylene manufacturing facility	<b>FRS Number:</b> 110000597266
<b>Permit Type:</b>	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	<b>SIC Code:</b> 2821
<b>Permit URL:</b>		<b>NAICS Code:</b> 325211
<b>EPA Region:</b>	6	<b>COUNTRY:</b> USA
<b>Facility County:</b>	CALCASIEU	
<b>Facility State:</b>	LA	
<b>Facility ZIP Code:</b>	70669	
<b>Permit Issued By:</b>	LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name) MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV	
<b>Other Agency Contact Info:</b>	Permit writer: Anthony Randall, (225) 219-3417 or anthony.randall@la.gov	
<b>Permit Notes:</b>	Complete application date = date of administrative completeness Permit is for a retroactive PSD review.	

## Process/Pollutant Information

**PROCESS NAME:** CGP Unit Cooling Tower (3-03, EQT 15)  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 3000.00 GPM  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.1300 LB/H HOURLY MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Monthly hydrocarbon monitoring; maintain equipment to minimize fugitive emissions; repair faulty equipment at the earliest opportunity, but no later than the next scheduled unit shutdown

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Annual VOC emissions from the CGP Unit Cooling Tower, along with VOC emissions from a number of other cooling towers not addressed in the PSD permit, are capped at 12.29 TPY (GRP 13).

## Process/Pollutant Information

**PROCESS NAME:** M-Line Production Area Flare (FL061) (Z2, EQT 19)  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0

**Process Notes:** Flare is subject to 40 CFR 60.18 and Subpart DDD.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 8882.9200 LB/H HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (P) Good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Annual VOC emissions from the Cogeneration Plant Flare (449, EQT 326); the M-Line Production Area Flare (Z2, EQT 19); and the Plant 5 Flare (Z1, EQT 138) (not addressed in the PSD permit) are limited to 465.93 TPY (GRP 12).

### Process/Pollutant Information

**PROCESS NAME:** Reciprocating Internal Combustion Engines 1 and 2 (1-08, EQT 321 & 2-08, EQT 322)  
**Process Type:** 17.150 (Other Gaseous)  
**Primary Fuel:** NATURAL GAS AND VENT GAS  
**Throughput:** 11265.00 HP  
**Process Notes:** Engines are subject to 40 CFR 60 Subparts DDD and JJJJ.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Inorganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 14.6700 LB/H HOURLY MAXIMUM  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , OPERATING PERMIT

**Control Method:** (P) Good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques (see notes below)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Aggregate NOx emissions from the engines are capped at 103.90 TPY (GRP 10). Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 3.3500 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 29.0000 PPMVD @ 5% O2 ANNUAL AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , OPERATING PERMIT

**Control Method:** (B) Oxidation catalyst and good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques (see notes below)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Aggregate VOC emissions from the engines are capped at 23.69 TPY (GRP 10). Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

## Process/Pollutant Information

**PROCESS NAME:** Solar Titan 130 Gas Turbine with Unfired HRSG (3-08, EQT 323)  
**Process Type:** 16.210 (Natural Gas (includes propane & liquified petroleum gas))  
**Primary Fuel:** Natural Gas  
**Throughput:** 159.46 MM BTU/HR  
**Process Notes:** Turbine is subject to 40 CFR 60 Subpart KKKK. Output power at generator: 14.117 MW

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 14.2500 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:** 15.0000 PPMVD @ 15% O2 ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , OPERATING PERMIT

**Control Method:** (P) Dry low NOx combustor (SoLoNOx) and good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques (see notes below)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.6400 LB/H HOURLY MAXIMUM  
**Emission Limit 2:**

**Standard Emission:** 2.5000 PPMVD @ 15% O2 ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques consistent with the manufacturer's recommendations to maximize fuel efficiency and minimize emissions (see notes below)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. PSD permit requires an annual stack test for VOC. If VOC < 75% of the permit limit, the frequency of the testing may be reduced to once every 2 years. If result of any subsequent test exceeds 75% of the permit limit, resume annual testing.

### Process/Pollutant Information

**PROCESS NAME:** Firetube Boiler Nos. 1 and 2 (4-08, EQT 324 & 5-08, EQT 325)

**Process Type:** 13.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)

**Primary Fuel:** NATURAL GAS AND VENT GAS

**Throughput:** 63.00 MM BTU/H

**Process Notes:** Boilers are subject to 40 CFR 60 Subpart Dc. Boiler No. 1 is also subject to 40 CFR 60 Subpart DDD.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** EPA/OAR Mthd 7E

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 2.7500 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 30.0000 PPMVD @ 3% O2 ANNUAL AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT



**Control Method:** (B) Flue gas recirculation and good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques (see notes below)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Aggregate NOx emissions from the boilers are capped at 10.05 TPY (GRP 11). Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. The PSD permit also references the 30 ppmvd @ 3% O2 limit as a "three 1-hour testing average."

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** EPA/OAR Mthd 25A

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.2100 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 2.8000 PPMVD @ 3% O2 ANNUAL AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (B) Oxidation catalyst and good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques (see notes below)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Aggregate VOC emissions from the boilers are capped at 0.90 TPY (GRP 11). Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. The PSD permit also references the 2.8 ppmvd @ 3% O2 limit as a "three 1-hour testing average."

Process/Pollutant Information

**PROCESS NAME:** Cogeneration Plant Flare (449, EQT 326)  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** Flare is subject to 40 CFR 60.18 and Subpart DDD.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 165.7500 LB/H HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (P) Good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Annual VOC emissions from the Cogeneration Plant Flare (449, EQT 326); the M-Line Production Area Flare (Z2, EQT 19); and the Plant 5 Flare (Z1, EQT 138) (not addressed in the PSD permit) are limited to 465.93 TPY (GRP 12).

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 12.6000 LB/H HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Annual NOx emissions from the Cogeneration Plant Flare (449, EQT 326); the M-Line Production Area Flare (Z2, EQT 19); and the Plant 5 Flare (Z1, EQT 138) (not addressed in the PSD permit) are limited to 36.65 TPY (GRP 12).

Process/Pollutant Information
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**PROCESS NAME:** Bulk Storage Vents (RLP 5, 9, 10, & 11)  
**Process Type:** 69.999 (Other Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 1200.00 ACFM  
**Process Notes:** Vents are subject to 40 CFR 60 Subpart DDD.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0100 LB/H HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (P) Good design and operating practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Annual VOC emissions from these vents, along with VOC emissions from a number of other vents not addressed in the PSD permit, are capped at 6.91 TPY (GRP 15).

## Process/Pollutant Information

**PROCESS NAME:** Facility Fugitive Emissions (FUG 4)  
**Process Type:** 63.999 (Other Polymer and Resin Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** EPA/OAR Mthd 21

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT , NSPS

**Control Method:** (P) Leak detection and repair (LDAR); LAC 33:III.2122

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 40 CFR 60 Subpart DDD (referencing Subpart VV) is also applicable, but LAC 33:III.2122 is the overall most stringent program.

## Facility Information

<b>RBLC ID:</b>	LA-0305 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	LAKE CHARLES METHANOL, LLC	<b>Last Updated:</b> 04/28/2017
<b>Facility Name:</b>	LAKE CHARLES METHANOL FACILITY	<b>Permit Number:</b> PSD-LA-803(M1)
<b>Facility Contact:</b>	JOHN MCDANIEL 318-308-0322 JMCDANIEL@LAKECHARLESMETHANOL.COM	<b>Permit Date:</b> 06/30/2016 (actual)
		<b>FRS Number:</b> 110067180366

<b>Facility Description:</b>	Proposed facility to produce methanol, H2, H2SO4, CO2, Argon and electricity from Pet Coke	<b>SIC Code:</b>	2869
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>NAICS Code:</b>	325199
<b>Permit URL:</b>		<b>COUNTRY:</b>	USA
<b>EPA Region:</b>	6		
<b>Facility County:</b>	CALCASIEU PARISH		
<b>Facility State:</b>	LA		
<b>Facility ZIP Code:</b>	70669		
<b>Permit Issued By:</b>	LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name) MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV		
<b>Other Agency Contact Info:</b>	Dan Nguyen - (225)219-3395		
<b>Permit Notes:</b>	PSD-LA-803 was issued 2/24/2016. The facility has not commence construction when Permit PSD-LA-803(M1) was issued.		
<b>Facility-wide Emissions:</b>	<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>	
	Carbon Monoxide	461.2800 (Tons/Year)	
	Nitrogen Oxides (NOx)	168.4900 (Tons/Year)	
	Particulate Matter (PM)	70.3500 (Tons/Year)	
	Sulfur Oxides (SOx)	137.1000 (Tons/Year)	
	Volatile Organic Compounds (VOC)	18.4400 (Tons/Year)	

<b>Process/Pollutant Information</b>
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<b>PROCESS NAME:</b>	Auxiliary Boilers and Superheaters
<b>Process Type:</b>	11.310 (Natural Gas (includes propane and liquefied petroleum gas))
<b>Primary Fuel:</b>	Natural Gas
<b>Throughput:</b>	0
<b>Process Notes:</b>	Supplement fuel: fuel gas Boilers: 225 MM BTU/hr each

<b>POLLUTANT NAME:</b>	Carbon Dioxide Equivalent (CO2e)
<b>CAS Number:</b>	CO2e
<b>Test Method:</b>	Unspecified
<b>Pollutant Group(s):</b>	( Greenhouse Gasses (GHG) )
<b>Emission Limit 1:</b>	
<b>Emission Limit 2:</b>	
<b>Standard Emission:</b>	

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good equipment design and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good engineering design and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good engineering design and proper operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good engineering design and proper operation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) fuel gases and/or pipeline quality natural gas  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0150 LBS/MM BTU 30 ROLLING AVG., EXCEPT SCR SU OR MAINT.  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) SCR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** Flares  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** Fuel Gas  
**Throughput:** 1008.00 MM BTU/hr  
**Process Notes:**



**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good equipment design and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM<sub>10</sub>)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good flare design  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good flare design  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good flare design  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

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## Process/Pollutant Information

**PROCESS NAME:** Acid Gas Removal Unit / CO2 Vent  
**Process Type:** 69.999 (Other Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Thermal Oxidizers  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Thermal oxidizers

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Wet Sulfuric Acid Plants

**Process Type:** 62.015 (Sulfuric Acid Plants)

**Primary Fuel:**

**Throughput:** 904.30 tons/day (each)

**Process Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good equipment design and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good engineering design and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) SCR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO2)

**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.5000 LB/TON H2SO4 PROD.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) H2O2 scrubbers

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfuric Acid (mist, vapors, etc)

**CAS Number:** 7664-93-9

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 LBS/TON H2SO4 PROD.

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Condenser, WESP, and H2O2 Scrubbers

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 LB/TON H2SO4 PROD.  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Condenser, WESP, H2O2 scrubbers  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 LB/TON H2SO4 PROD.  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Condenser, WESP, H2O2 scrubbers  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**



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**PROCESS NAME:** Regenerative Thermal Oxidizers  
**Process Type:** 19.200 (Emission Control Afterburners & Incinerators (combustion gasses only))  
**Primary Fuel:** fuel gas  
**Throughput:** 6.00 mm btu/hr (each)

**Process Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good equipment design and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good engineering design and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NO<sub>x</sub>) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Cooling Towers  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** Unit A = 241,843 gpm Unit B = 201,196 gpm Unit C = 72,531 gpm

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Drift eliminators  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Drift eliminators  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Coke Handling  
**Process Type:** 99.190 (Other Fugitive Dust Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 GR/DSCF THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) baghouses

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 GR/DSCF THREE ONE-HOUR TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) baghouses  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Sulfuric Acid Storage Tanks  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 68246.00 gallons  
**Process Notes:**

**POLLUTANT NAME:** Sulfuric Acid (mist, vapors, etc)  
**CAS Number:** 7664-93-9  
**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Fixed roofs, submerged fill pipes, and nitrogen blanket  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Fugitives  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Diesel Engines (Emergency)  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Diesel  
**Throughput:** 4023.00 hp  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )



**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Complying with 40 CFR 60 Subpart IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Complying with 40 CFR 60 Subpart IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO2)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Complying with 40 CFR 60 Subpart IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Complying with 40 CFR 60 Subpart IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) Complying with 40 CFR 60 Subpart IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Complying with 40 CFR 60 Subpart IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Gasifier Start-up Preheat Burners

**Process Type:** 13.310 (Natural Gas (includes propane and liquefied petroleum gas))

**Primary Fuel:** Natural gas  
**Throughput:** 23.00 MM BTU/hr (each)  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good engineering practices, good combustion technology, and use of clean fuels

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good engineering practices, good combustion technology, and use of clean fuels

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good engineering practices, good combustion technology, and use of clean fuels  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good engineering practices, good combustion technology, and use of clean fuels  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good engineering practices, good combustion technology, and use of clean fuels

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good equipment design and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** WSA Preheat Burners  
**Process Type:** 13.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** Natural Gas  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good engineering design and practices and use of clean fuels  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good engineering design and practices and use of clean fuels

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good engineering design and practices and use of clean fuels

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NO<sub>x</sub>) , Particulate Matter (PM) )

**Emission Limit 1:**



**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good engineering design and practices and use of clean fuels

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good engineering design and practices and use of clean fuels

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good equipment design and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	LA-0275 (final)	<b>Date Determination</b>	
		<b>Last Updated:</b>	04/28/2017
<b>Corporate/Company Name:</b>	SASOL CHEMICALS (USA) LLC	<b>Permit Number:</b>	PSD-LA-291(M4)
<b>Facility Name:</b>	LINEAR ALKYL BENZENE (LAB) UNIT	<b>Permit Date:</b>	04/29/2016 (actual)
<b>Facility Contact:</b>	ERIC RODRIGUEZ 281-588-3761 ERIC.RODRIGUEZ@SASOL.COM	<b>FRS Number:</b>	110017418061
<b>Facility Description:</b>	LAB production unit, PSD-LA-291(M2) issued October 18, 1998 - PSD-LA-291(M3) issued November 29, 2010. Permit PSD-LA-291(M4) for emission limits revision, No BACT change.	<b>SIC Code:</b>	2865
<b>Permit Type:</b>	C: Modify process at existing facility	<b>NAICS Code:</b>	325110
<b>Permit URL:</b>		<b>COUNTRY:</b>	USA
<b>EPA Region:</b>	6		
<b>Facility County:</b>	CALCASIEU		
<b>Facility State:</b>	LA		
<b>Facility ZIP Code:</b>	70669		
<b>Permit Issued By:</b>	LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name) MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV		
<b>Other Agency Contact Info:</b>	Dan Nguyen, (225) 219-3395		
<b>Permit Notes:</b>			
<b>Affected Boundaries:</b>	<b>Boundary Type:</b>	<b>Class 1 Area State:</b>	<b>Boundary:</b> <b>Distance:</b>

	CLASS1	LA	Breton	> 250 km
<b>Facility-wide Emissions:</b>	<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>		
	Nitrogen Oxides (NOx)	115.9800 (Tons/Year)		
	Particulate Matter (PM)	10.3300 (Tons/Year)		

<b>Process/Pollutant Information</b>
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**PROCESS** Heaters (3 units)

**NAME:**

**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))

**Primary Fuel:** Natural Gas and Ethane

**Throughput:** 0

**Process Notes:** LH-1(H-201): 87.3 MM BTU/hr - fires CH4 & Ethane LH-2(H-202): 21.0 MM BTU/hr - fires CH4 & Ethane LH-3(H-601): 220.5 MM BTU/hr - fires CH4, Ethane, and hydrogen waste gas

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NESHAP

**Control Method:** (P) Low NOX burners

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** LH-1: 7.15 lbs/hr LH-2: 2.71 lbs/hr LH-3: 19.36 lbs/hr

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** LH-1: 0.86 lbs/hr LH-2: 0.21 lbs/hr LH-3: 1.67 lbs/hr

### Process/Pollutant Information

**PROCESS NAME:** LF-1 - LAB Unit Flare  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** Natural Gas  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 10.1500 LBS/HR HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Steam assisted  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.4000 LBS/HR HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) steam assisted  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	TX-0728 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	BASF	<b>Last Updated:</b> 05/16/2016
<b>Facility Name:</b>	PEONY CHEMICAL MANUFACTURING FACILITY	<b>Permit Number:</b> 118239, N200
<b>Facility Contact:</b>	DOUG REEVES (979) 415-8410 DOUG.REEVES@BASF.COM	<b>Permit Date:</b> 04/01/2015 (actual)
<b>Facility Description:</b>	Ammonia production with hydrogen imported	<b>FRS Number:</b> 110056953701
<b>Permit Type:</b>	B: Add new process to existing facility	<b>SIC Code:</b> 2813
<b>Permit URL:</b>		<b>NAICS Code:</b> 325311
<b>EPA Region:</b>	6	<b>COUNTRY:</b> USA

**Facility County:** BRAZORIA  
**Facility State:** TX  
**Facility ZIP Code:**  
**Permit Issued By:** TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) (Agency Name)  
MICHAEL PARTEE(Agency Contact) (512) 239-3312 michael.partee@tceq.texas.gov  
**Other Agency Contact Info:** David Infortunio 512-239-1247

**Permit Notes:**

**Affected Boundaries:** **Boundary Type:** CLASS1 **Class 1 Area State:** LA **Boundary:** Breton **Distance:** > 250 km

Process/Pollutant Information

**PROCESS** ammonia flare

**NAME:**

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary** Natural gas, ammonia, hydrogen

**Fuel:**

**Throughput:** 106396.00 MMBtu/yr

**Process** 4TPY ammonia throughput limit A flare is used to combust unreacted hydrogen, destroy impure hydrogen/ammonia streams, and to control process

**Notes:** shutdowns. The Flare is claimed to achieve 99% control for ammonia. Best Available Control Technology (BACT) for carbon monoxide (CO) from flares is good combustion practices. Sulfur Dioxide (SO2) emissions are controlled with the use of pipeline quality natural gas as fuel gas. The only volatile organic compound (VOC) emitted from the flare result from using natural gas as fuel gas. As the flare is not used for control of VOC, assist gas is not needed to control emissions of particulate matter (PM). Emission rates provided are for worst case maintenance, start-up and shutdown (MSS) scenarios.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 950.4100 LB/H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** OTHER CASE-BY-CASE

**Other Applicable Requirements:** N/A

**Control Method:** (P) flare good combustion practices

**Est. % Efficiency:** 98.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Emission rates provided are for worst-case MSS scenarios

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 223.4100 LB/H  
**Emission Limit 2:** 5.3900 T/YR  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** N/A  
**Control Method:** (P) no control  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The TPY emission rate is based on all operating scenarios. the lb/hr rate is based on worst case MSS scenarios.

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 1.0200 LB/H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** OTHER CASE-BY-CASE  
**Other Applicable Requirements:** N/A  
**Control Method:** (N)

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Emission rates provided are for worst-case MSS scenarios.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 9.3200 LB/H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** OTHER CASE-BY-CASE  
**Other Applicable Requirements:** N/A  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** All VOC is from fuel gas not waste gas. Emission rates provided are for worst-case MSS scenarios.

### Process/Pollutant Information

**PROCESS NAME:** Emergency Diesel Generator  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Diesel  
**Throughput:** 1500.00 hp



**Process Notes:** The emergency generator (EPN 17-1-4) at the site is diesel fired and rated at 1500 horsepower (hp). Lowest Achievable Emission Rates (LAER) for nitrogen oxides (NOx) is the use of a 40 Code Federal Rules (CFR) Part 89 Tier 2 engine and limited hours of operation. Emissions from the engine shall not exceed 0.0218 grams per horsepower-hour (g/hp-hr) of nitrogen oxides (NOx). The engine is limited to 52 hours per year of non-emergency operation. Emissions from the engine shall not exceed 0.01256 g/hp hr of carbon monoxide (CO). The fuel for the engine is limited to 15 parts per million sulfur by weight (ultra-low sulfur diesel). The engine is limited to 52 hours per year of non-emergency operation. Also applicable: 40CFR60 IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engine and 40CFR63 ZZZZ, National Emissions Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 LB/H

**Emission Limit 2:** 0.0100 T/YR

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** OTHER CASE-BY-CASE

**Other Applicable Requirements:** NSPS , MACT

**Control Method:** (P) Minimized hours of operations Tier II engine

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 LB/H

**Emission Limit 2:** 0.0100 T/YR

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** OTHER CASE-BY-CASE

**Other Applicable Requirements:** NSPS , MACT

**Control Method:** (P) Minimized hours of operations Tier II engine

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 LB/H  
**Emission Limit 2:** 0.0100 T/YR  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** OTHER CASE-BY-CASE  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (P) Minimized hours of operations Tier II engine  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0218 G/HP HR  
**Emission Limit 2:** 0.3500 TPY  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (P) Minimized hours of operations Tier II engine

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0126 G/HP HR  
**Emission Limit 2:** 0.2000 TPY  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** OTHER CASE-BY-CASE  
**Other Applicable Requirements:** NSPS , MACT  
**Control Method:** (P) Minimized hours of operations Tier II engine  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.6100 LB/H  
**Emission Limit 2:** 0.0200 T/YR  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** OTHER CASE-BY-CASE  
**Other Applicable Requirements:** N/A  
**Control Method:** (P) Low sulfur fuel 15 ppmw

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.7000 LB/H  
**Emission Limit 2:** 0.0200 T/YR  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** OTHER CASE-BY-CASE  
**Other Applicable Requirements:** N/A  
**Control Method:** (P) Minimized hours of operations Tier II engine  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Diesel and lube oil tanks

**Process Type:** 42.005 (Petroleum Liquid Storage in Fixed Roof Tanks)

**Primary Fuel:**

**Throughput:** 10708.00 gallons/yr

**Process Notes:** The tanks are painted white. Loading is done via submerged piping. The volatile organic compound (VOC) vapor pressure of the diesel and lube oil stored is below 0.0002 pounds per square inch actual (psia), so a fixed roof is reasonable.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0200 LB/H  
**Emission Limit 2:** 0.0100 T/YR  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** OTHER CASE-BY-CASE  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) low vapor pressure fuel, submerged fill, white tank  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** VP

## Process/Pollutant Information

**PROCESS** Cooling tower

**NAME:**

**Process Type:** 99.009 (Industrial Process Cooling Towers)

**Primary Fuel:**

**Throughput:** 40000.00 gallons per minute

**Process Notes:** Total dissolved solids (TDS) shall not exceed 3,500 parts per million by weight. Volatile organic compounds (VOC) is not emitted from the cooling tower as there is no VOC in the process.

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3500 LB/H  
**Emission Limit 2:** 1.5300 T/YR  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** OTHER CASE-BY-CASE

**Other Applicable Requirements:**

**Control Method:** (A) drift eliminator is 0.0005% efficient  
**Est. % Efficiency:** 0.001  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3100 LB/H  
**Emission Limit 2:** 1.0500 T/YR

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** OTHER CASE-BY-CASE

**Other Applicable Requirements:**

**Control Method:** (A) drift eliminator is 0.0005% efficient  
**Est. % Efficiency:** 0.001  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1200 LB/H  
**Emission Limit 2:** 0.4100 T/YR

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** OTHER CASE-BY-CASE

**Other Applicable Requirements:**

**Control Method:** (A) drift eliminator is 0.0005% efficient  
**Est. % Efficiency:** 0.001  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Ammonia Start-Up Heater

**Process:** 19.600 (Misc. Boilers, Furnaces, Heaters)

**Type:**

**Primary:** pipeline quality natural gas

**Fuel:**

**Throughput:** 8100.00 MMBtu/yr

**Process Notes:** Throughput also limited to 54MMBtu/hr. Given that the hours of operation are intermittent, it is unreasonable to use Selective Catalytic Reduction

(SCR) on this unit due to the time it takes SCR to reach a temperature at which it controls nitrogen oxides (NOx) emissions. The startup heater achieves 0.036 pounds per million british thermal units (lb/MMBtu) for NOx. This rate is supported by the RACT/BACT/LAER Clearinghouse (RBLC) database, as well as recently issued permits in Texas and other states. California regulations require 0.011 lb. NOx/MMBtu as reasonably available control technology (RACT) (Southern California Air Quality District (SCAQMD) Rule 1146) but this is not achievable for intermittent emissions resulting from heaters being used exclusively in support of maintenance, start-up, and shutdown (MSS) activities.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 1.9600 LB/H

**Emission Limit 2:** 50.0000 PPMVD @ 3% O2

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** OTHER CASE-BY-CASE

**Other Applicable Requirements:**

**Control Method:** (P) limited hours of operation

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 1.9100 LB/H  
**Emission Limit 2:** 0.0360 LB/MMBTU  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:**  
**Control Method:** (P) limited hours of operation and low NOx burners  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.4000 LB/H  
**Emission Limit 2:** 0.0300 T/YR  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** OTHER CASE-BY-CASE  
**Other Applicable Requirements:**  
**Control Method:** (P) use of gaseous fuel  
**Est. % Efficiency:**



**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.0300 LB/H  
**Emission Limit 2:** 0.0100 T/YR  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** OTHER CASE-BY-CASE

**Other Applicable Requirements:**

**Control Method:** (P) limited hours of operation and low sulfur fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.2700 LB/H

**Emission Limit 2:** 0.0200 T/YR

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** OTHER CASE-BY-CASE

**Other Applicable Requirements:**

**Control Method:** (P) use of gaseous fuel

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Lead (Pb) / Lead Compounds  
**CAS Number:** 7439-92-1  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Hazardous Air Pollutants (HAP) , Heavy Metals , InOrganic Compounds , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0100 LB/H  
**Emission Limit 2:** 0.0100 T/YR  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** OTHER CASE-BY-CASE  
**Other Applicable Requirements:** MACT  
**Control Method:** (P) limited hours of operation  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** 40CFR63 Subpart DDDDD, National Emission Standards For Hazardous Air Pollutants For Major Sources: Industrial, Commercial, And Institutional Boilers And Process Heaters.

## Facility Information

<b>RBLC ID:</b>	AK-0082 (final)	<b>Date Determination</b>	
<b>Corporate/Company Name:</b>	EXXON MOBIL CORPORATION	<b>Last Updated:</b>	02/19/2016
<b>Facility Name:</b>	POINT THOMSON PRODUCTION FACILITY	<b>Permit Number:</b>	AQ1201CPT03
<b>Facility Contact:</b>	MATT REILE 907 929 4108 MATTHEW.R.REILE@EXXONMOBIL.COM	<b>Permit Date:</b>	01/23/2015 (actual)
<b>Facility Description:</b>	OIL GAS EXPLORATION AND PRODUCTION FACILITY.	<b>FRS Number:</b>	110058932561
<b>Permit Type:</b>	C: Modify process at existing facility	<b>SIC Code:</b>	1382
<b>Permit URL:</b>	<a href="http://dec.alaska.gov/Applications/Air/airtoolsweb/Home/ViewAttachment/16685549/QXjhK6BJvK3h8EByjhru7Q2">http://dec.alaska.gov/Applications/Air/airtoolsweb/Home/ViewAttachment/16685549/QXjhK6BJvK3h8EByjhru7Q2</a>	<b>NAICS Code:</b>	211111
<b>EPA Region:</b>	10	<b>COUNTRY:</b>	USA

**Facility County:** USA  
**Facility State:** AK  
**Facility ZIP Code:**  
**Permit Issued By:** ALASKA DEPT OF ENVIRONMENTAL CONS (Agency Name)  
 MR. JIM PLOSAY(Agency Contact) (907) 465-5103 JOHN.KUTERBACH@ALASKA.GOV  
**Permit Notes:** Revise Existing RBLC ID AK-0076 to include pollutants: PM-10 and VOC which now trigger PSD.  
**Affected Boundaries:**

<b>Boundary Type:</b>	<b>Class 1 Area State:</b>	<b>Boundary:</b>	<b>Distance:</b>
INTL BORDER		US/Canada Border	< 100 km

**Facility-wide Emissions:**

<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>
Carbon Monoxide	122.0000 (Tons/Year)
Nitrogen Oxides (NOx)	294.3000 (Tons/Year)
Particulate Matter (PM)	25.9000 (Tons/Year)
Sulfur Oxides (SOx)	32.1000 (Tons/Year)
Volatile Organic Compounds (VOC)	43.3000 (Tons/Year)

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Turbines  
**Process Type:** 16.150 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** Fuel Gas  
**Throughput:** 7520.00 kW  
**Process Notes:** Four 7.52 MW Solar Turbines with SoLoNOx Technology burning natural gas on the North Slope of Alaska, north of the Artic Circle. Two of the turbines are dual fired units that can combust ULSD as well as Fuel Gas

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 15.0000 PPMV 15% OXYGEN  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS

**Control Method:** (B) Dry Low NOx and SoLoNOx. DLN combustors utilize multistage premix combustors where the air and fuel is mixed at a lean fuel to air ratio. The excess air in the lean mixture acts as a heat sink, which lowers peak combustion temperatures and also ensures a more homogeneous mixture, both resulting in greatly reduced NOX formation rates. SoLoNOx is a lean premixed process which improves combustion efficiency and reduce NOx and particulate emissions.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 2.5000 PPMV 15% OXYGEN

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) SCR (Selective Catalytic Reduction) is a post-combustion gas treatment technique for reduction of nitric oxide (NO) and nitrogen dioxide (NO2) in the turbine exhaust stream to molecular nitrogen, water, and oxygen. This process is accomplished by using ammonia (NH3) as a reducing agent, and is injected into the flue gas upstream of the catalyst bed. By lowering the activation energy of the NOX decomposition removal efficiency of 80 to 90 percent are achievable.

**Est. % Efficiency:** 85.000

**Cost Effectiveness:** 1400 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0660 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0066 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 2.5000 PPMV  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 89336.0000 TONS/YEAR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** Airstrip Generator Engine  
**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))

**Primary Fuel:** Ultra Low Sulfur Diesel  
**Throughput:** 490.00 hp  
**Process Notes:** One 490 hp Airstrip Generator Engine

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0025 LB/HP-H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 4.8000 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.6000 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton



**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 163.0000 TONS/YEAR  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** Fine Water Pumps  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Ultra Low Sulfur Diesel  
**Throughput:** 610.00 hp  
**Process Notes:** Two ULSD-fired 610 hp Fine Water Pumps

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 3.0000 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.6000 GRAMS/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 GRAMS/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 GRAMS/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0007 LB/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 565.0000 TONS/YEAR COMBINED

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Bulk Tank Generator Engines  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Ultra Low Sulfur Diesel  
**Throughput:** 891.00 hp  
**Process Notes:** Two ULSD-fired 891 hp Bulk Tank Storage Area Generator Engines

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 4.8000 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 2.6000 GRAMS/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 GRAMS/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 GRAMS/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0007 LB/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 7194.0000 TONS/YEAR COMBINED

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Agitator Generator Engine

**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))

**Primary Fuel:** Ultra Low Sulfur Diesel

**Throughput:** 98.00 hp

**Process Notes:** ULSD-fired 98 hp Agitator Generator Engine

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 3.7000 GRAMS/HP-H

**Emission Limit 2:**



**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 5.6000 GRAMS/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3000 GRAMS/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3000 GRAMS/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0025 LB/HP-H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 356.0000 TONS/YEAR

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** Incinerator Generator Engine

**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))

**Primary Fuel:** Ultra Low Sulfur Diesel

**Throughput:** 102.00 hp

**Process Notes:** ULSD-fired 102 hp Incinerator Generator Engine

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 3.7000 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Dioxide (NO2)  
**CAS Number:** 10102-44-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) )  
**Emission Limit 1:** 4.9000 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10  $\mu$  (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2200 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5  $\mu$  (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2200 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0025 LB/HP-H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 516.0000 TONS/YEAR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** Boilers and Heaters  
**Process Type:** 13.220 (Distillate Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Ultra Low Sulfur Diesel  
**Throughput:** 7.00 MMBTU/H  
**Process Notes:** 33 ULSD-fired Boilers and Heaters ranging from 1 to 7 MMBtu/hr

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 20.0000 LB/1,000 GAL  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 5.0000 LB/1,000 GAL  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10  $\mu$  (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 2.3000 LB/1,000 GAL

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5  $\mu$  (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.5500 LB/1,000 GAL

**Emission Limit 2:**

**Standard Emission:**



**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.2520 LB/1,000 GAL

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 45537.0000 TONS/YEAR COMBINED

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Waste Incinerator

**Process Type:** 21.400 (Municipal Waste Combustion)

**Primary Fuel:** Gas, ULSD, or Trash

**Throughput:** 4.90 MMBTU/H

**Process Notes:** 4.9 MMBtu Gas-, ULSD-, or Trash-fired new, small, remote Waste Incinerator capable of firing 220 lbs/hr

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 170.0000 PPMV

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 13.0000 PPMV  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10  $\mu$  (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 270.0000 MG/DSCM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 270.0000 MG/DSCM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 3.0000 LB/TON  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 981.0000 TONS/YEAR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** Remote Incinerator Generator Engine  
**Process Type:** 21.400 (Municipal Waste Combustion)  
**Primary Fuel:** Ultra Low Sulfur Diesel  
**Throughput:** 102.00 hp  
**Process Notes:** 102 hp ULSD-fired existing, small, remote Waste Incinerator

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 3.0000 LB/TON  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 10.0000 LB/TON

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 7.0000 LB/TON

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 7.0000 LB/TON  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 3.0000 LB/TON  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 892.0000 TONS/YEAR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Drilling, HP, and LP Flares  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** Gas  
**Throughput:** 50.00 MMscf/yr  
**Process Notes:** 50 MMscf/yr Drilling Flare, 35 MMscf/yr HP Flare-Pilot/Purge, 20 MMscf/yr LP Flare-Pilot/Purge



**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0680 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.3700 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0264 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0264 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1400 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 5317.0000 TONS/YEAR COMBINED  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

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## Process/Pollutant Information

**PROCESS NAME:** Emergency Camp Generators  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Ultra Low Sulfur Diesel  
**Throughput:** 2695.00 hp  
**Process Notes:** Three 2,695 hp ULSD-fired Standby Camp Generator Engines.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 4.8000 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.6000 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 GRAMS/HP-H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0007 LB/HP-H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 2332.0000 TONS/YEAR COMBINED  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	AK-0083 (final)	<b>Date</b>	
		<b>Determination</b>	
		<b>Last Updated:</b>	02/19/2016
<b>Corporate/Company</b>	AGRIUM U.S. INC.	<b>Permit</b>	AQ0083CPT06
<b>Name:</b>		<b>Number:</b>	
<b>Facility Name:</b>	KENAI NITROGEN OPERATIONS	<b>Permit Date:</b>	01/06/2015 (actual)
<b>Facility Contact:</b>	TED HARTMAN 913 302 7469 TED.HARTMAN@AGRIUM.COM	<b>FRS Number:</b>	110030488620
<b>Facility Description:</b>	The Kenai Nitrogen Operations Facility is located at Mile 21 of the Kenai Spur Highway, near Kenai Alaska. It is classified as a nitrogenous fertilizer manufacturing facility under Standard Industrial Classification code 2873 and under North American Industrial Classification code 325311. The facility will produce ammonia and urea for bulk sale. There are two ammonia and two urea plants at Agrium's KNO facility. This permit authorizes the restart of one ammonia and one urea plant (plants 4 and 5). The ammonia plant converts natural gas with added steam and air to produce ammonia (NH3) and carbon dioxide (CO2). Feedstocks for the urea plant include CO2 and NH3. The utility plant generates the power and steam needed to operate the ammonia and urea plants. Final products are loaded at the Product Loading Wharf for shipment.	<b>SIC Code:</b>	2873
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>NAICS Code:</b>	325311
<b>Permit URL:</b>	<a href="http://dec.alaska.gov/Applications/Air/airtoolsweb/Home/ViewAttachment/16672291/KQZafTqmYd8SVnZ3RUWQfQ2">http://dec.alaska.gov/Applications/Air/airtoolsweb/Home/ViewAttachment/16672291/KQZafTqmYd8SVnZ3RUWQfQ2</a>		
<b>EPA Region:</b>	10	<b>COUNTRY:</b>	USA
<b>Facility County:</b>	USA		
<b>Facility State:</b>	AK		
<b>Facility ZIP Code:</b>	99611		
<b>Permit Issued By:</b>	ALASKA DEPT OF ENVIRONMENTAL CONS (Agency Name) MR. JIM PLOSAY(Agency Contact) (907) 465-5103 JOHN.KUTERBACH@ALASKA.GOV		
<b>Permit Notes:</b>			
<b>Affected Boundaries:</b>	<b>Boundary Type:</b> CLASS1	<b>Class 1 Area State:</b> AK	<b>Boundary:</b> Denali NP
			<b>Distance:</b> 100km - 50km

	CLASS1	AK	Tuxedni	< 100 km
	INTL BORDER		US/Canada Border	> 250 km
<b>Facility-wide Emissions:</b>	<b>Pollutant Name:</b>		<b>Facility-wide Emissions Increase:</b>	
	Carbon Monoxide		730.5000 (Tons/Year)	
	Nitrogen Oxides (NOx)		214.1000 (Tons/Year)	
	Particulate Matter (PM)		174.8000 (Tons/Year)	
	Sulfur Oxides (SOx)		8.9000 (Tons/Year)	
	Volatile Organic Compounds (VOC)		114.2000 (Tons/Year)	

## Process/Pollutant Information

**PROCESS NAME:** Five (5) Natural Gas Fired Combustion Turbines

**Process Type:** 16.110 (Natural Gas (includes propane & liquified petroleum gas))

**Primary Fuel:** Natural Gas

**Throughput:** 37.60 MMBTU/H

**Process Notes:** Five (5) Natural Gas-Fired Solar Combustion Turbines rated at 37.6 MMBtu/hr each. Installed in 1976.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 7.0000 PPMV 3-HR AVG @ 15 % O2

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Selective Catalytic Reduction

**Est. % Efficiency:** 80.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide



**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 50.0000 PPMV 3-HR AVG @ 15 % O2  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 10836 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The economic analysis indicates the level of CO reduction does not justify the use of catalytic oxidation. Based on the excessive cost per ton of CO removed per year, installing catalytic oxidation on the turbines/waste heat boilers is not considered a feasible option for reducing CO emissions.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0021 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 291788 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The economic analysis indicates the level of VOC reduction does not justify the use of catalytic oxidation. Based on the excessive cost per ton of VOC removed per year, installing catalytic oxidation on the turbines is not considered a feasible option for reducing VOC emissions.

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 59.6100 TONS/MMCF 3-HR AVG  
**Emission Limit 2:** 91500.0000 TONS/YEAR COMBINED  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Primary Reformer Furnace  
**Process Type:** 11.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** Natural Gas, Process Gas  
**Throughput:** 1350.00 MMBTU/H  
**Process Notes:** Natural Gas-, Process Gas-Fired 1,350 MMBtu/hr Primary Reformer Furnace. Installed in 1976.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 17.0000 PPMV 30-DAY AVERAGE @ 3% O2

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Selective Catalytic Reduction

**Est. % Efficiency:** 90.000

**Cost Effectiveness:** 15041 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:** The economic analysis indicates the level of NOx reduction does not justify installing low NOx burners to be used in conjunction with selective catalytic reduction. Based on the excessive cost per ton of NOx removed per year, installation of low NOx burners on the primary reformer is not considered a feasible option for reducing NOx emissions.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0430 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**CAS Number:** CO<sub>2</sub>e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 59.6100 TONS/MMCF 3-HR AVG

**Emission Limit 2:** 700000.0000 TONS/YEAR

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** Three (3) Package Boilers

**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))

**Primary Fuel:** Natural Gas

**Throughput:** 243.00 MMBTU/H

**Process Notes:** Three (3) New Natural Gas-Fired 243 MMBtu/hr Package Boilers

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0100 LB/MMBTU 30-DAY AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Ultra Low NOx Burners  
**Est. % Efficiency:** 70.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 50.0000 PPMV 3-HR AVG @ 3% O2  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton



**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 143952 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The economic analysis indicates the level of VOC reduction does not justify the use of catalytic oxidation. Based on the excessive cost per ton of VOC removed per year, installing catalytic oxidation on the package boilers is not considered a feasible option for reducing VOC emissions.

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 59.6100 TONS/MMCF 3-HR AVG  
**Emission Limit 2:** 376500.0000 TONS/YEAR COMBINED  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Five (5) Waste Heat Boilers  
**Process Type:** 13.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** Natural Gas  
**Throughput:** 50.00 MMBTU/H  
**Process Notes:** Five (5) Natural Gas-Fired 50 MMBtu/hr Waste Heat Boilers. Installed in 1986.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 7.0000 PPMV 3-HR AVG @ 15 % O2

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Selective Catalytic Reduction

**Est. % Efficiency:** 81.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 50.0000 PPMV 3-HR AVG @ 15 % O2

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Limited Use (200 hr/yr)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0074 LB/MMBTU 3-HR AVG

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 59.6100 TONS/MMCF 3-HR AVG

**Emission Limit 2:** 131405.0000 TONS/YEAR COMBINED  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Startup Heater  
**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** Natural Gas  
**Throughput:** 101.00 MMBTU/H  
**Process Notes:** Natural Gas-Fired 101 MMBtu/hr Startup Heater. Installed in 1976.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0980 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Use (200 hr/yr)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 55705 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The economic analysis indicates the level of NOx reduction does not justify installing selective catalytic reduction. Based on the excessive cost per ton of NOx removed per year, installation of selective catalytic reduction on the startup heater is not considered a feasible option for reducing NOx emissions.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0820 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Use (200 hr/yr)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Use (200 hr/yr)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton



**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0074 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Use (200 hr/yr)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0074 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0074 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Use (200 hr/yr)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 59.6100 TONS/MMCF  
**Emission Limit 2:** 1200.0000 TONS/YEAR  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Use (200 hr/yr)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** Three (3) Flares  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** Natural Gas  
**Throughput:** 1.25 MMBTU/H  
**Process Notes:** 1.25 MMBtu/hr Ammonia Tank Flare, 0.4 MMBtu/hr Emergency Flare, and 1.25 MMBtu/hr Small Flare

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0680 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Work Practice Requirements and Limited Use (limit venting to 168 hr/yr each during startup, shutdown, and maintenance events)

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.3700 LB/MMBTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Work Practice Requirements and Limited Use (limit venting to 168 hr/yr each during startup, shutdown, and maintenance events)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0054 LB/MMBTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Work Practice Requirements and Limited Use (limit venting to 168 hr/yr each during startup, shutdown, and maintenance events)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0074 LB/MMBTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Work Practice Requirements and Limited Use (limit venting to 168 hr/yr each during startup, shutdown, and maintenance events)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0074 LB/MMBTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Work Practice Requirements and Limited Use (limit venting to 168 hr/yr each during startup, shutdown, and maintenance events)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0074 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Work Practice Requirements and Limited Use (limit venting to 168 hr/yr each during startup, shutdown, and maintenance events)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**CAS Number:** CO<sub>2</sub>e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 59.6100 TONS/MMCF

**Emission Limit 2:** 1500.0000 TONS/YEAR COMBINED

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Work Practice Requirements and Limited Use (limit venting to 168 hr/yr each during startup, shutdown, and maintenance events)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Diesel Fired Well Pump  
**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Diesel  
**Throughput:** 2.70 MMBTU/H  
**Process Notes:** 2.7 MMBtu/hr Diesel Fired Well Pump. Installed in 1966.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 4.4100 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Operation of 168 hr/yr.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.9500 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Limited Operation of 168 hr/yr.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.3600 LB/MMBTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Limited Operation of 168 hr/yr.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3100 LB/MMBTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD



**Other Applicable Requirements:**

**Control Method:** (P) Limited Operation of 168 hr/yr.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3100 LB/MMBTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Limited Operation of 168 hr/yr.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3100 LB/MMBTU

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Limited Operation of 168 hr/yr.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 37.2000 TONS/YEAR

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Limited Operation of 168 hr/yr.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Gasoline Fired Fire Pump Engine

**Process Type:** 17.220 (Other Liquid Fuel & Liquid Fuel Mixtures)

**Primary Fuel:** Gasoline

**Throughput:** 2.10 MMBTU/H

**Process Notes:** 2.1 MMBtu/hr Gasoline-Fired Fire Pump Engine. Installed in 1978.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 1.6300 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Operation of 168 hr/yr.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.9900 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Operation of 168 hr/yr.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 3.0300 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Operation of 168 hr/yr.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1000 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Operation of 168 hr/yr.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1000 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Operation of 168 hr/yr.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1000 LB/MMBTU  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Operation of 168 hr/yr.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 27.2000 TONS/YEAR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited Operation of 168 hr/yr.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Ammonia Plant, CO2 Vent

**Process Type:** 62.999 (Other Inorganic Chemical Manufacturing Sources)

**Primary Fuel:** Natural Gas

**Throughput:** 1800.00 T/D

**Process Notes:** The CO2 vent, vents excess CO2 from ammonia process. During times when ammonia plant is operating and Urea plant is not operating, all CO2 generated by ammonia plant operations is vented through this vent.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 11.4000 LB/H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 845486.0000 TONS/YEAR  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** H2 Vent  
**Process Type:** 62.999 (Other Inorganic Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** H2 vent stack (dry gas vent) – vents during startup only

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 15222.0000 LB/STARTUP  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Limited use (200 hr/yr)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Two (2) Urea Granulation Units  
**Process Type:** 61.012 (Fertilizer Production (except 61.009))  
**Primary Fuel:**  
**Throughput:** 1200.00 T/D  
**Process Notes:** Two (2) Urea Granulation Units rated at 1200 tons per day (each).

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 90.0000 % CONTROL METHANOL WHICHEVER IS LESS RESTRICTIVE  
**Emission Limit 2:** 2.0000 PPMV WHICHEVER IS LESS RESTRICTIVE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**



**Control Method:** (A) Wet Scrubber  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2000 LB/TON OF UREA  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Wet Scrubber  
**Est. % Efficiency:** 90.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2000 LB/TON OF UREA  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Wet Scrubber  
**Est. % Efficiency:** 90.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2000 LB/TON OF UREA  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Wet Scrubber  
**Est. % Efficiency:** 90.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** Urea UF-85 Storage Tank  
**Process Type:** 42.009 (Volatile Organic Liquid Storage)  
**Primary Fuel:**  
**Throughput:** 30440.00 gallons  
**Process Notes:** Urea UF-85 Storage Tank. 30,440 gallon capacity

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** LB/H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Wet Scrubber  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Two (2) Methyl-diethanol Amine (MDEA) Storage Tanks  
**Process Type:** 42.009 (Volatile Organic Liquid Storage)  
**Primary Fuel:**  
**Throughput:** 158420.00 gallons  
**Process Notes:** Two (2) MDEA Storage Tanks with rated capacities of 158,420 gallons and 16,000 gallons.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0020 TONS/YEAR COMBINED  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Submerged Fill Design

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** Urea Ship Loading  
**Process Type:** 99.110 (Agricultural Activities)  
**Primary Fuel:**  
**Throughput:** 1000.00 tons urea/hour  
**Process Notes:** The Urea Ship Loading Operations are conveyor systems used to load products from the Urea Plant into ships.

**POLLUTANT NAME:** Particulate matter, fugitive  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 0.0013 LB/TON OF UREA  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) Use of UF-85 (Hardening Agent), Product Coolers on Granulation Urea Process Lines, Loading into Partial Enclosure, and use of a Telescoping Chute

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0011 LB/TON OF UREA  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) Use of UF-85 (Hardening Agent), Product Coolers on Granulation Urea Process Lines, Loading into Partial Enclosure, and use of a Telescoping Chute.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0004 LB/TON OF UREA

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) Use of UF-85 (Hardening Agent), Product Coolers on Granulation Urea Process Lines, Loading into Partial Enclosure, and use of a Telescoping Chute.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

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## Process/Pollutant Information

**PROCESS NAME:** Urea Handling Units  
**Process Type:** 99.110 (Agricultural Activities)  
**Primary Fuel:**  
**Throughput:** 1000.00 tons urea/hour  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, fugitive  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 0.0050 GRAINS/DSCF 3 STACK TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Fully Enclosed Conveyors and Fabric Filters  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 GRAINS/DSCF 3 STACK TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fully Enclosed Conveyors and Fabric Filters  
**Est. % Efficiency:** 99.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 GRAINS/DSCF 3 STACK TEST AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Fully Enclosed Conveyors and Fabric Filters  
**Est. % Efficiency:** 99.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** 2 Cell Cross-Flow Cooling Tower  
**Process Type:** 99.110 (Agricultural Activities)  
**Primary Fuel:**  
**Throughput:** 15000.00 gallons per minute  
**Process Notes:** 2 Cell Cross-Flow Cooling Tower

**POLLUTANT NAME:** Particulate matter, fugitive

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 0.0020 % DRIFT  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) High Efficiency Drift Eliminators

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0020 % DRIFT

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) High Efficiency Drift Eliminators

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)



**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0020 % DRIFT  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) High Efficiency Drift Eliminators  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	IN-0173 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	MIDWEST FERTILIZER CORPORATION	<b>Last Updated:</b> 05/04/2016
<b>Facility Name:</b>	MIDWEST FERTILIZER CORPORATION	<b>Permit Number:</b> 129-33576-00059
<b>Facility Contact:</b>	MICHAEL CHORLTON 3176258315	<b>Permit Date:</b> 06/04/2014 (actual)
<b>Facility Description:</b>	A STATIONARY NITROGEN FERTILIZER MANUFACTURING FACILITY	<b>FRS Number:</b> 110059696841
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>SIC Code:</b> 2873
<b>Permit URL:</b>	HTTP://PERMITS.AIR.IDEM.IN.GOV/33576F.PDF	<b>NAICS Code:</b> 325311
<b>EPA Region:</b>	5	<b>COUNTRY:</b> USA
<b>Facility County:</b>	POSEY	
<b>Facility State:</b>	IN	
<b>Facility ZIP Code:</b>	47620	
<b>Permit Issued By:</b>	INDIANA DEPT OF ENV MGMT, OFC OF AIR (Agency Name) MR. MATT STUCKEY(Agency Contact) (317) 233-0203 mstuckey@idem.in.gov	

**Other Agency Contact Info:** PERMIT WRITER:  
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SECTION CHIEF:  
NATHAN BELL (317) 233-5670 NBELL@IDEM.IN.GOV

**Permit Notes:**

Process/Pollutant Information
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**PROCESS NAME:** REFORMER FURNACE  
**Process Type:** 11.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** NATURAL GAS, PROCESS GAS  
**Throughput:** 950.64 MMBTU/H

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.9000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 5.3850 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 5.3850 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 9.0000 PPMVD @3% OXYGEN THIRTY DAY ROLLING AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) SELECTIVE CATALYTIC REDUCTION (SCR), LOW NOX BURNERS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 43.4500 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 5.5000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 59.6100 T/MMCF 3-HR AVERAGE  
**Emission Limit 2:** 486675.0000 TON CO2/YR MONTHLY  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 80% THERMAL EFFICIENCY BASED ON HIGHER HEATING VALUE.

Process/Pollutant Information
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**PROCESS NAME:** STARTUP HEATER

**Process Type:** 15.110 (Natural Gas (includes propane & liquified petroleum gas))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 92.50 MMBTU/H  
**Process Notes:** NATURAL GAS USAGE SHALL NOT EXCEED 18.14 MMCF/YEAR.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.9000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 183.7000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 37.2300 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 59.6100 T/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS

**Est. % Efficiency:**



**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 5.5000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) PROPER DESIGN AND GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** TWO (2) NATURAL GAS FIRED COMBUSTION TURBINES  
**Process Type:** 16.210 (Natural Gas (includes propane & liquified petroleum gas))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 283.00 MMBTU/H, EACH  
**Process Notes:** NATURAL GAS FIRED, OPEN-SIMPLE CYCLE COMBUSTION TURBINES WITH HEAT RECOVERY

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0019 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0076 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0076 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 22.6500 PPMVD AT 15% OXYGEN 3-HR AVERAGE AT > 50% PEAK LOAD  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) DRY LOW NOX COMBUSTORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0300 LB/MMBTU 3-HR AVERAGE AT > 50% PEAK LOAD

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 2.5000 PPMVD AT 15% OXYGEN 1-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9

**Test Method:** Unspecified

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 12666.0000 BTU/KW-H, MINIMUM CONTINUOUS  
**Emission Limit 2:** 116.8900 LB/MMBTU 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** CO2 EMISSIONS SHALL NOT EXCEED 144,890 TON/YEAR

### Process/Pollutant Information

**PROCESS NAME:** THREE (3) AUXILARY BOILERS  
**Process Type:** 16.210 (Natural Gas (includes propane & liquified petroleum gas))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 218.60 MMBTU/H, EACH  
**Process Notes:** NATURAL GAS USAGE IN EACH BOILER NOT TO EXCEED 1501.91 MMCF/YR

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.9000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 20.4000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) LOW NOX BURNERS, FLUE GAS RECIRCULATION  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 37.2200 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 5.5000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 59.6100 T/MMCF 3-HR AVERAGE  
**Emission Limit 2:** 80.0000 % THERMAL EFFICIENCY (HHV)

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN: AIR INLET CONTROLS, HEAT RECOVERY CONDENSATE AND BLOWDOWN HEAT RECOVERY

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** CO2 PURIFICATION PROCESS  
**Process Type:** 61.012 (Fertilizer Production (except 61.009))  
**Primary Fuel:**  
**Throughput:** 2400.00 T/D AMMONIA  
**Process Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )



**Emission Limit 1:** 0.0117 LB/TON AMMONIA 3-HR AVERAGE, 100% CO2 VENTING

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PROPER CATALYST SELECTION

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0558 LB/TON OF AMMONIA 3-HR AVERAGE, 100% CO2 VENTING

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PROPER CATALYST SELECTION

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9

**Test Method:** Unspecified

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 1.2750 TON/TON AMMONIA 3-HR AVERAGE, 100% VENTING  
**Emission Limit 2:** 1232475.0000 TON CO2/YEAR MONTHLY  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) PROPER CATALYST SELECTION  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** UREA GRANULATION UNIT  
**Process Type:** 61.012 (Fertilizer Production (except 61.009))  
**Primary Fuel:**  
**Throughput:** 1440.00 METRIC TONS PER DAY  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1630 LB/TON GRANULES 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY WET SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1630 LB/TON GRANULES 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY WET SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1630 LB/TON GRANULES 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY WET SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** UREA GRANULE STORAGE WAREHOUSE  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1700 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) BAGHOUSE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1700 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) BAGHOUSE

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1700 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) BAGHOUSE

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** FUGITIVE EMISSIONS FROM EQUIPMENT LEAKS

**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) LEAK DETECTION AND REPAIR (LDAR) PROGRAM USING 40 CFR 60, SUBPART VVA PROCEDURES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** GRANULAR UAN TRUCK LOADOUT OPERATION

**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1200 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) FABRIC FILTER DUST COLLECTOR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1200 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) FABRIC FILTER DUST COLLECTOR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1200 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) FABRIC FILTER DUST COLLECTOR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** GRANULAR UAN RAIL LOADING OPERATION

**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) FABRIC FILTER DUST COLLECTOR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton



**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) FABRIC FILTER DUST COLLECTOR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) FABRIC FILTER DUST COLLECTOR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** UREA JUNCTION OPERATION  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) FABRIC FILTER DUST COLLECTOR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) FABRIC FILTER DUST COLLECTOR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) FABRIC FILTER DUST COLLECTOR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** NITRIC ACID PLANT

**Process Type:** 62.014 (Nitric Acid Plants)

**Primary Fuel:**

**Throughput:**

1840.00 METRIC TONS PER DAY

**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0640 LB/TON NITRIC ACID 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) SELECTIVE CATALYTIC REDUCTION (SCR)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)  
**CAS Number:** 10024-97-2  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.6130 LB/TON NITRIC ACID 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) CATALYTIC REACTOR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NITRIC ACID LIMIT IS BASED ON 100% NITRIC ACID.

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** FRONT END FLARE  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 4.00 MMBTU/H  
**Process Notes:** SSM VENTING IS LIMITED TO 336 HOURS PER YEAR. HEAT INPUT OF 4 MMBTU/HR IS FOR PILOT ONLY.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.9000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0680 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:** 595.4900 LB/H, SSM VENTING 3-HR AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.3700 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:** 3240.1600 LB/H, SSM VENTING 3-HR AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:** 47.2600 LB/H, SSM VENTING 3-HR AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9

**Test Method:** Unspecified

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 116.8900 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:** 511.8100 TON/H, SSM VENTING 3-HR AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** BACK END FLARE

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:** NATURAL GAS

**Throughput:** 4.00 MMBTU/H



**Process Notes:** SSM VENTING SHALL NOT EXCEEDD 336 HOURS PER YEAR. HEAT INPUT IS PILOT ONLY.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other then air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0680 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 624.9400 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other then air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.3700 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 804.7600 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 11.7300 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 116.8900 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 127.1200 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0019 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** AMMONIA STORAGE FLARE  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 1.50 MMBTU/H  
**Process Notes:** HEAT INPUT IS FOR PILOT ONLY. SSM EMISSIONS HAVE SEPARATE LIMITS. SSM VENTING LIMITED 168 HOURS.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0019 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0680 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 125.0000 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.3700 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 116.8900 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** TEN CELL EVAPORATIVE COOLING TOWER  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 147937.00 GPM  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS  
**Emission Limit 2:** 2000.0000 ML/L TDS CONTINUOUS

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**



**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS  
**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS  
**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

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## Process/Pollutant Information

**PROCESS NAME:** SIX CELL EVAPORATIVE COOLING TOWER

**Process Type:** 99.009 (Industrial Process Cooling Towers)

**Primary Fuel:**

**Throughput:** 88762.00 GPM

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS

**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS

**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS  
**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** DIESEL FIRED EMERGENCY GENERATOR  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** NO. 2, DIESEL  
**Throughput:** 3600.00 BHP  
**Process Notes:** ANNUAL OPERATING HOURS SHALL NOT EXCEED 500 HOURS. INSIGNIFICANT ACTIVITY WILL NOT BE TESTED.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/BHP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 G/BHP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/BHP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 4.4600 G/BHP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.6100 G/BHP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.3100 G/BHP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 526.3900 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FIRE PUMP  
**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:**  
**Throughput:** 500.00 HP  
**Process Notes:** OPERATION LIMITED TO 500 HOURS PER YEAR. INSIGNIFICANT ACTIVITY, WILL NOT BE TESTED.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**



**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.8300 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.6000 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1410 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 527.4000 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** FUGITIVE DUST FROM PAVED ROADS AND PARKING LOTS  
**Process Type:** 99.140 (Paved Roads)  
**Primary Fuel:**  
**Throughput:** 10402.00 VEHICLE MILES TRAVELED  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 90.0000 % CONTROL CONTINUOUS  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PAVE ALL HAUL ROADS, DAILY SWEEPING WITH WET SUPPRESSION, PROMPT CLEANUP OF ANY SPILLED MATERIAL.  
**Est. % Efficiency:** 90.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 90.0000 % CONTROL CONTINUOUS  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PAVE ALL HAUL ROADS, DAILY SWEEPING WITH WET SUPPRESSION, PROMPT CLEANUP OF ANY SPILLED MATERIAL.

**Est. % Efficiency:** 90.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 90.0000 % CONTROL CONTINUOUS

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PAVE ALL HAUL ROADS, DAILY SWEEPING WITH WET SUPPRESSION, PROMPT CLEANUP OF ANY SPILLED MATERIAL.

**Est. % Efficiency:** 90.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** RAW WATER PUMP  
**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** DIESEL, NO. 2  
**Throughput:** 500.00 HP  
**Process Notes:** OPERATION NOT TO EXCEED 500 HOURS PER YEAR. INSIGNIFICANT ACTIVITY, WILL NOT BE TESTED.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 G/BHP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 2.8300 G/BHP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.6000 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1410 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 527.4000 G/BHP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	IN-0180 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	MIDWEST FERTILIZER CORPORATION	<b>Last Updated:</b> 05/05/2016
<b>Facility Name:</b>	MIDWEST FERTILIZER CORPORATION	<b>Permit Number:</b> 129-33576-00059
<b>Facility Contact:</b>	MICHAEL CHORLTON 3176258315	<b>Permit Date:</b> 06/04/2014 (actual)
<b>Facility Description:</b>	A STATIONARY NITROGEN FERTILIZER MANUFACTURING FACILITY	<b>FRS Number:</b> 110059696841
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>SIC Code:</b> 2873
		<b>NAICS Code:</b> 325311



**Permit URL:** HTTP://PERMITS.AIR.IDEM.IN.GOV/33576F.PDF  
**EPA Region:** 5 **COUNTRY:** USA  
**Facility County:** POSEY  
**Facility State:** IN  
**Facility ZIP Code:** 47620  
**Permit Issued By:** INDIANA DEPT OF ENV MGMT, OFC OF AIR (Agency Name)  
 MR. MATT STUCKEY(Agency Contact) (317) 233-0203 mstuckey@idem.in.gov  
**Other Agency Contact Info:** PERMIT WRITER:  
 DAVID MATOUSEK (317) 232-8253 DMATOUSE@IDEM.IN.GOV  
  
 SECTION CHIEF:  
 NATHAN BELL (317) 233-5670 NBELL@IDEM.IN.GOV

**Permit Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** REFORMER FURNACE  
**Process Type:** 11.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** NATURAL GAS, PROCESS GAS  
**Throughput:** 950.64 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.9000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 5.3850 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 5.3850 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 9.0000 PPMVD @3% OXYGEN THIRTY DAY ROLLING AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) SELECTIVE CATALYTIC REDUCTION (SCR), LOW NOX BURNERS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 43.4500 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 5.5000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 59.6100 TON/MMCF 3-HR AVERAGE  
**Emission Limit 2:** 486675.0000 T/YR CO2 MONTHLY  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 80% THERMAL EFFICIENCY BASED ON HIGHER HEATING VALUE.

Process/Pollutant Information

**PROCESS NAME:** STARTUP HEATER  
**Process Type:** 15.110 (Natural Gas (includes propane & liquified petroleum gas))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 92.50 MMBTU/H  
**Process Notes:** NATURAL GAS USAGE SHALL NOT EXCEED 18.14 MMCF/YEAR.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.9000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 183.7000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 37.2300 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9

**Test Method:** Unspecified

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 59.6100 TON/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN, USE NATURAL GAS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 5.5000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PROPER DESIGN AND GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** TWO (2) NATURAL GAS FIRED COMBUSTION TURBINES

**Process Type:** 16.210 (Natural Gas (includes propane & liquified petroleum gas))

**Primary Fuel:** NATURAL GAS



**Throughput:** 283.00 MMBTU/H, EACH

**Process Notes:** NATURAL GAS FIRED, OPEN-SIMPLE CYCLE COMBUSTION TURBINES WITH HEAT RECOVERY

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0019 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0076 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0076 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 22.6500 PPMVD AT 15% OXYGEN 3-HR AVERAGE AT > 50% PEAK LOAD

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) DRY LOW NOX COMBUSTORS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0300 LB/MMBTU 3-HR AVERAGE AT > 50% PEAK LOAD

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 2.5000 PPMVD AT 15% OXYGEN 1-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9

**Test Method:** Unspecified

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 12666.0000 BTU/KW-H, MINIMUM CONTINUOUS

**Emission Limit 2:** 116.8900 LB/MMBTU 3-HR AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** CO2 EMISSIONS SHALL NOT EXCEED 144,890 TON/YEAR

### Process/Pollutant Information

**PROCESS NAME:** THREE (3) AUXILARY BOILERS

**Process Type:** 16.210 (Natural Gas (includes propane & liquified petroleum gas))

**Primary Fuel:** NATURAL GAS

**Throughput:** 218.60 MMBTU/H, EACH

**Process Notes:** NATURAL GAS USAGE IN EACH BOILER NOT TO EXCEED 1501.91 MMCF/YR

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.9000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 20.4000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) LOW NOX BURNERS, FLUE GAS RECIRCULATION

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 37.2200 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 5.5000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9

**Test Method:** Unspecified

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 59.6100 TON/MMCF 3-HR AVERAGE

**Emission Limit 2:** 80.0000 % THERMAL EFFICIENCY (HHV)

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES AND PROPER DESIGN: AIR INLET CONTROLS, HEAT RECOVERY CONDENSATE AND BLOWDOWN HEAT RECOVERY

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** CO2 PURIFICATION PROCESS

**Process Type:** 61.012 (Fertilizer Production (except 61.009))

**Primary Fuel:**

**Throughput:** 2400.00 T/D AMMONIA

**Process Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0117 LB/TON AMMONIA 3-HR AVERAGE, 100% CO2 VENTING  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) PROPER CATALYST SELECTION  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0558 LB/TON OF AMMONIA 3-HR AVERAGE, 100% CO2 VENTING  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) PROPER CATALYST SELECTION  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown



**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 1.2750 TON/TON AMMONIA 3-HR AVERAGE, 100% VENTING  
**Emission Limit 2:** 1232475.0000 T/YR CO2 MONTHLY  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) PROPER CATALYST SELECTION  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** UREA GRANULATION UNIT  
**Process Type:** 61.012 (Fertilizer Production (except 61.009))  
**Primary Fuel:**  
**Throughput:** 1440.00 METRIC T/D  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1630 LB/TON GRANULES 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) HIGH EFFICIENCY WET SCRUBBER

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1630 LB/TON GRANULES 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) HIGH EFFICIENCY WET SCRUBBER

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1630 LB/TON GRANULES 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) HIGH EFFICIENCY WET SCRUBBER

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** UREA GRANULE STORAGE WAREHOUSE

**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1700 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) BAGHOUSE

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1700 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) BAGHOUSE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1700 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) BAGHOUSE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** FUGITIVE EMISSIONS FROM EQUIPMENT LEAKS  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) LEAK DETECTION AND REPAIR (LDAR) PROGRAM USING 40 CFR 60, SUBPART VVA PROCEDURES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** GRANULAR UAN TRUCK LOADOUT OPERATION  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1200 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) FABRIC FILTER DUST COLLECTOR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1200 LB/H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) FABRIC FILTER DUST COLLECTOR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1200 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) FABRIC FILTER DUST COLLECTOR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** GRANULAR UAN RAIL LOADING OPERATION  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) FABRIC FILTER DUST COLLECTOR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) FABRIC FILTER DUST COLLECTOR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N



**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) FABRIC FILTER DUST COLLECTOR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** UREA JUNCTION OPERATION  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) FABRIC FILTER DUST COLLECTOR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) FABRIC FILTER DUST COLLECTOR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2100 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) FABRIC FILTER DUST COLLECTOR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

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## Process/Pollutant Information

**PROCESS NAME:** NITRIC ACID PLANT  
**Process Type:** 62.014 (Nitric Acid Plants)  
**Primary Fuel:**  
**Throughput:** 1840.00 METRIC T/D  
**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0640 LB/TON NITRIC ACID 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) SELECTIVE CATALYTIC REDUCTION (SCR)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)  
**CAS Number:** 10024-97-2  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.6130 LB/TON NITRIC ACID 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) CATALYTIC REACTOR  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NITRIC ACID LIMIT IS BASED ON 100% NITRIC ACID.

**Process/Pollutant Information**

**PROCESS NAME:** FRONT END FLARE  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 4.00 MMBTU/H  
**Process Notes:** SSM VENTING IS LIMITED TO 336 HOURS PER YEAR. HEAT INPUT OF 4 MMBTU/HR IS FOR PILOT ONLY.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.9000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0680 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 595.4900 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.3700 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 3240.1600 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 47.2600 LB/H, SSM VENTING 3-HR AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9

**Test Method:** Unspecified

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 116.8900 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:** 511.8100 TON/H, SSM VENTING 3-HR AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

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**PROCESS NAME:** BACK END FLARE  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 4.00 MMBTU/H  
**Process Notes:** SSM VENTING SHALL NOT EXCEEDD 336 HOURS PER YEAR. HEAT INPUT IS PILOT ONLY.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0680 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:** 624.9400 LB/H, SSM VENTING 3-HR AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**



**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.3700 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 804.7600 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 11.7300 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 116.8900 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 127.1200 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0019 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** AMMONIA STORAGE FLARE  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 1.50 MMBTU/H  
**Process Notes:** HEAT INPUT IS FOR PILOT ONLY. SSM EMISSIONS HAVE SEPARATE LIMITS. SSM VENTING LIMITED 168 HOURS.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0019 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0680 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 125.0000 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0

**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.3700 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 116.8900 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** TEN CELL EVAPORATIVE COOLING TOWER  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 147937.00 GPM  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS  
**Emission Limit 2:** 2000.0000 ML/L TDS CONTINUOUS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS  
**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS  
**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS



**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** SIX CELL EVAPORATIVE COOLING TOWER  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 88762.00 GPM  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS  
**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS  
**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT LOSS CONTINUOUS  
**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** DIESEL FIRED EMERGENCY GENERATOR

**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** NO. 2, DIESEL  
**Throughput:** 3600.00 BHP  
**Process Notes:** ANNUAL OPERATING HOURS SHALL NOT EXCEED 500 HOURS. INSIGNIFICANT ACTIVITY WILL NOT BE TESTED.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 4.4600 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.6100 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.3100 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 526.3900 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FIRE PUMP  
**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:**  
**Throughput:** 500.00 HP  
**Process Notes:** OPERATION LIMITED TO 500 HOURS PER YEAR. INSIGNIFICANT ACTIVITY, WILL NOT BE TESTED.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.8300 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )



**Emission Limit 1:** 2.6000 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1410 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 527.4000 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FUGITIVE DUST FROM PAVED ROADS AND PARKING LOTS  
**Process Type:** 99.140 (Paved Roads)  
**Primary Fuel:**  
**Throughput:** 10402.00 VEHICLE MILES TRAVELED  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 90.0000 % CONTROL CONTINUOUS  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) PAVE ALL HAUL ROADS, DAILY SWEEPING WITH WET SUPPRESSION, PROMPT CLEANUP OF ANY SPILLED MATERIAL.  
**Est. % Efficiency:** 90.000

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 90.0000 % CONTROL CONTINUOUS  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PAVE ALL HAUL ROADS, DAILY SWEEPING WITH WET SUPPRESSION, PROMPT CLEANUP OF ANY SPILLED MATERIAL.

**Est. % Efficiency:** 90.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 90.0000 % CONTROL CONTINUOUS  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PAVE ALL HAUL ROADS, DAILY SWEEPING WITH WET SUPPRESSION, PROMPT CLEANUP OF ANY SPILLED MATERIAL.

**Est. % Efficiency:** 90.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** RAW WATER PUMP  
**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** DIESEL, NO. 2  
**Throughput:** 500.00 HP  
**Process Notes:** OPERATION NOT TO EXCEED 500 HOURS PER YEAR. INSIGNIFICANT ACTIVITY, WILL NOT BE TESTED.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.8300 G/B-HP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 2.6000 G/B-HP-H 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1410 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 527.4000 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	LA-0291 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	SASOL CHEMICALS (USA) LLC	<b>Last Updated:</b> 09/19/2016
<b>Facility Name:</b>	LAKE CHARLES CHEMICAL COMPLEX GTL UNIT	<b>Permit Number:</b> PSD-LA-778
<b>Facility Contact:</b>	ERIC RODRIGUEZ (281) 588-3761 ERIC.RODRIGUEZ@US.SASOL.COM	<b>Permit Date:</b> 05/23/2014 (actual)
<b>Facility Description:</b>		<b>FRS Number:</b> 110017418061
<b>Permit Type:</b>	B: Add new process to existing facility	<b>SIC Code:</b> 2869
<b>Permit URL:</b>		<b>NAICS Code:</b> 325110
<b>EPA Region:</b>	6	<b>COUNTRY:</b> USA
<b>Facility County:</b>	CALCASIEU	
<b>Facility State:</b>	LA	
<b>Facility ZIP Code:</b>	70669	
<b>Permit Issued By:</b>	LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name) MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV	
<b>Permit Notes:</b>	Complete application date = date of administrative completeness This RBLC entry addresses the Gas-to-Liquids (GTL) Unit of the GTL Project. GTL will utilize natural gas as a feedstock to produce fuel-grade hydrocarbon products, including liquefied petroleum gas (LPG), naphtha, paraffins, diesel, wax products, and base oil products. In the GTL process, natural gas will first be reformed into a synthesis gas; the synthesis gas will then be converted into liquid hydrocarbons via a Fischer-Tropsch reaction. The Fisher-Tropsch synthesis is followed by treatment and extraction units and product work-up units which produce the desired products.	

<b>Process/Pollutant Information</b>
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<b>PROCESS NAME:</b>	Process Heaters (EQT 690, 691, 692, 751, 752, & 753)
<b>Process Type:</b>	11.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)
<b>Primary Fuel:</b>	Process Gas
<b>Throughput:</b>	424.80 MMBTU/H
<b>Process Notes:</b>	Heaters are subject to 40 CFR 63 Subpart DDDDD.

<b>POLLUTANT NAME:</b>	Particulate matter, total < 10 μ (TPM10)
<b>CAS Number:</b>	PM
<b>Test Method:</b>	Unspecified
<b>Pollutant Group(s):</b>	( Particulate Matter (PM) )
<b>Emission Limit 1:</b>	3.2000 LB/H HOURLY MAXIMUM
<b>Emission Limit 2:</b>	11.5500 T/YR ANNUAL MAXIMUM
<b>Standard Emission:</b>	0.0075 LB/MMBTU ANNUAL AVERAGE



**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 3.2000 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 11.5500 T/YR ANNUAL MAXIMUM

**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO2)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 25.2500 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 2.2800 T/YR ANNUAL MAXIMUM  
**Standard Emission:** 0.0015 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 gr/scf (annual average)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Other  
**Other Test Method:** CEMS  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 21.4700 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 15.5000 T/YR ANNUAL MAXIMUM  
**Standard Emission:** 0.0100 LB/MMBTU 30-DAY ROLLING AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (B) Ultra low NOx burners (ULNB) and selective catalytic reduction (SCR)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be the use of SCR and ULNBs to limit NOx emissions to 0.01 lb/MM Btu (30-day rolling average). During startup events, the SCR catalyst must be at the proper operating temperature before ammonia can be injected into the flue gas. Further, the SCR vendor has estimated that the ammonia distribution system may be down for up to 32 hours per year for maintenance. During these periods (i.e., startup/shutdown/maintenance), which may total up to 168 hours per year, NOx emissions shall be limited to

0.05 lb/MM Btu (3-hour average).

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** EPA/OAR Mthd 10  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 15.0300 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 54.2700 T/YR ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU AVERAGE OF 3 1-HR. TEST RUNS  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.3200 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 8.3600 T/YR ANNUAL MAXIMUM  
**Standard Emission:** 0.0054 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2e</sub>)  
**CAS Number:** CO<sub>2e</sub>  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 353891.0000 T/YR ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of natural gas as feedstock and good combustion practices  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall entail filtration of inlet air (to prevent reduced performance caused by dust and debris in the intake air supply); use of refractory materials that provide the highest insulating capacity practicable; proper insulation of equipment and piping to minimize heat loss; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups consistent with BACT determination for CO and VOC emissions; compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of boiler tubes and heat exchangers and measures to minimize air infiltration; and use of air preheaters to heat incoming combustion air. The CO<sub>2e</sub> limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2e</sub> limits shall be revised accordingly without the need to modify the permit.

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Process Heater (EQT 702)

**Process Type:** 13.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** Process Gas  
**Throughput:** 73.80 MMBTU/H  
**Process Notes:** Heater is subject to 40 CFR 63 Subpart DDDDD.

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 2.0100 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 2.0100 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )  
**Emission Limit 1:** 4.6100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.4000 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 gr/scf (annual average)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NO<sub>x</sub>) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.9800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 10.2300 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0380 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Ultra low NOx burners (ULNB)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.7400 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 9.4200 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.4200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.4500 TPY ANNUAL MAXIMUM

**Standard Emission:** 0.0054 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2e</sub>)  
**CAS Number:** CO<sub>2e</sub>  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 61709.0000 TPY ANNUAL MAXIMUM

**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of natural gas as feedstock and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall entail filtration of inlet air (to prevent reduced performance caused by dust and debris in the intake air supply); use of refractory materials that provide the highest insulating capacity practicable; proper insulation of equipment and piping to minimize heat loss; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups consistent with BACT determination for CO and VOC emissions; compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of boiler tubes and heat exchangers and measures to minimize air infiltration; and use of air preheaters to heat incoming combustion air. The CO<sub>2e</sub> limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of



310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

## Process/Pollutant Information

**PROCESS NAME:** Base Oils DW Reactor Feed Heater (EQT 776)  
**Process Type:** 13.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** Process Gas  
**Throughput:** 31.00 MMBTU/H  
**Process Notes:** Heater is subject to 40 CFR 63 Subpart DDDDD.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.8400 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.2600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.8400 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:** 2.0900 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.1700 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 gr/scf (annual average)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)

**CAS Number:** 10102

**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 1.3500 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 4.3000 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0380 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Ultra low NOx burners (ULNB)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 1.2400 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 3.9600 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.6100 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0054 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 22757.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of natural gas as feedstock and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall entail filtration of inlet air (to prevent reduced performance caused by dust and debris in the intake air supply); use of refractory materials that provide the highest insulating capacity practicable; proper insulation of equipment and piping to minimize heat loss; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups consistent with BACT determination for CO and VOC emissions; compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of boiler tubes and heat exchangers and measures to minimize air infiltration; and use of air preheaters to heat incoming combustion air. The CO<sub>2e</sub> limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2e</sub> limits shall be revised accordingly without the need to modify the permit.

Process/Pollutant Information
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**PROCESS NAME:** Base Oils Light Vacuum Feed Heater (EQT 777)  
**Process Type:** 13.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** Process Gas  
**Throughput:** 71.20 MMBTU/H  
**Process Notes:** Heater is subject to 40 CFR 63 Subpart DDDDD.

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.9400 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.5600 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 1.9400 TPY ANNUAL MAXIMUM

**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:** 4.4500 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.3800 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 gr/scf (annual average)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.8800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 9.8700 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0380 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Ultra low NOx burners (ULNB)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.6500 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 9.0900 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.4100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.4000 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0054 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 54343.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**



**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of natural gas as feedstock and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall entail filtration of inlet air (to prevent reduced performance caused by dust and debris in the intake air supply); use of refractory materials that provide the highest insulating capacity practicable; proper insulation of equipment and piping to minimize heat loss; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups consistent with BACT determination for CO and VOC emissions; compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of boiler tubes and heat exchangers and measures to minimize air infiltration; and use of air preheaters to heat incoming combustion air. The CO<sub>2e</sub> limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2e</sub> limits shall be revised accordingly without the need to modify the permit.

**Process/Pollutant Information**

**PROCESS NAME:** Base Oils Heavy Vacuum Feed Heater (EQT 778)  
**Process Type:** 13.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** Process Gas  
**Throughput:** 10.00 MM BTU/H  
**Process Notes:** Heater is subject to 40 CFR 63 Subpart DDDDD.

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.2700 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.2700 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:** 0.8600 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.0500 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 gr/scf (annual average)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.5500 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 1.3900 TPY ANNUAL MAXIMUM

**Standard Emission:** 0.0380 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Ultra low NOx burners (ULNB)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.5100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.2800 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.2000 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0054 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 6235.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of natural gas as feedstock and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall entail filtration of inlet air (to prevent reduced performance caused by dust and debris in the intake air supply); use of refractory materials that provide the highest insulating capacity practicable; proper insulation of equipment and piping to minimize heat loss; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups consistent with BACT determination for CO and VOC emissions; compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of boiler tubes and heat exchangers and measures to minimize air infiltration; and use of air preheaters to heat incoming combustion air. The CO2e limits are based on a CH4 global warming potential (GWP) of 21 and a N2O GWP of 310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

### Process/Pollutant Information

**PROCESS NAME:** HC Reactor Feed Heaters (EQT 736 & 754)  
**Process Type:** 13.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** Process Gas  
**Throughput:** 70.80 MMBTU/H  
**Process Notes:** Heaters are subject to 40 CFR 63 Subpart DDDDD.

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.9200 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.9200 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )  
**Emission Limit 1:** 4.4300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.3800 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 gr/scf (annual average)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NO<sub>x</sub>) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.8600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 9.8200 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0380 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Ultra low NO<sub>x</sub> burners (ULNB)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.6400 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 9.0400 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.4100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.3900 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0054 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD



**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 43002.0000 TPY ANNUAL MAXIMUM (EQT 736)  
**Emission Limit 2:** 44252.0000 TPY ANNUAL MAXIMUM (EQT 754)  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of natural gas as feedstock and good combustion practices

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall entail filtration of inlet air (to prevent reduced performance caused by dust and debris in the intake air supply); use of refractory materials that provide the highest insulating capacity practicable; proper insulation of equipment and piping to minimize heat loss; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups consistent with BACT determination for CO and VOC emissions; compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of boiler tubes and heat exchangers and measures to minimize air infiltration; and use of air preheaters to heat incoming combustion air. The CO2e limits are based on a CH4 global warming potential (GWP) of 21 and a N2O GWP of 310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

**PROCESS NAME:** Fractionator Feed Heaters (EQT 737 & 774)  
**Process Type:** 12.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** Process Gas  
**Throughput:** 248.70 MMBTU/H  
**Process Notes:** Heaters are subject to 40 CFR 63 Subpart DDDDD.

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.8900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 6.7600 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.8900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 6.7600 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:** 14.8900 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 1.3300 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 gr/scf (annual average)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)

**CAS Number:** 10102

**Test Method:** EPA/OAR Mthd 7E

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NO<sub>x</sub>) , Particulate Matter (PM) )

**Emission Limit 1:** 9.6200 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 34.4900 TPY ANNUAL MAXIMUM

**Standard Emission:** 0.0380 LB/MMBTU AVERAGE OF 3 1-HR. TEST RUNS

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Ultra low NOx burners (ULNB)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** EPA/OAR Mthd 10  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 8.8600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 31.7600 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU AVERAGE OF 3 1-HR. TEST RUNS

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.3700 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 4.8900 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0054 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 153286.0000 TPY ANNUAL MAXIMUM (EQT 737)  
**Emission Limit 2:** 157892.0000 TPY ANNUAL MAXIMUM (EQT 774)  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of natural gas as feedstock and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall entail filtration of inlet air (to prevent reduced performance caused by dust and debris in the intake air supply); use of refractory materials that provide the highest insulating capacity practicable; proper insulation of equipment and piping to minimize heat loss; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups consistent with BACT determination for CO and VOC emissions; compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of boiler tubes and heat exchangers and measures to minimize air infiltration; and use of air preheaters to heat incoming

combustion air. The CO<sub>2</sub>e limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2</sub>e limits shall be revised accordingly without the need to modify the permit.

## Process/Pollutant Information

**PROCESS NAME:** DW Reactor Feed Heaters (EQT 738 & 775)  
**Process Type:** 13.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** Process Gas  
**Throughput:** 56.80 MMBTU/H  
**Process Notes:** Heaters are subject to 40 CFR 63 Subpart DDDDD.

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.4600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.5400 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.4600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.5400 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )  
**Emission Limit 1:** 3.6100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.3000 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 gr/scf (annual average)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)

**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.3300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 7.8700 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0380 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Ultra low NOx burners (ULNB)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.1500 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 7.2500 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.



**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 34317.0000 TPY ANNUAL MAXIMUM (EQT 738)  
**Emission Limit 2:** 35302.0000 TPY ANNUAL MAXIMUM (EQT 775)

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of natural gas as feedstock and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall entail filtration of inlet air (to prevent reduced performance caused by dust and debris in the intake air supply); use of refractory materials that provide the highest insulating capacity practicable; proper insulation of equipment and piping to minimize heat loss; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups consistent with BACT determination for CO and VOC emissions; compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of boiler tubes and heat exchangers and measures to minimize air infiltration; and use of air preheaters to heat incoming combustion air. The CO2e limits are based on a CH4 global warming potential (GWP) of 21 and a N2O GWP of 310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.3300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.1200 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0054 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and the tune-up provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

Process/Pollutant Information
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**PROCESS NAME:** High Temperature Paint Maintenance Activities (ACT 4)  
**Process Type:** 99.999 (Other Miscellaneous Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 62.1000 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 19.8300 TPY ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good housekeeping practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Base Oils - Loading (EQT 835)  
**Process Type:** 64.005 (Transfer of SOCOMI Chemicals (loading/unloading, filling, etc.))  
**Primary Fuel:**  
**Throughput:** 144.90 MM GALS/YR  
**Process Notes:** HOURLY THROUGHPUT IS 218,700 GALS/HR.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 8.4100 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 2.7900 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Diesel Berth 1 & 2 Loading (EQT 830 & 832)  
**Process Type:** 64.005 (Transfer of SOCOMI Chemicals (loading/unloading, filling, etc.))  
**Primary Fuel:**  
**Throughput:** 1100.14 MM GALS/YR  
**Process Notes:** THROUGHPUT IS PER BERTH. HOURLY THROUGHPUT IS 136,856 GALS/HR PER BERTH.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.4900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 5.9900 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (P) Best maintenance practices consistent with Sasol’s written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Group 2 transfer racks under 40 CFR 63 Subpart FFFF.

Process/Pollutant Information
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**PROCESS NAME:** GTL Unit Fugitive Emissions (FUG 15)  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 68.3700 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Leak detection and repair (LDAR) program: 40 CFR 63 Subpart FFFF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 21  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 89.1300 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT , MACT  
**Control Method:** (P) Leak detection and repair (LDAR) program: 40 CFR 63 Subpart FFFF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 1214.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Leak detection and repair (LDAR) program: 40 CFR 63 Subpart FFFF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** CO<sub>2</sub>e limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2</sub>e limits shall be revised accordingly without the need to modify the permit.

### Process/Pollutant Information

**PROCESS NAME:** Vapor Combustor (EQT 834)  
**Process Type:** 19.200 (Emission Control Afterburners & Incinerators (combustion gasses only))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0400 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.1700 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63 Subpart FFFF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of 40 CFR Subpart FFFF, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0400 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.1700 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63 Subpart FFFF

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of 40 CFR Subpart FFFF, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:** 0.0030 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.0100 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63 Subpart FFFF

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of 40 CFR Subpart FFFF, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.0900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 9.1300 TPY ANNUAL MAXIMUM

**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63 Subpart FFFF

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of 40 CFR Subpart FFFF, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 4.1600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 18.2300 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD



**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63 Subpart FFFF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of 40 CFR Subpart FFFF, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 15.4800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 67.7900 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63 Subpart FFFF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of 40 CFR Subpart FFFF, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 9753.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63 Subpart FFFF

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of 40 CFR Subpart FFFF, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988. CO<sub>2</sub>e limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2</sub>e limits shall be revised accordingly without the need to modify the permit.

**Process/Pollutant Information**

**PROCESS NAME:** Multi-Point Ground Flares (EQT 836 & 837)

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 170.8400 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 7.1400 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subparts FFFF and SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987; minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 170.8400 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 7.1400 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subparts FFFF and SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987; minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO2)

**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.9500 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.0300 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subparts FFFF and SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987; minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 1072.8600 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 44.8600 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subparts FFFF and SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987; minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the

volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 5837.6200 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 243.9600 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subparts FFFF and SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987; minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 461.8100 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 55.0800 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subparts FFFF and SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987; minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 115911.0000 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subparts FFFF and SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987; minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** CO2e limits are based on a CH4 global warming potential (GWP) of 21 and a N2O GWP of 310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

## Process/Pollutant Information

**PROCESS** Process Vents

**NAME:**

**Process** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Type:**

**Primary**

**Fuel:**

**Throughput:** 0

**Process** Includes: Process Condensate Stripper (120-VC-001, EQT 0693) Autothermal Reformer (120-VR-108, EQT 0694) Lift Reactor (130-VR-105, EQT 0695) Wash Water Column (135-VC-001, EQT 0696) CO2 Strippers (135-VC-003, EQT 0697) Dry Condensate Rectifier (135-VC-004, EQT 0698) Primary Separation Column (140-VC-002, EQT 0699) Reaction Vessel (145-VD-001A, EQT 0700) Reaction Vessel (145-VD-001B, EQT 0701) Main Fractionation Column (148-VC-101, EQT 0730) Side Stripper FT80 (148-VC-102, EQT 0731) Side Stripper FT70 (148-VC-103, EQT 0732) Side Stripper FT60 (148-VC-104, EQT 0733) Side Stripper FT50 (148-VC-105, EQT 0734) Emulsifier (148-VD-802, EQT 0735) Light Cut Column (32-VC-001, EQT 0799) Heavy Cut Column (32-VC-002, EQT 0800) Oxygenate Extractor (32-VC-003, EQT 0801) Raffinate Stripper (32-VC-004, EQT 0802) Solvent Recovery Column (32-VC-005, EQT 0803) Regeneration Knockout Drum (32-VD-007, EQT 0804) Heavy Cut Seal Fluid Drum (32-VD-012, EQT 0805) Deethaniser (555-VC-001, EQT 0807)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT , MACT

**Control Method:** (A) Flare

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing process vents located in the GTL Unit to Multi-Point Ground Flare 181-MPGF-001 (EQT 0836) or 281-MPGF-002 (EQT 0837).

Process/Pollutant Information

**PROCESS NAME:** Heat Exchangers  
**Process Type:** 64.999 (Other SOCOMI Processes)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with the heat exchange system requirements of 40 CFR 63.104  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Sulfuric Acid Storage Tank (EQT 828)  
**Process Type:** 62.020 (Inorganic Liquid/Gas Storage & Handling)



**Primary Fuel:**

**Throughput:** 2.60 MM GALS/YR

**Process Notes:** Tank capacity = 45,000 gals

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT limit is

**Process/Pollutant Information**

**PROCESS NAME:** Naphtha Berth 1 & 2 Loading (EQT 831 & 833)

**Process Type:** 64.005 (Transfer of SOCM Chemicals (loading/unloading, filling, etc.))

**Primary Fuel:**

**Throughput:** 1100.00 MM GALS/YR

**Process Notes:** THROUGHPUT IS PER BERTH.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , SIP , OPERATING PERMIT

**Control Method:** (A) Vapor combustor

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing VOC emissions to Vapor Combustor 599-XP-024.

**Process/Pollutant Information**

**PROCESS NAME:** Naphtha Storage Tanks (EQT 815, 816, & 817)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 439.00 MM GALS/YR

**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 10.2 MM GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 10.8500 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , MACT , SIP , OPERATING PERMIT

**Control Method:** (P) Internal floating roof (IFR)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Consistent with 40 CFR 63.2470(a) and Table 4 to Subpart FFFF, the floating roof, recordkeeping, and reporting requirements of 40 CFR 63 Subpart WW shall apply.

### Process/Pollutant Information

**PROCESS NAME:** P/O Rundown Tanks (EQT 818, 819, 820, & 821)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 202.00 MM GALS/YR  
**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 329,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.5700 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) Internal floating roof (IFR)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Consistent with 40 CFR 63.2470(a) and Table 4 to Subpart FFFF, the floating roof, recordkeeping, and reporting requirements of 40 CFR 63 Subpart WW shall apply.

### Process/Pollutant Information

**PROCESS NAME:** Statutory Storage Tank (EQT 826)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 439.00 MM GALS/YR

**Process Notes:** TANK CAPACITY = 12.1 MM GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 12.3800 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , MACT , SIP , OPERATING PERMIT

**Control Method:** (P) Internal floating roof (IFR)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Consistent with 40 CFR 63.2470(a) and Table 4 to Subpart FFFF, the floating roof, recordkeeping, and reporting requirements of 40 CFR 63 Subpart WW shall apply.

## Process/Pollutant Information

**PROCESS NAME:** Petroleum Wax Storage Tank (EQT 827)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 79.00 MM GALS/YR

**Process Notes:** TANK CAPACITY = 800,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.7600 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** Fresh Amine Storage Tank (EQT 829)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 79.00 MM GALS/YR  
**Process Notes:** TANK CAPACITY = 16,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0040 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Process Licensor Methanol Tank Nos. 1 & 2 (EQT 797 & 798)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 26.80 MM GALS/YR  
**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 207,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.3100 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT , SIP , OPERATING PERMIT  
**Control Method:** (P) Internal floating roof (IFR)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Consistent with 40 CFR 63.2470(a) and Table 4 to Subpart FFFF, the floating roof, recordkeeping, and reporting requirements of 40 CFR 63 Subpart WW shall apply.

### Process/Pollutant Information

**PROCESS** Storage Tanks Routed to Flare

**NAME:**

**Process** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Type:**

**Primary**

**Fuel:**

**Throughput:** 0

**Process** Includes: Methanol Drainage Tank (EQT 0806) Clean Wax Tank (EQT 0739) Extracted Wax Tank (EQT 0740) Clean Wax Tank (EQT 0779) UCO

**Notes:** Tank (EQT 0780) GTLBO XLN Grade Prover Tank (EQT 0781) GTLBO XLN Grade Prover Tank (EQT 0782) GTLBO LN Grade Prover Tank (EQT 0783) GTLBO LN Grade Prover Tank (EQT 0784) GTLBO MN Grade Prover Tank (EQT 0785) GTLBO MN Grade Prover Tank (EQT 0786) GTLBO HN Grade Prover Tank (EQT 0787) GTLBO HN Grade Prover Tank (EQT 0788) Diesel/Naphtha Rework Tank (EQT 0808) Condensate Recovery Tank (EQT 0809) Condensate Recovery Tank (EQT 0810) Raw Wax Tank (EQT 0811) Raw Wax Tank (EQT 0812) Raw Wax Tank (EQT 0813) P/O Rework Tank (EQT 0814) Maintenance Wax Tank (EQT 0963) Benzene Stripper Feed Tank (EQT 0962)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (A) Flare

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing VOC emissions to Multi-Point Ground Flare 181-MPGF-001 (EQT 0836) or 281-MPGF-002 (EQT 0837). BACT for the Benzene Stripper Feed Tank is determined to be routing VOC emissions to Multi-Point Ground Flare COMON2-GF-1 (EQT 0839).

Process/Pollutant Information

**PROCESS NAME:** GTLBO XLN Grade Finished Product Tanks (EQT 789 & 790)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 45.30 MM GALS/YR  
**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 2.18 MM GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 1.0600 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT , MACT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** GTLBO LN Grade Finished Product Tanks (EQT 791 & 792)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 55.30 MM GALS/YR  
**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 2.63 MM GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified



**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.3400 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** GTLBO MN Grade Finished Product Tanks (EQT 793 & 794)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 27.70 MM GALS  
**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 1.31 MM GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.5900 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** GTLBO HN Grade Finished Product Tanks (EQT 795 & 796)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 24.90 MM GALS/YR  
**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 1.16 MM GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.5200 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT50R Prover Tanks (EQT 703 & 704)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 230.70 MM GALS/YR  
**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 106,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 5.8600 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT50R Storage Tank (EQT 705)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 230.70 MM GALS/YR  
**Process Notes:** TANK CAPACITY = 368,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 6.9800 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT60R Prover Tanks (EQT 706 & 707)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 157.70 MM GALS/YR  
**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 39,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 3.8600 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT60R Storage Tank (EQT 708)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 157.70 MM GALS/YR  
**Process Notes:** TANK CAPACITY = 268,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 4.8400 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** FT70R Prover Tanks (EQT 709 & 710)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 45.70 MM GALS/YR  
**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 23,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 1.1700 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** FT70R Storage Tank (EQT 711)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 45.70 MM GALS/YR  
**Process Notes:** TANK CAPACITY = 303,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 2.3700 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** FT80R Prover Tanks (EQT 712 & 713)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 94.60 MM GALS/YR

**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 24,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 2.3200 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT50H Prover Tanks (EQT 714 & 715)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 238.60 MM GALS/YR  
**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 60,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 5.8500 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**



## Process/Pollutant Information

**PROCESS NAME:** FT50H Storage Tank (EQT 716)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 254.40 MM GALS/YR  
**Process Notes:** TANK CAPACITY = 415,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 7.7400 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** FT60H Prover Tanks (EQT 717 & 718)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 231.80 MM GALS/YR

**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 56,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 5.6800 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** FT60H Storage Tank (EQT 719)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 254.40 MM GALS/YR  
**Process Notes:** TANK CAPACITY = 280,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 7.1600 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT70H Prover Tanks (EQT 720 & 721)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 251.80 MM GALS/YR

**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 62,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 6.1700 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** FT50HD Prover Tanks (EQT 722 & 723)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 95.70 MM GALS/YR  
**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 27,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 2.3600 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** FT60HD Prover Tanks (EQT 724 & 725)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 49.40 MM GALS/YR

**Process Notes:** THROUGHPUT IS PER TANK TANK CAPACITY = 16,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 1.2300 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Wax Storage Tank (EQT 726)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 5.30 MM GALS/YR

**Process Notes:** TANK VOLUME = 24,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.2300 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** Product Storage Tank (EQT 727)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 104.10 MM GALS/YR  
**Process Notes:** TANK VOLUME = 40,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.6200 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Product Storage Tank (EQT 728)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 10.00 MM GALS/YR  
**Process Notes:** TANK VOLUME = 40,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.4100 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Wax Storage Tank (EQT 729)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 228.60 MM GALS/YR  
**Process Notes:** TANK VOLUME = 186,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 6.1600 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** FT50 Non-Deoiled/Non HDT Wax Tank (EQT 741)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 44.00 MM GALS/YR  
**Process Notes:** TANK VOLUME = 1.97 MM GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified



**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 6.2800 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT50 HDT and Deoiled Wax Tank (EQT 742)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 1.39 MM GALS/YR  
**Process Notes:** TANK VOLUME = 69,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.2000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT50 HDT Deoiled Blended Wax Tank (EQT 743)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 25.50 MM GALS/YR  
**Process Notes:** TANK VOLUME = 500,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.7300 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT60 HDT and Deoiled Wax Tank (EQT 746)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 4.63 MM GALS/YR  
**Process Notes:** TANK VOLUME = 274,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.7300 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT50 Emulsion Wax Tank (EQT 744)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 57.00 MM GALS/YR  
**Process Notes:** TANK VOLUME = 500,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.6600 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT60 Non-Deoiled Wax Tank (EQT 745)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 57.00 MM GALS/YR  
**Process Notes:** TANK VOLUME = 545,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.6600 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT60 Blends Wax Tank (EQT 747)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 2.31 MM GALS/YR  
**Process Notes:** TANK VOLUME = 91,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.3300 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** FT70 Non-Deoiled/Non HDT Wax Tank (EQT 748)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 4.63 MM GALS/YR  
**Process Notes:** TANK VOLUME = 180,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.6600 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** FT70 HDT Wax Tank (EQT 749)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 4.63 MM GALS/YR  
**Process Notes:** TANK VOLUME = 271,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.6700 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** FT80 Non-Deoiled/Non HDT Wax Tank (EQT 750)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 9.26 MM GALS/YR

**Process Notes:** TANK VOLUME = 635,000 GALS

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 1.3300 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Fixed roof; best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	LA-0296 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	SASOL CHEMICALS (USA) LLC	<b>Last Updated:</b> 04/28/2017
<b>Facility Name:</b>	LAKE CHARLES CHEMICAL COMPLEX LDPE UNIT	<b>Permit Number:</b> PSD-LA-779
<b>Facility Contact:</b>	ERIC RODRIGUEZ (281) 588-3761 ERIC.RODRIGUEZ@US.SASOL.COM	<b>Permit Date:</b> 05/23/2014 (actual)
<b>Facility Description:</b>	The Low Density Polyethylene (LDPE) Unit will produce LDPE by the high pressure polymerization of ethylene.	<b>FRS Number:</b> 110017418061
<b>Permit Type:</b>	B: Add new process to existing facility	<b>SIC Code:</b> 2821
<b>Permit URL:</b>		<b>NAICS Code:</b> 325211
<b>EPA Region:</b>	6	<b>COUNTRY:</b> USA
<b>Facility County:</b>	CALCASIEU	
<b>Facility State:</b>	LA	
<b>Facility ZIP Code:</b>	70669	
<b>Permit Issued By:</b>	LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name) MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV	
<b>Permit Notes:</b>	Complete application date = date of administrative completeness This RBLC entry addresses the Low Density Polyethylene (LDPE) Unit of the Lake Charles Cracker Project (LCCP). This entry also addresses the Emergency Diesel Generators associated with the entire LCCP, as all of the permitted units are identical.	

## Process/Pollutant Information

**PROCESS NAME:** LLPDE/LDPE Multi-Point Ground Flare (EQT 640)



**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** The flare controls the following process vents: Purgas C-1 (LDPE-C-1, EQT 0641) Compressor Area C-2 (LDPE-C-2, EQT 0642) Comonomer Degassing Column C-3 (LDPE-C-3, EQT 0643) Isopentane Degassing Column C-4 (LDPE-C-4, EQT 0644) Purification Bed Regeneration C-7 (LDPE-C-7, EQT 0645) Analyzer Vents C-8 (LDPE-C-8, EQT 0646) Vent Recovery Accumulator C-9 (LDPE-C-9, EQT 0647)

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 37.5100 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 4.2700 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. BACT is also determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 37.5100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 4.2700 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. BACT is also determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:** 1.1500 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.1400 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. BACT is also determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 174.0900 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 39.2500 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. BACT is also determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 947.2500 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 259.0600 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. BACT is also determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 305.0800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 561.2200 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , MACT , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. BACT is also determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**CAS Number:** CO<sub>2</sub>e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 68285.0000 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. BACT is also determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tip; and the use of natural gas as pilot gas. The CO<sub>2e</sub> limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2e</sub> limits shall be revised accordingly without the need to modify the permit.

Process/Pollutant Information
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**PROCESS NAME:** LDPE Fugitives (FUG 13)

**Process Type:** 63.999 (Other Polymer and Resin Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** EPA/OAR Mthd 21

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 17.4400 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , OPERATING PERMIT

**Control Method:** (P) Leak Detection and Repair (LDAR): 40 CFR 60 Subpart VVa

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS** LDPE Thermal Oxidizer (EQT 648)

**NAME:**

**Process** 19.200 (Emission Control Afterburners & Incinerators (combustion gasses only))

**Type:**

**Primary**

**Fuel:**

**Throughput:** 122.00 MM BTU/HR

**Process** The thermal oxidizer controls the following process vents: Blender M-301 (LDPE-M-301, EQT 0649) Blender M-302 (LDPE-M-302, EQT 0650)

**Notes:** Blender M-303 (LDPE-M-303, EQT 0651) Blender M-304 (LDPE-M-304, EQT 0652) Blender M-305 (LDPE-M-305, EQT 0653) Blender M-306 (LDPE-M-306, EQT 0654) Blender M-307 (LDPE-M-307, EQT 0655) Blender M-308 (LDPE-M-308, EQT 0656) Extruder Pellet Hopper BN-700 (LDPE-BN-700, EQT 0657) Pellet Silo BN-801A (LDPE-BN-801A, EQT 0658) Pellet Silo BN-801B (LDPE-BN-801B, EQT 0659) Pellet Silo BN-801C (LDPE-BN-801C, EQT 0660) Pellet Silo BN-801D (LDPE-BN-801D, EQT 0661) Pellet Silo BN-801E (LDPE-BN-801E, EQT 0662) Pellet Silo BN-801F (LDPE-BN-801F, EQT 0663) Centrifugal Dryer Vent D-201 (LDPE-D-201, EQT 0668) Pellet Elutriation Separator / Vent S-353 (LDPE-S-353, EQT 0669) Pellet Elutriation Separator / Vent S-354 (LDPE-S-354, EQT 0670)

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.3600 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 3.9800 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with the applicable provisions of 40 CFR 63 Subpart SS.

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.3600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 3.9800 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with the applicable provisions of 40 CFR 63 Subpart SS.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.1600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.4800 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U



**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with the applicable provisions of 40 CFR 63 Subpart SS.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 8.2900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 24.2000 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with the applicable provisions of 40 CFR 63 Subpart SS.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 45.1000 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 131.7000 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with the applicable provisions of 40 CFR 63 Subpart SS.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 11.7600 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 34.3400 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , MACT , OPERATING PERMIT

**Control Method:** (P) Compliance with the applicable provisions of 40 CFR 63 Subpart SS.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 42165.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with the applicable provisions of 40 CFR 63 Subpart SS.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be compliance with the applicable provisions of Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988. The CO<sub>2e</sub> limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2e</sub> limits shall be revised accordingly without the need to modify the permit.

### Process/Pollutant Information

**PROCESS NAME:** Bin B207 Vent (EQT 666)  
**Process Type:** 63.999 (Other Polymer and Resin Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0500 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.1900 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with the applicable process weight rate limitation established by LAC 33:III.1311.B.

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0500 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.1900 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with the applicable process weight rate limitation established by LAC 33:III.1311.B.

Process/Pollutant Information
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**PROCESS NAME:** Bin B208 Vent (EQT 667)  
**Process Type:** 63.999 (Other Polymer and Resin Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0500 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.1900 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (A) Fabric filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be use of fabric filters to limit PM10 emissions to 0.02 gr/dscf. Fabric filters shall be maintained and operated properly. Filter vents shall be inspected for visible emissions on a daily basis. The filter elements (bags) shall be inspected every six months and whenever visual checks indicate maintenance may be necessary. Elements shall be changed as necessary. Records of visual checks and maintenance inspections shall be kept on site for 5 years.

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0500 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.1900 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (A) Fabric filter

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be use of fabric filters to limit PM2.5 emissions to 0.02 gr/dscf. Fabric filters shall be maintained and operated properly. Filter vents shall be inspected for visible emissions on a daily basis. The filter elements (bags) shall be inspected every six months and whenever visual checks indicate maintenance may be necessary. Elements shall be changed as necessary. Records of visual checks and maintenance inspections shall be kept on site for 5 years.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0400 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.1500 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** W209 Drop Point (EQT 672)  
**Process Type:** 63.999 (Other Polymer and Resin Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0010 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.0010 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** HOURLY BACT LIMIT IS REPRESENTED AS

**POLLUTANT NAME:** Particulate matter, filterable < 2.5  $\mu$  (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0010 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.0010 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** HOURLY AND ANNUAL BACT LIMITS ARE REPRESENTED AS

Process/Pollutant Information
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**PROCESS NAME:** Emergency Diesel Generators (EQTs 622, 671, 773, 850, 994, 995, 996, 1033, 1077, 1105, & 1202)

**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Diesel  
**Throughput:** 2682.00 HP  
**Process Notes:** Non-emergency use is limited to 100 hours per year.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.8800 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.0400 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 60 Subpart IIII; operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** PM limit is 0.20 g/kW-hr. BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart IIII and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.8800 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.0400 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U



**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT , NSPS  
**Control Method:** (P) Compliance with 40 CFR 60 Subpart III; operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PM limit is 0.20 g/kW-hr. BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart III and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )  
**Emission Limit 1:** 0.0300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.0020 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 60 Subpart III; operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Fuel sulfur content is limited to 15 ppm. BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart III and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)

**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 27.3700 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.3700 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT , NSPS

**Control Method:** (P) Compliance with 40 CFR 60 Subpart III; operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NOx + NMHC limit is 6.40 g/kW-hr. BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart III and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 15.4300 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.7700 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 60 Subpart III; operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** CO limit is 3.50 g/kW-hr. BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart III and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.8500 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.0400 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 60 Subpart III; operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart III and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 56.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 60 Subpart IIII; operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart IIII and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage. The CO2e limits are based on a CH4 global warming potential (GWP) of 21 and a N2O GWP of 310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

## Facility Information

<b>RBLC ID:</b>	LA-0299 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	SASOL CHEMICALS (USA) LLC	<b>Last Updated:</b> 04/28/2017
<b>Facility Name:</b>	LAKE CHARLES CHEMICAL COMPLEX ETHOXYLATION UNIT	<b>Permit Number:</b> PSD-LA-779
<b>Facility Contact:</b>	ERIC RODRIGUEZ (281) 588-3761 ERIC.RODRIGUEZ@US.SASOL.COM	<b>Permit Date:</b> 05/23/2014 (actual)
<b>Facility Description:</b>		<b>FRS Number:</b> 110017418061
<b>Permit Type:</b>	B: Add new process to existing facility	<b>SIC Code:</b> 2869
<b>Permit URL:</b>		<b>NAICS Code:</b> 325199
<b>EPA Region:</b>	6	<b>COUNTRY:</b> USA
<b>Facility County:</b>	CALCASIEU	
<b>Facility State:</b>	LA	
<b>Facility ZIP Code:</b>	70669	
<b>Permit Issued By:</b>	LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name) MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV	
<b>Permit Notes:</b>	Complete application date = date of administrative completeness This RBLC entry addresses the expansion of the Ethoxylation Unit. Two new ethoxylate trains (ETO-4 and ETO-5) will be added as part of the Lake Charles Cracker Project. These trains will produce ethoxylated alcohols.	

## Process/Pollutant Information

**PROCESS NAME:** ETO/Guerbet Elevated Flare (EQT 1079)

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.2300 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.0900 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.2300 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.0900 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:** 0.2100 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.1100 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 8.5100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 3.2600 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 46.3200 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 17.7600 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 33.2900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 5.4800 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 3986.0000 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown



**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips. The CO<sub>2e</sub> limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2e</sub> limits shall be revised accordingly without the need to modify the permit.

### Process/Pollutant Information

**PROCESS NAME:** ETO/Guerbet Vapor Combustion Unit II (EQT 1080)

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.2300 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.7600 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.7600 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.2100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.8900 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 8.7200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 27.7200 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 47.4700 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 150.8300 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 31.1900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 46.2800 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 54833.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips. The CO2e limits are based on a CH4 global warming potential (GWP) of 21 and a N2O GWP of 310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Fugitives (FUG 21)  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 21  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 10.9200 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , SIP , OPERATING PERMIT  
**Control Method:** (P) Leak Detection and Repair (LDAR): 40 CFR 63 Subpart FFFF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** #4 Product Storage Tanks (EQTs 1081 & 1082)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 15.00 MM GALS/YR  
**Process Notes:** Tank capacity = 146,800 gallons each Throughput = per tank

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 13.0100 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be a fixed roof to limit annual VOC emissions to the above total. BACT limit is per tank.

## Process/Pollutant Information

**PROCESS NAME:** #4 Product Drums (EQTs 1083, 1084, 1086, & 1086)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 5.00 MM GALS/YR  
**Process Notes:** Tank capacity = 27,000 gallons each Throughput = per tank

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.5400 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be a fixed roof to limit annual VOC emissions to the above total. BACT limit is per tank.

### Process/Pollutant Information

**PROCESS NAME:** #5 Product Drums (EQTs 1087, 1088, 1089, & 1090)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 2.50 MM GALS/YR  
**Process Notes:** Tank capacity = 27,000 gallons each Throughput = per tank

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.5000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be a fixed roof to limit annual VOC emissions to the above total. BACT limit is per tank.

### Process/Pollutant Information

**PROCESS NAME:** Alcohol Storage Tanks (EQTs 1091, 1092, 1093, & 1094)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 5.00 MM GALS/YR  
**Process Notes:** Tank capacity = 146,800 gallons each Throughput = per tank

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 10.9400 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be a fixed roof to limit annual VOC emissions to the above total. BACT limit is per tank.

### Process/Pollutant Information



**PROCESS NAME:** Alcohol D150-911 (EQT 1095)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 893271.00 GALS/YR  
**Process Notes:** Tank capacity = 27,000 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.9600 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be a fixed roof to limit annual VOC emissions to the above total.

### Process/Pollutant Information

**PROCESS NAME:** #4 Alcohol Feed Drum (EQT 1096)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 3.50 MM GALS/YR  
**Process Notes:** Tank capacity = 27,000 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be a fixed roof to limit annual VOC emissions to the above total.

### Process/Pollutant Information

**PROCESS NAME:** #5 Alcohol Feed Drum (EQT 1097)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 2.50 MM GALS/YR  
**Process Notes:** Tank capacity = 27,000 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.3000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be a fixed roof to limit annual VOC emissions to the above total.

### Process/Pollutant Information

**PROCESS NAME:** #4 Utility Drum (EQT 1098)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 3.50 MM GALS/YR  
**Process Notes:** Tank capacity = 27,000 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.6200 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be a fixed roof to limit annual VOC emissions to the above total.

### Process/Pollutant Information

**PROCESS NAME:** #5 Utility Drum (EQT 1099)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 2.50 MM GALS/YR  
**Process Notes:** Tank capacity = 27,000 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.6000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be a fixed roof to limit annual VOC emissions to the above total.

### Process/Pollutant Information

**PROCESS NAME:** Novel Catalyst Drum (EQT 1100)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 50000.00 GALS/YR  
**Process Notes:** Tank capacity = 14,400 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.4400 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be a fixed roof to limit annual VOC emissions to the above total.

### Process/Pollutant Information

**PROCESS NAME:** Product Storage Tanks (EQTs 1101 & 1102)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 8.40 MM GALS/YR  
**Process Notes:** Tank capacity = 124,520 gallons each Throughput = per tank

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 5.2200 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be a fixed roof to limit annual VOC emissions to the above total. BACT limit is per tank.

Process/Pollutant Information

**PROCESS NAME:** ETO Loading Rack (EQT 1103)  
**Process Type:** 64.005 (Transfer of SOCOMI Chemicals (loading/unloading, filling, etc.))  
**Primary Fuel:**  
**Throughput:** 146.63 MM GALS/YR  
**Process Notes:** Maximum operating rate = 1000 gals/min

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 26.9800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 28.9400 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Alcohol Loading Rack (EQT 1104)  
**Process Type:** 64.005 (Transfer of SOCOMI Chemicals (loading/unloading, filling, etc.))

**Primary Fuel:**

**Throughput:** 37.78 MM GALS/YR

**Process Notes:** Maximum operating rate = 420 gals/min

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 32.7100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 22.8300 TPY ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS** Heat Exchangers

**NAME:**

**Process Type:** 64.999 (Other SOCOMI Processes)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** Includes the following sources: Vacuum Pretreatment Condenser (ETO-X-150-412, EQT 1153) Secondary Cooler (ETO-X-150-423, EQT 1154) Post-Treatment Secondary Circuit Cooler (ETO-X-150-432, EQT 1155) Vacuum Pretreatment Condenser (ETO-X-150-512, EQT 1156) Secondary Cooler (ETO-X-150-523, EQT 1157) Post-Treatment Secondary Circuit Cooler (ETO-X-150-532, EQT 1158)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT , MACT  
**Control Method:** (P) Compliance with 40 CFR 63.104

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the heat exchange system requirements of 40 CFR 63.104 (regardless if it is otherwise applicable). These provisions require Sasol to monitor the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak, repair any leaks that are detected, and confirm that the heat exchange system is no longer leaking following repair activities. This section also prescribes recordkeeping and reporting requirements.

## Process/Pollutant Information

**PROCESS NAME:** ETO4 & ETO5 Pre- and Post-Treatment Vessels (EQTs 1145, 1147, 1148, & 1150)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U



**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (A) Flare  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing the above storage vessels through a closed vent system to the ETO/Guerbet Elevated Flare (EQT 1079), to the ETO/Guerbet Vapor Combustion Unit II (EQT 1080), or to an equivalent flare.

Process/Pollutant Information
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**PROCESS NAME:** Organic Byproduct Collector (EQT 1146)  
**Process Type:** 64.999 (Other SOCOMI Processes)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Flare  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vent through a closed vent system to the ETO/Guerbet Elevated Flare (EQT 1079) or to ETO/Guerbet Vapor Combustion Unit II (EQT 1080).

Process/Pollutant Information

**PROCESS NAME:** Aqueous Byproduct Collector (EQT 1149)

**Process Type:** 64.999 (Other SOCM I Processes)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (A) Flare

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vent through a closed vent system to the ETO/Guerbet Elevated Flare (EQT 1079) or to ETO/Guerbet Vapor Combustion Unit II (EQT 1080).

Process/Pollutant Information

**PROCESS NAME:** ETO 4 & ETO 5 HH Loop Reactors (EQT 1151 & 1152)

**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (A) Flare

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vents through a closed vent system to the ETO/Guerbet Elevated Flare (EQT 1079) or to ETO/Guerbet Vapor Combustion Unit II (EQT 1080).

## Facility Information

<b>RBLC ID:</b>	LA-0301 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	SASOL CHEMICALS (USA) LLC	<b>Last Updated:</b> 04/28/2017
<b>Facility Name:</b>	LAKE CHARLES CHEMICAL COMPLEX ETHYLENE 2 UNIT	<b>Permit Number:</b> PSD-LA-779
<b>Facility Contact:</b>	ERIC RODRIGUEZ (281) 588-3761 ERIC.RODRIGUEZ@US.SASOL.COM	<b>Permit Date:</b> 05/23/2014 (actual)
<b>Facility Description:</b>		<b>FRS Number:</b> 110017418061
<b>Permit Type:</b>	B: Add new process to existing facility	<b>SIC Code:</b> 2869
<b>Permit URL:</b>		<b>NAICS Code:</b> 325110
<b>EPA Region:</b>	6	<b>COUNTRY:</b> USA
<b>Facility County:</b>	CALCASIEU	
<b>Facility State:</b>	LA	

**Facility ZIP Code:** 70669  
**Permit Issued By:** LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name)  
MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV  
**Permit Notes:** Complete application date = date of administrative completeness This RBLC entry addresses Ethylene Unit 2 of the Lake Charles Cracker Project. This unit will produce ethylene by thermally cracking ethane in cracking furnaces.

### Process/Pollutant Information

**PROCESS NAME:** Utility Steam Boiler Nos. 1-3 (EQTs 967, 968, & 969)  
**Process Type:** 11.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** Process Gas  
**Throughput:** 662.00 MM BTU/HR  
**Process Notes:** Boilers are subject to 40 CFR 60 Subpart Db and 40 CFR 63 Subpart DDDDD.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Other  
**Other Test Method:** Methods 5 & 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 5.0200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 52.8700 TPY\* ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU AVERAGE OF THREE 1-HOUR TEST RUNS  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** \*TPY value represents aggregate PM10 limit for all 3 boilers. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Other  
**Other Test Method:** Methods 5 & 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 5.0200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 52.8700 TPY\* ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU AVERAGE OF THREE 1-HOUR TEST RUNS  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** \*TPY value represents aggregate PM2.5 limit for all 3 boilers. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 1.9800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 10.4300 TPY\* ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 grains per standard cubic foot (annual average)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** \*TPY value represents aggregate SO2 limit for all 3 boilers.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Other  
**Other Test Method:** CEMS  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 33.7000 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 70.9600 TPY\* ANNUAL MAXIMUM  
**Standard Emission:** 0.0100 LB/MMBTU 30-DAY ROLLING AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (B) Selective catalytic reduction (SCR) and ultra low NOx burners (ULNB)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** \*TPY value represents aggregate NOx limit for all 3 boilers. During startup events, the SCR catalyst must be at the proper operating temperature before ammonia can be injected into the flue gas. Further, the SCR vendor has estimated that the ammonia distribution system may be down for up to 32 hours per year for maintenance. During these periods (i.e., startup/shutdown/maintenance), which may total up to 168 hours per year, NOx emissions shall be limited to 0.05 lb/MM Btu (3-hour average).

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** EPA/OAR Mthd 10  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 23.5900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 248.3500 TPY\* ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU AVERAGE OF THREE 1-HOUR TEST RUNS  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) Good combustion practices and compliance with the applicable provisions of 40 CFR 63 Subpart DDDDD

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** \*TPY value represents aggregate CO limit for all 3 boilers. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 3.6300 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 38.2600 TPY\* ANNUAL MAXIMUM

**Standard Emission:** 0.0054 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) Good combustion practices and compliance with the applicable provisions of 40 CFR 63 Subpart DDDDD

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** \*TPY value represents aggregate VOC limit for all 3 boilers. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 836405.0000 TPY\* ANNUAL MAXIMUM

**Emission Limit 2:****Standard Emission:****Did factors, other than air pollution technology considerations influence the BACT decisions:** U**Case-by-Case Basis:** BACT-PSD**Other Applicable Requirements:** OPERATING PERMIT**Control Method:** (P) Good combustion practices**Est. % Efficiency:****Cost Effectiveness:** 0 \$/ton**Incremental Cost Effectiveness:** 0 \$/ton**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** \*TPY value represents aggregate CO<sub>2</sub>e limit for all 3 boilers. Good combustion practices shall entail air preparation, as appropriate (to minimize reduced performance caused by dust and debris in the intake air supply); use of service appropriate refractory materials; proper insulation of equipment and piping to minimize heat loss; use of heat exchangers to heat incoming combustion air or boiler feed water, produce steam, etc.; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups consistent with LDEQ's BACT determination for CO and VOC emissions; and compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of boiler tubes and heat exchangers and measures to minimize air infiltration. The O&M plan shall include provisions to address the temporary removal of equipment from service during normal operations for maintenance and inspections. Good combustion practices shall also include a condensate return system (to return condensate to the boiler feed water system); recovery of waste heat from boiler blowdown; and preheating and treatment of boiler feed water. The CO<sub>2</sub>e limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2</sub>e limits shall be revised accordingly without the need to modify the permit.

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Furnace Nos. 1-8 (EQTs 971, 972, 973, 974, 975, 976, 977, & 978)**Process Type:** 11.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)**Primary Fuel:** Process Gas**Throughput:** 654.00 MM BTU/HR**Process Notes:** The furnaces are subject to 40 CFR 60 Subparts NNN & RRR and 40 CFR 63 Subpart DDDDD.**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)**CAS Number:** PM**Test Method:** Other**Other Test Method:** Methods 5 & 202



**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 4.2700 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 136.7900 TPY\* ANNUAL MAXIMUM  
**Standard Emission:** 0.0070 LB/MMBTU AVERAGE OF THREE 1-HOUR TEST RUNS

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** \*TPY value represents aggregate PM10 limit for all 8 furnaces. During decoking operations, decoking vents shall be recycled to the fuel gas header, and PM10 emissions shall be limited to 0.03 lb/MM Btu (3-hour average). Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Other

**Other Test Method:** Methods 5 & 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 4.2700 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 136.7900 TPY\* ANNUAL MAXIMUM

**Standard Emission:** 0.0070 LB/MMBTU AVERAGE OF THREE 1-HOUR TEST RUNS

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels and good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** \*TPY value represents aggregate PM2.5 limit for all 8 furnaces. During decoking operations, decoking vents shall be recycled to the fuel gas header, and PM2.5 emissions shall be limited to 0.03 lb/MM Btu (3-hour average). Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 1.9200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 28.0800 TPY\* ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 grains per standard cubic foot (annual average)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** \*TPY value represents aggregate SO2 limit for all 8 furnaces.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Other  
**Other Test Method:** CEMS  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 61.0100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 455.4700 TPY\* ANNUAL MAXIMUM  
**Standard Emission:** 0.0200 LB/MMBTU 30-DAY ROLLING AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (B) Selective catalytic reduction (SCR) and ultra low NOx burners (ULNB)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** \*TPY value represents aggregate NOx limit for all 8 furnaces. During startup events, the SCR catalyst must be at the proper operating temperature before ammonia can be injected into the flue gas. Further, the SCR vendor has estimated that the ammonia distribution system may be down for up to 32 hours per year for maintenance. During these periods (i.e., startup/shutdown/maintenance), which may total up to 425 hours per year, NOx emissions shall be limited to 0.10 lb/MM Btu (3-hour average). During decoking operations, NOx shall be limited to 0.18 lb/MM Btu (3-hour average). During such periods, the firing rate is significantly reduced – 128.6 MM Btu/hr versus 545 MM Btu/hr during normal operations.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** EPA/OAR Mthd 10

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 21.3500 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 673.1200 TPY\* ANNUAL MAXIMUM

**Standard Emission:** 0.0350 LB/MMBTU AVERAGE OF THREE 1-HOUR TEST RUNS

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) Good combustion practices and compliance with the applicable provisions of 40 CFR 63 Subpart DDDDD

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** \*TPY value represents aggregate CO limit for all 8 furnaces. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 4.9100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 153.7300 TPY\* ANNUAL MAXIMUM  
**Standard Emission:** 0.0080 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT , OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and compliance with the applicable provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** \*TPY value represents aggregate VOC limit for all 8 furnaces. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2e</sub>)  
**CAS Number:** CO<sub>2e</sub>  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 2273111.0000 TPY\* ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

\*TPY value represents aggregate CO2e limit for all 8 furnaces. Good combustion practices shall entail air preparation, as appropriate (to minimize reduced performance caused by dust and debris in the intake air supply); use of service appropriate refractory materials; proper insulation of equipment and piping to minimize heat loss; use of heat exchangers to heat incoming combustion air or boiler feed water, produce steam, etc.; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups consistent with LDEQ’s BACT determination for CO and VOC emissions; and compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of boiler tubes and heat exchangers and measures to minimize air infiltration. The O&M plan shall include provisions to address the temporary removal of equipment from service during normal operations for maintenance and inspections. Good combustion practices (during normal operations) shall also include recovery of refrigeration capacity from the incoming ethane feed; combustion of available hydrogen-rich off gas as fuel; and minimizing coke formation through proper design and operation. The CO2e limits are based on a CH4 global warming potential (GWP) of 21 and a N2O GWP of 310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

**Process/Pollutant Information**

**PROCESS NAME:** Thermal Oxidizer (EQT 980)  
**Process Type:** 19.200 (Emission Control Afterburners & Incinerators (combustion gasses only))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.6400 TPY ANNUAL MAXIMUM

**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63 Subpart SS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.6400 TPY ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63 Subpart SS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.0300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.0800 TPY ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63 Subpart SS

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.2900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 6.6800 TPY ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63 Subpart SS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 12.4500 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 36.3600 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63 Subpart SS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 17.7700 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 14.9500 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63 Subpart SS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 3739.0000 TPY ANNUAL MAXIMUM



**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63 Subpart SS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983 and the operating, performance testing, and temperature monitoring requirements of 40 CFR 63.988. The CO<sub>2e</sub> limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2e</sub> limits shall be revised accordingly without the need to modify the permit.

**Process/Pollutant Information**

**PROCESS NAME:** Elevated Flare (EQT 981)

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 562.2300 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 30.5600 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 562.2300 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 30.5600 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )  
**Emission Limit 1:** 8.9600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.9700 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)  
**CAS Number:** 10102  
**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 12383.1300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 22.6200 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 67378.7800 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 123.0800 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 45046.7600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 59.9200 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 44516.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas. The CO<sub>2</sub>e limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2</sub>e limits shall be revised accordingly without the need to modify the permit.

### Process/Pollutant Information

**PROCESS NAME:** Ground Flare (EQT 982)  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1041.9400 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 9.5600 TPY ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1041.9400 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 9.5600 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:** 803.8400 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 9.5900 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown



**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 8565.3100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 80.8400 TPY ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 46605.3800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 440.0200 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 24759.7400 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 162.8300 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2e</sub>)  
**CAS Number:** CO<sub>2e</sub>  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 100085.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart SS; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas. The CO<sub>2e</sub> limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is

revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

## Process/Pollutant Information

**PROCESS NAME:** Firewater Pump Nos. 1-3 (EQTs 997, 998, & 999)  
**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** Diesel  
**Throughput:** 500.00 HP  
**Process Notes:** Non-emergency use operating time is limited to 100 hr/yr (per engine).

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1700 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.0100 TPY ANNUAL MAXIMUM

**Standard Emission:** 0.1500 G/BHP-HR

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 60 Subpart IIII and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart IIII and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1700 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.0100 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.1500 G/BHP-HR  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 60 Subpart IIII and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart IIII and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**POLLUTANT NAME:** Sulfur Dioxide (SO2)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )

**Emission Limit 1:** 0.0050 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.0010 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 60 Subpart IIII and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Sulfur content of fuel is limited to 15 ppm. Annual SO2 limit is represented as "

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 3.2100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.1600 TPY ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 60 Subpart IIII and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NOx + NMHC emissions are limited to 3.0 g/hp-hr. BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart IIII and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.8700 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.1400 TPY ANNUAL MAXIMUM  
**Standard Emission:** 2.6000 G/BHP-HR

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 60 Subpart IIII and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart IIII and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.1000 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.0050 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 60 Subpart IIII and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NOx + NMHC emissions are limited to 3.0 g/hp-hr. BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart IIII and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 10.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 60 Subpart IIII and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be compliance with the limitations imposed by 40 CFR 60 Subpart IIII and its associated monitoring, recordkeeping, and reporting requirements; and operating the engine in accordance with the engine manufacturer's instructions and/or written procedures (consistent with safe operation) designed to maximize combustion efficiency and minimize fuel usage. The CO2e limits are based on a CH4 global warming potential (GWP) of 21 and a N2O GWP of 310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Steam Fugitive Emissions (FUG 17)  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 21  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 88.1400 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**



**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** SIP , OPERATING PERMIT

**Control Method:** (P) Leak Detection and Repair (LDAR): LAC 33:III.2122

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Cooling Tower (EQT 979)

**Process Type:** 99.009 (Industrial Process Cooling Towers)

**Primary Fuel:**

**Throughput:** 358000.00 GALS/MIN

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 20.4700 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) High efficiency drift eliminators and low TDS cooling water

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Determine and record the concentration of total dissolved solids (TDS) in the cooling water at least once per week using Standard Method 2540C or EPA Method 160.1. The efficiency of the drift eliminators shall be verified by the manufacturer's certification. The permittee shall average all recorded TDS concentrations and utilize the manufacturer's drift rate and the design recirculation rate of the cooling water pump(s) to determine compliance with the permit's emissions limitations.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 20.4700 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) High efficiency drift eliminators and low TDS cooling water

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Determine and record the concentration of total dissolved solids (TDS) in the cooling water at least once per week using Standard Method 2540C or EPA Method 160.1. The efficiency of the drift eliminators shall be verified by the manufacturer's certification. The permittee shall average all recorded TDS concentrations and utilize the manufacturer's drift rate and the design recirculation rate of the cooling water pump(s) to determine compliance with the permit's emissions limitations.

## Process/Pollutant Information

**PROCESS NAME:** Process Wastewater Treatment Plant (FUG 18)

**Process Type:** 64.006 (Wastewater Collection & Treatment)

**Primary Fuel:**

**Throughput:** 12647.00 GALS/MIN

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 40.0100 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP , MACT , OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63 Subpart G and 40 CFR 61 Subpart FF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The wastewater treatment plant will receive Group 2 wastewater streams from multiple process units.

### Process/Pollutant Information

**PROCESS NAME:** Railcar Loading (EQT 983)  
**Process Type:** 64.005 (Transfer of SOCM Chemicals (loading/unloading, filling, etc.))  
**Primary Fuel:**  
**Throughput:** 206.60 MM GALS/YR  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 18.9700 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 40.8300 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , SIP , OPERATING PERMIT

**Control Method:** (A) Thermal oxidation  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing VOC emissions through a closed vent system to a thermal oxidizer. No further control is required for the loading of sulfide/spent caustic with a floating layer of oil, as VOC emissions from this activity total only 0.03 TPY.

### Process/Pollutant Information

**PROCESS NAME:** Fugitive Emissions (FUG 19)  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 21  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 90.3100 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT , SIP , OPERATING PERMIT  
**Control Method:** (P) Leak Detection and Repair (LDAR): 40 CFR 63 Subpart UU  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Methanol/Propanol Storage Tank (EQT 984)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 58824.00 GALS/YR  
**Process Notes:** Tank volume = 216,583 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.1600 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , SIP , OPERATING PERMIT

**Control Method:** (P) Internal Floating Roof

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Sulfuric Acid Storage Tank (EQT 985)  
**Process Type:** 62.020 (Inorganic Liquid/Gas Storage & Handling)  
**Primary Fuel:**  
**Throughput:** 730531.00 GALS/YR  
**Process Notes:** Tank volume = 33,809 gallons

**POLLUTANT NAME:** Sulfur Dioxide (SO2)

**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PSD permit represents SO2 limit as "

### Process/Pollutant Information

**PROCESS NAME:** Methanol Storage Tank (EQT 986)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 15000.00 GALS/YR  
**Process Notes:** Tank volume = 5000 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1200 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , SIP , OPERATING PERMIT

**Control Method:** (P) Internal Floating Roof  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Process Water Tanks (EQTs 987, 988, & 989)  
**Process Type:** 64.006 (Wastewater Collection & Treatment)  
**Primary Fuel:**  
**Throughput:** 730531.00 GALS/YR  
**Process Notes:** Throughput = per tank Tank volume = 1.09 million gallons each

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 17.8200 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP , MACT , OPERATING PERMIT  
**Control Method:** (P) Internal Floating Roof  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** VOC limit is per tank.

### Process/Pollutant Information

**PROCESS NAME:** Sulfide Caustic Storage Tanks (EQTs 990, 991, & 992)  
**Process Type:** 62.020 (Inorganic Liquid/Gas Storage & Handling)  
**Primary Fuel:**  
**Throughput:** 4.45 MM GALS/YR  
**Process Notes:** Throughput = per tank Tank volume = 133,643 gallons each

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0300 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Internal Floating Roof  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** VOC limit is per tank.

### Process/Pollutant Information

**PROCESS NAME:** Wash Oil Tank (EQT 993)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 393176.00 GALS/YR  
**Process Notes:** Tank volume = 60,319 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified



**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1600 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Internal Floating Roof  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Benzene Stripper (EQT 1135)  
**Process Type:** 64.006 (Wastewater Collection & Treatment)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP , MACT , OPERATING PERMIT  
**Control Method:** (P) Route emissions to the fuel gas system  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Wastewater Drums and Sumps

**Process Type:** 64.006 (Wastewater Collection & Treatment)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** Includes the following sources: Caustic Drain Drum (ETH2-95-D-330, EQT 1137) Spent Caustic Flash Drum (ETH2-95-D-331, EQT 1138) Cracked Gas Compressor Oily WWTR Sump (ETH2-M7-9703, EQT 1139) Refrig Compressor Oily Wastewater Sump (ETH2-M8-9704, EQT 1140) Quench Water Oily Wastewater Sump (ETH2-M9-9702, EQT 1141) Caustic Wastewater Sump (ETH2-M10-9705, EQT 1142)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NESHAP , MACT , OPERATING PERMIT

**Control Method:** (A) Flare

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing the above drums and sumps through a closed vent system to the Ground Flare (EQT 0982).

## Process/Pollutant Information

**PROCESS NAME:** Benzene Accumulator (EQT 1143)  
**Process Type:** 64.006 (Wastewater Collection & Treatment)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (A) Flare

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vent through a closed vent system to the Elevated Flare (EQT 0981).

## Process/Pollutant Information

**PROCESS NAME:** Pressurized Tanks  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 0

**Process Notes:** Includes the following sources: Propylene Refrigerant Tank (ETH2-D92-9050, EQT 1106) P&P (Propane & Propylene) Tank (ETH2-D92-9051, EQT 1107) Butadiene Tank (ETH2-D92-9052A, EQT 1108) Butadiene Tank (ETH2-D92-9052B, EQT 1109) Co-Product Tank (ETH2-D92-9057, EQT 1112) Propionaldehyde Drum (ETH2-D92-9060, EQT 1114) Ethane Drum (ETH2-TK-1106, EQT 1115)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT , SIP

**Control Method:** (P) Maintain the working pressure sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** LAC Tank (EQT 1110), Heavy Pygas (HAD) Tank (EQT 1111), and Pentane Drum (EQT 1113)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** SIP , OPERATING PERMIT

**Control Method:** (A) Flare

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing the above storage vessels through a closed vent system to the Elevated Flare (EQT 0981), Ground Flare (EQT 0982), or to an equivalent flare.

**Process/Pollutant Information**

**PROCESS NAME:** Wash Oil Tank (EQT 1116) and Dimethyl Sulfide Tank (EQT 1117)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** Wash Oil Tank (EQT 1116) = 5000 gallons Dimethyl Sulfide Tank (EQT 1117) = 10,000 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** SIP , OPERATING PERMIT

**Control Method:** (A) Flare

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing the above storage vessels through a closed vent system to the Elevated Flare (EQT 0981), Ground Flare (EQT 0982), or to an equivalent flare.

Process/Pollutant Information

**PROCESS NAME:** Sulfide Caustic Oxidation (EQT 1136)  
**Process Type:** 64.006 (Wastewater Collection & Treatment)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP , MACT , OPERATING PERMIT  
**Control Method:** (A) Thermal Oxidizer  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vent through a closed vent system to Thermal Oxidizer Z85-8657 (EQT 0980).

Process/Pollutant Information

**PROCESS NAME:** C3 Hydrogenation Package (EQT 1127)

**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (A) Flare (or route emissions to the fuel gas system)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vent through a closed vent system to the Ground Flare or to the fuel gas system.

## Process/Pollutant Information

**PROCESS** Distillation Units

**NAME:**

**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** Includes the following sources: Demethanizer (ETH2-T-401, EQT 1130) Deethanizer (ETH2-T-501, EQT 1131) Depropanizer (ETH2-T-601, EQT 1133) Debutanizer (ETH2-T-651, EQT 1134)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (P) Route emissions to the fuel gas system  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Sour Water Stripper (EQT 1128)  
**Process Type:** 64.006 (Wastewater Collection & Treatment)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NESHAP , MACT , OPERATING PERMIT



**Control Method:** (P) Route emissions to the fuel gas system  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Caustic Wash Tower (EQT 1129) and Water Wash Tower (EQT 1132)  
**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Route emissions to the fuel gas system  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** C2 Hydrogenation Reactor (EQT 1126)  
**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (A) Flare  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vents through a closed vent system to the Ground Flare (EQT 0982).

Process/Pollutant Information
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**PROCESS NAME:** Process Vents  
**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** Includes the following sources: Analyzers (ETH2-Ana, EQT 1121) H2 Dryer Switch (ETH2-H2DS, EQT 1122) Frac Feed Dryer (ETH2-FFD, EQT 1123) Propylene from VCM (ETH2-PVCM, EQT 1124) Startup Converter (ETH2-SC, EQT 1125)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (A) Flare  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vents through a closed vent system to the Ground Flare (EQT 0982).

Process/Pollutant Information
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**PROCESS** Loading Operations

**NAME:**

**Process Type:** 64.005 (Transfer of SOCFI Chemicals (loading/unloading, filling, etc.))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** Includes the following sources: Propylene Refrig Unloading Line (ETH2-PRUL, EQT 1118) PSL Loading Rack (ETH2-PSLLR, EQT 1119) PSL Railcar Samples (ETH2-PSLRS, EQT 1120)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , SIP , OPERATING PERMIT  
**Control Method:** (A) Flare  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vents through a closed vent system to the Ground Flare (EQT 0982).

## Facility Information

<b>RBLC ID:</b>	LA-0302 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	SASOL CHEMICALS (USA) LLC	<b>Last Updated:</b> 04/28/2017
<b>Facility Name:</b>	LAKE CHARLES CHEMICAL COMPLEX EO/MEG UNIT	<b>Permit Number:</b> PSD-LA-779
<b>Facility Contact:</b>	ERIC RODRIGUEZ (281) 588-3761 ERIC.RODRIGUEZ@US.SASOL.COM	<b>Permit Date:</b> 05/23/2014 (actual)
<b>Facility Description:</b>		<b>FRS Number:</b> 110017418061
<b>Permit Type:</b>	B: Add new process to existing facility	<b>SIC Code:</b> 2869
<b>Permit URL:</b>		<b>NAICS Code:</b> 325199
<b>EPA Region:</b>	6	<b>COUNTRY:</b> USA
<b>Facility County:</b>	CALCASIEU	
<b>Facility State:</b>	LA	
<b>Facility ZIP Code:</b>	70669	
<b>Permit Issued By:</b>	LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name) MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV	
<b>Permit Notes:</b>	Complete application date = date of administrative completeness This RBLC entry addresses the Ethylene Oxide/Monoethylene Glycol (EO/MEG) Unit of the Lake Charles Cracker Project.	

## Process/Pollutant Information

**PROCESS NAME:** Process Heat Boilers B-910A & B-910B (EQTs 1008 & 1009)  
**Process Type:** 13.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)

**Primary Fuel:** Process Gas  
**Throughput:** 78.00 MM BTU/HR  
**Process Notes:** Heat input = per boiler

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.8700 TPY\* ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Pound per hour PM10 limitations are per boiler. \*Annual PM10 emissions from both boilers are limited to the TPY value reported. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.8700 TPY\* ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Pound per hour PM2.5 limitations are per boiler. \*Annual PM2.5 emissions from both boilers are limited to the TPY value reported. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 4.6000 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.3700 TPY\* ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 grains per standard cubic foot (gr/scf) (annual average)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Pound per hour SO2 limitations are per boiler. \*Annual SO2 emissions from both boilers are limited to the TPY value reported.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.9700 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 9.5500 TPY\* ANNUAL MAXIMUM

**Standard Emission:** 0.0380 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Ultra low NOx burners (ULNB)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Pound per hour NOx limitations are per boiler. \*Annual NOx emissions from both boilers are limited to the TPY value reported.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.7400 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 8.8000 TPY\* ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and compliance with the applicable provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Pound per hour CO limitations are per boiler. \*Annual CO emissions from both boilers are limited to the TPY value reported. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 69173.0000 TPY\* ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** \*Annual CO<sub>2</sub>e emissions from both boilers are limited to the TPY value reported. Good combustion practices shall entail air preparation, as appropriate (to minimize reduced performance caused by dust and debris in the intake air supply); use of service appropriate refractory materials; proper insulation of equipment and piping to minimize heat loss; use of heat exchangers to heat incoming combustion air or boiler feed water, produce steam, etc.; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups consistent with LDEQ's BACT determination for CO and VOC emissions; and compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of boiler tubes and heat exchangers and measures to minimize air infiltration. The O&M plan shall include provisions to address the temporary removal of equipment from service during normal operations for maintenance and inspections. Good combustion practices shall also include a condensate return system (to return condensate to the boiler feed water system); recovery of waste heat from boiler blowdown; and preheating and treatment of boiler feed water. The CO<sub>2</sub>e limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2</sub>e limits shall be revised accordingly without the need to modify the permit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.4200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.3600 TPY\* ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD



**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and compliance with the applicable provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Pound per hour VOC limitations are per boiler. \*Annual VOC emissions from both boilers are limited to the TPY value reported. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

Process/Pollutant Information
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**PROCESS NAME:** Elevated Flare and Ground Flare (EQTs 1012 & 1013)  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** Normal operating rate = 79,370 lb/hr

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.1600 TPY\* ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the closed vent system requirements of 40 CFR 63.148; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Pound per hour PM10 limitations are per flare. \*Annual PM10 emissions from both flares are limited to the TPY value reported.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.1600 TPY\* ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the closed vent system requirements of 40 CFR 63.148; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Pound per hour PM2.5 limitations are per flare. \*Annual PM2.5 emissions from both flares are limited to the TPY value reported.

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.0100 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.0200 TPY\* ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions: U**

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the closed vent system requirements of 40 CFR 63.148; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Pound per hour SO2 limitations are per flare. \*Annual SO2 emissions from both flares are limited to the TPY value reported.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.4300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.0600 TPY\* ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions: U**

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the closed vent system requirements of 40 CFR 63.148; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Pound per hour NOx limitations are per flare. \*Annual NOx emissions from both flares are limited to the TPY value reported.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 13.2300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 5.7900 TPY\* ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the closed vent system requirements of 40 CFR 63.148; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Pound per hour CO limitations are per flare. \*Annual CO emissions from both flares are limited to the TPY value reported.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 1998.0000 TPY\* ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the closed vent system requirements of 40 CFR 63.148; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** \*Annual CO<sub>2</sub>e emissions from both flares are limited to the TPY value reported. The CO<sub>2</sub>e limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2</sub>e limits shall be revised accordingly without the need to modify the permit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 278.1300 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 2.3500 TPY\* ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the closed vent system requirements of 40 CFR 63.148; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Pound per hour VOC limitations are per flare. \*Annual VOC emissions from both flares are limited to the TPY value reported.

**PROCESS NAME:** E-222 Regenerator Condenser CO2 Vent (EQT 1010)  
**Process Type:** 64.999 (Other SOCOMI Processes)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.0600 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.1300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.3400 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 8.0200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 5.1500 TPY ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT , OPERATING PERMIT  
**Control Method:** (P) Compliance with the applicable provisions of 40 CFR 63 Subpart G for Group 2 process vents  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 215473.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Selection of a catalyst that maximizes production of EO over the by-products of CO2 and water to limit CO2e emissions to the hourly and annual rates set forth in the PSD permit

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The CO2e limits are based on a CH4 global warming potential (GWP) of 21 and a N2O GWP of 310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

Process/Pollutant Information
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**PROCESS NAME:** Cooling Tower (EQT 1011)

**Process Type:** 99.009 (Industrial Process Cooling Towers)

**Primary Fuel:**

**Throughput:** 156000.00 GALS/MIN

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.7100 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) High efficiency drift eliminators and low TDS cooling water

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown



**Pollutant/Compliance Notes:** The permittee shall determine and record the concentration of total dissolved solids (TDS) in the cooling water at least once per week using Standard Method 2540C or EPA Method 160.1. The efficiency of the drift eliminators shall be verified by the manufacturer's certification. The permittee shall average all recorded TDS concentrations and utilize the manufacturer's drift rate and the design recirculation rate of the cooling water pump(s) to determine compliance with emissions limitations.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.7100 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) High efficiency drift eliminators and low TDS cooling water

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The permittee shall determine and record the concentration of total dissolved solids (TDS) in the cooling water at least once per week using Standard Method 2540C or EPA Method 160.1. The efficiency of the drift eliminators shall be verified by the manufacturer's certification. The permittee shall average all recorded TDS concentrations and utilize the manufacturer's drift rate and the design recirculation rate of the cooling water pump(s) to determine compliance with emissions limitations.

## Process/Pollutant Information

**PROCESS NAME:** Fugitive Emissions (FUG 20)

**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 21  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 26.5100 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT , SIP , OPERATING PERMIT  
**Control Method:** (P) Leak Detection and Repair (LDAR): 40 CFR 63 Subpart H  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 204.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Leak Detection and Repair (LDAR): 40 CFR 63 Subpart H  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The CO2e limits are based on a CH4 global warming potential (GWP) of 21 and a N2O GWP of 310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

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## Process/Pollutant Information

**PROCESS NAME:** Railcar Loading (EQT 1014)  
**Process Type:** 64.005 (Transfer of SOCMI Chemicals (loading/unloading, filling, etc.))  
**Primary Fuel:**  
**Throughput:** 883.60 MM GALS/YR  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 27.9600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 2.2800 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (P) Best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Group 2 transfer rack per 40 CFR 63 Subpart G

## Process/Pollutant Information

**PROCESS NAME:** MEG Storage Tanks (EQTs 1015, 1016, & 1017)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 181.44 MM GALS/YR  
**Process Notes:** Tank capacity = 3.86 MM gallons each Throughput = per tank

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.6700 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Fixed roof storage vessels (Group 2 under 40 CFR 63 Subpart G) VOC emission limits are per tank.

Process/Pollutant Information
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**PROCESS NAME:** DEG Storage Tanks (EQTs 1018 & 1019)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 14.97 MM GALS/YR  
**Process Notes:** Tank capacity = 454,000 gallons each Throughput = per tank

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0100 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Fixed roof storage vessels (Group 2 under 40 CFR 63 Subpart G) VOC emission limits are per tank.

### Process/Pollutant Information

**PROCESS NAME:** TEG Storage Tanks (EQTs 1020 & 1021)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 792000.00 GALS/YR  
**Process Notes:** Tank capacity = 24,000 gallons each Throughput = per tank

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Fixed roof storage vessels (Group 2 under 40 CFR 63 Subpart G) VOC emission limits are per tank.

### Process/Pollutant Information

**PROCESS NAME:** DEG Storage Tank (EQT 1022)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 14.97 MM GALS/YR  
**Process Notes:** Tank capacity = 136,000 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Fixed roof storage vessel (Group 2 under 40 CFR 63 Subpart G)

### Process/Pollutant Information

**PROCESS NAME:** Crude Glycol Storage Tank (EQT 1023)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 181.44 MM GALS/YR  
**Process Notes:** Tank capacity = 976,527 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.4000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Fixed roof storage vessel (Group 2 under 40 CFR 63 Subpart G)

### Process/Pollutant Information

**PROCESS NAME:** Crude Heavy Glycol Storage Tank (EQT 1024)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 16.11 MM GALS/YR  
**Process Notes:** Tank capacity = 77,000 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0300 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Fixed roof storage vessel (Group 2 under 40 CFR 63 Subpart G)

Process/Pollutant Information

**PROCESS NAME:** PEG Storage Tank (EQT 1025)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 366000.00 GALS/YR  
**Process Notes:** Tank capacity = 24,000 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Fixed roof storage vessel (Group 2 under 40 CFR 63 Subpart G) Permit represents VOC limit as "

Process/Pollutant Information

**PROCESS NAME:** MEG Rundown Storage Tanks (EQT 1026 & 1027)



**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 181.44 MM GALS/YR  
**Process Notes:** Tank capacity = 629,000 gallons each Throughput = per tank

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1800 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Fixed roof storage vessels (Group 2 under 40 CFR 63 Subpart G) VOC emission limits are per tank.

## Process/Pollutant Information

**PROCESS NAME:** DEG Rundown Storage Tanks (EQT 1028 & 1029)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 14.97 MM GALS/YR  
**Process Notes:** Tank capacity = 107,234 gallons each Throughput = per tank

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0030 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Fixed roof storage vessels (Group 2 under 40 CFR 63 Subpart G) VOC emission limits are per tank.

### Process/Pollutant Information

**PROCESS NAME:** TEG Rundown Storage Tanks (EQT 1030 & 1031)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 792000.00 GALS/YR  
**Process Notes:** Tank capacities: EQT 1030 - 25,569 gallons EQT 1031 - 26,000 gallons Throughput = per tank

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Fixed roof storage vessels (Group 2 under 40 CFR 63 Subpart G) VOC emission limits are per tank.

Process/Pollutant Information

**PROCESS NAME:** Sulfuric Acid Storage Tank (EQT 1032)  
**Process Type:** 62.020 (Inorganic Liquid/Gas Storage & Handling)  
**Primary Fuel:**  
**Throughput:** 121700.00 GALS/YR  
**Process Notes:** Tank capacity = 16,798 gallons

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Permit represents SO2 limit as "

Process/Pollutant Information

**PROCESS NAME:** Heat Exchangers

**Process** 64.999 (Other SOCOMI Processes)

**Type:**

**Primary**

**Fuel:**

**Throughput:** 0

**Process** Includes the following sources: Wash Water Cooler (EOM-E-116, EQT 1056) Cycle Water Cooler (EOM-E-313, EQT 1057) Reclaim Compressor

**Notes:** Aftercooler (EOM-E-320, EQT 1058) Reabsorber Bottom Coolers (EOM-E-322A/B/C, EQT 1059) Reabsorber Water Coolers (EOM-E-321A/B, EQT 1060) Purification Column Condenser (EOM-E-411, EQT 1061) Vacuum Effect Condenser (EOM-E-538, EQT 1062) Wastewater VOC Stripper Bottoms Cooler (EOM-E-570, EQT 1063) Drying Column Condenser (EOM-E-611, EQT 1064) Crude Glycol Tank Feed Cooler (EOM-E-615, EQT 1065) MEG Column Ejector Precondenser (EOM-E-623, EQT 1066) DEG Column Condenser (EOM-E-711, EQT 1067) Crude Heavy Glycol Cooler (EOM-E-715, EQT 1068) TEG Column Condenser (EOM-E-721, EQT 1069) TEG Product Cooler (EOM-E-722, EQT 1070) Blowdown Cooler (EOM-E-940, EQT 1071) Cycle Water Bleed Exchanger (EOM-E-552, EQT 1073) Cycle Water Bleed Cooler (EOM-E-553, EQT 1074) MEG Splitter Condenser (EOM-E-631, EQT 1278)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) Compliance with the heat exchange system requirements of 40 CFR 63.104

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the heat exchange system requirements of 40 CFR 63.104 (regardless if it is otherwise applicable). These provisions require Sasol to monitor the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak, repair any leaks that are detected, and confirm that the heat exchange system is no longer leaking following repair activities. This section also prescribes recordkeeping and reporting requirements.

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**PROCESS NAME:** Glycol Sump (EQT 1075)  
**Process Type:** 64.006 (Wastewater Collection & Treatment)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (A) Flare  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing the above sump through a closed vent system to the Elevated Flare (EQT 1012) or to the Ground Flare (EQT 1013).

Process/Pollutant Information
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**PROCESS NAME:** Cycle Water Treating Unit (EQT 1076)  
**Process Type:** 64.006 (Wastewater Collection & Treatment)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (A) Combustion (Flare or Process Heat Boiler)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing the above vent through a closed vent system to the Elevated Flare (EQT 1012), to the Ground Flare (EQT 1013), to Process Heat Boiler B-910A (EQT 1008), or to Process Heat Boiler B-910B (EQT 1009).

Process/Pollutant Information
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**PROCESS NAME:** Wastewater VOC Stripper (Vent) (EQT 1072)  
**Process Type:** 64.006 (Wastewater Collection & Treatment)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (A) Combustion (Process Heat Boiler)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing the above vent through a closed vent system to Process Heat Boiler B-910A (EQT 1008) or to Process Heat Boiler B-910B (EQT 1009).

### Process/Pollutant Information

**PROCESS NAME:** EOM Storage Sphere (EQT 1078)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP , OPERATING PERMIT  
**Control Method:** (P) Maintain the working pressure sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS** Process Vents

**NAME:**

**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** Includes the following sources: Evaporator Vent (EOM-F-536, RLP 0122) Drying Column Hotwell (Vent) (EOM-F-610, RLP 0123) DEQ/TEG Columns Hotwell (Vent) (EOM-F-710, RLP 0124) Waste Heat Boiler Pot (Vent) EOM-D-910A/B, RLP 0125)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (A) Combustion (Process Heat Boiler)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vents through a closed vent system to Process Heat Boiler B-910A (EQT 1008) or to Process Heat Boiler B-910B (EQT 1009).

## Process/Pollutant Information

**PROCESS** Process Vents

**NAME:**



**Process** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Type:**

**Primary**

**Fuel:**

**Throughput:** 0

**Process** Includes the following sources: Reactor/Gas Cooler (EOM-R-110, EQT 1034) Sulfur Guard Bed (EOM-R-150, EQT 1035) Glycol Reactor

**Notes:** (EOM-R-250, EQT 1036) Regenerator/Feed Flash Drums (EOM-T-220, EQT 1038) Stripping Column/Flash Drum (EOM-T-310, EQT 1039) Reabsorber (EOM-T-320, EQT 1040) Vent Scrubber (EOM-T-330, EQT 1041) Purification Column (EOM-T-410, EQT 1042) Glycol Feed Stripper (EOM-T-510, EQT 1043) First Effect Evaporator (EOM-T-531, EQT 1044) Second Effect Evaporator (EOM-T-532, EQT 1045) Third Effect Evaporator (EOM-T-533, EQT 1046) Fourth Effect Evaporator (EOM-T-534, EQT 1047) Fifth Effect Evaporator (EOM-T-535, EQT 1048) Six Effect Evaporator (EOM-T-536, EQT 1049) Vacuum Effect Evaporator (EOM-T-537, EQT 1050) Aldehyde Stripper (EOM-T-560, EQT 1051) Drying Column (EOM-T-610, EQT 1052) MEG Splitter (EOM-T-630, EQT 1053) DEG Column (EOM-T-710, EQT 1054) TEG Column (EOM-T-720, EQT 1055)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (A) Flare

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vents through a closed vent system to the Elevated Flare (EQT 1012) or to the Ground Flare (EQT 1013).

## Facility Information

**RBLC ID:** LA-0303 (final)

**Date Determination**

**Last Updated:** 04/28/2017

**Corporate/Company Name:** SASOL CHEMICALS (USA) LLC

**Permit Number:** PSD-LA-779

<b>Facility Name:</b>	LAKE CHARLES CHEMICAL COMPLEX ZIEGLER ALCOHOL UNIT	<b>Permit Date:</b>	05/23/2014 (actual)
<b>Facility Contact:</b>	ERIC RODRIGUEZ (281) 588-3761 ERIC.RODRIGUEZ@US.SASOL.COM	<b>FRS Number:</b>	110017418061
<b>Facility Description:</b>		<b>SIC Code:</b>	2869
<b>Permit Type:</b>	D: Both B (Add new process to existing facility) &C (Modify process at existing facility)	<b>NAICS Code:</b>	325199
<b>Permit URL:</b>			
<b>EPA Region:</b>	6	<b>COUNTRY:</b>	USA
<b>Facility County:</b>	CALCASIEU		
<b>Facility State:</b>	LA		
<b>Facility ZIP Code:</b>	70669		
<b>Permit Issued By:</b>	LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name) MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV		
<b>Permit Notes:</b>	Complete application date = date of administrative completeness This RBLC entry addresses the expansion of the existing Alcohol Unit, part of the Lake Charles Cracker Project. The new process train will produce highly linear primary alcohols ranging from 2 to about 28 carbons using Ziegler technology.		

<b>Process/Pollutant Information</b>
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<b>PROCESS NAME:</b>	Reactor Feed Heater (EQT 1160)
<b>Process Type:</b>	13.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)
<b>Primary Fuel:</b>	Process Gas
<b>Throughput:</b>	18.00 MM BTU/HR
<b>Process Notes:</b>	Heater is subject to 40 CFR 60 Subpart Dc and 40 CFR 63 Subpart DDDDD.

<b>POLLUTANT NAME:</b>	Particulate matter, total < 10 μ (TPM10)
<b>CAS Number:</b>	PM
<b>Test Method:</b>	Unspecified
<b>Pollutant Group(s):</b>	( Particulate Matter (PM) )
<b>Emission Limit 1:</b>	0.1300 LB/HR HOURLY MAXIMUM
<b>Emission Limit 2:</b>	0.4900 TPY ANNUAL MAXIMUM
<b>Standard Emission:</b>	0.0075 LB/MMBTU ANNUAL AVERAGE
<b>Did factors, other than air pollution technology considerations influence the BACT decisions:</b>	U
<b>Case-by-Case Basis:</b>	BACT-PSD
<b>Other Applicable Requirements:</b>	OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.4900 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 1.0600 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.1000 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 grains per standard cubic foot (gr/scf) (annual average)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.6800 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 2.5000 TPY ANNUAL MAXIMUM

**Standard Emission:** 0.0380 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Ultra low NOx burners (ULNB)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.6300 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 2.3000 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and compliance with the applicable provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1000 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.3500 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0054 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and compliance with the applicable provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 9484.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall entail air preparation, as appropriate (to minimize reduced performance caused by dust and debris in the intake air supply); use of service appropriate refractory materials; proper insulation of equipment and piping to minimize heat loss; use of heat exchangers to heat incoming combustion air; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups; and compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of heat exchangers and measures to minimize air infiltration. The O&M plan shall also include provisions to address the temporary removal of equipment from service during normal operations for maintenance and inspections. Flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. The CO2e limits are based on a CH4 global warming potential (GWP) of 21 and a N2O GWP of 310. In the event any GWP is revised, the CO2e limits shall be revised accordingly without the need to modify the permit.

### Process/Pollutant Information

**PROCESS NAME:** Hot Oil Heater (EQT 1161)  
**Process Type:** 12.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** Process Gas  
**Throughput:** 240.00 MM BTU/HR  
**Process Notes:** Heater is subject to 40 CFR 60 Subpart Db and 40 CFR 63 Subpart DDDDD.

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.7900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 6.5300 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.7900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 6.5300 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0075 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )  
**Emission Limit 1:** 14.1200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 1.2900 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Use of gaseous fuels with a sulfur content of no more than 0.005 grains per standard cubic foot (gr/scf) (annual average)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NO<sub>x</sub>) , Particulate Matter (PM) )  
**Emission Limit 1:** 9.1200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 33.2900 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0380 LB/MMBTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (P) Ultra low NO<sub>x</sub> burners (ULNB)

**Est. % Efficiency:**



**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 8.4000 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 30.6600 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0350 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices and compliance with the applicable provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.2900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 4.7200 TPY ANNUAL MAXIMUM  
**Standard Emission:** 0.0054 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Good combustion practices and compliance with the applicable provisions of 40 CFR 63 Subpart DDDDD  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 145933.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Good combustion practices shall entail air preparation, as appropriate (to minimize reduced performance caused by dust and debris in the intake air supply); use of service appropriate refractory materials; proper insulation of equipment and piping to minimize heat loss; use of heat exchangers to heat incoming combustion air; instrumentation to monitor the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature; periodic tune-ups; and compliance with a written operations and maintenance (O&M) plan developed by Sasol that addresses topics such as the inspection and cleaning of heat exchangers and measures to minimize air infiltration. The O&M plan shall also include provisions to address the temporary removal of equipment from service during normal operations for maintenance and inspections. Flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. The CO<sub>2</sub>e limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2</sub>e limits shall be revised accordingly without the need to modify the permit.

## Process/Pollutant Information

**PROCESS NAME:** Elevated Flare (EQT 133)  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** Normal operating rate = 860.33 MM lb/yr

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.9000 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 1.4300 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.9000 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 1.4300 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:** 0.5100 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.4100 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 55.3200 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 41.4200 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 300.9300 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 225.4000 TPY ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 420.6700 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 192.9900 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT , MACT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 94386.0000 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas. The CO<sub>2</sub>e limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2</sub>e limits shall be revised accordingly without the need to modify the permit.

### Process/Pollutant Information

**PROCESS NAME:** Emission Combustion Unit #3 Ground Flare (EQT 500)

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** Normal operating rate = 860.33 MM lb/yr

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.5200 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.4300 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT



**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.5200 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.4300 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:** 20.7900 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 0.1400 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Nitrogen Oxides (NO<sub>x</sub>)

**CAS Number:** 10102

**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 49.6800 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 10.7800 TPY ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 270.3200 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 58.6700 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 566.9700 LB/HR HOURLY MAXIMUM

**Emission Limit 2:** 92.9800 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**CAS Number:** CO<sub>2</sub>e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 24567.0000 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS; minimization of flaring through adherence to the SSMP developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987. In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas. The CO<sub>2</sub>e limits are based on a CH<sub>4</sub> global warming potential (GWP) of 21 and a N<sub>2</sub>O GWP of 310. In the event any GWP is revised, the CO<sub>2</sub>e limits shall be revised accordingly without the need to modify the permit.

## Process/Pollutant Information

**PROCESS NAME:** Melt Bin (EQT 1159)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 45500.00 GALS/YR  
**Process Notes:** Fixed roof container

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 85.2200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 0.0600 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Fugitive Emissions (FUG 22)  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 21  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 308.4800 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (P) Leak Detection and Repair (LDAR): 40 CFR 63 Subpart FFFF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0200 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Leak Detection and Repair (LDAR): 40 CFR 63 Subpart FFFF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

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## Process/Pollutant Information

**PROCESS NAME:** Loading Rack Operations (EQT 1162)  
**Process Type:** 64.005 (Transfer of SOCFI Chemicals (loading/unloading, filling, etc.))  
**Primary Fuel:**  
**Throughput:** 196500.00 GALS/HR  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2727.5900 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 22.2800 TPY ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Best maintenance practices consistent with Sasol's written plan developed pursuant to LAC 33:III.2113  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Isopropanol/Slurry Tank (EQT 1163)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** Tank volume = 9988 gallons Group 2 storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)



**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Alcohol/Hydrolysis Condensate/Slurry Tanks (EQTs 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1172, 1173, 1174, 1175, & 1176)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** Tank volume = 21,000 gallons each Group 2 storage vessels under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.2500 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** VOC limit is per tank.

### Process/Pollutant Information

**PROCESS NAME:** SSO Storage Tank (EQT 139)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 35.00 MM GALS/YR  
**Process Notes:** Tank volume = 127,092 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.0300 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , SIP , OPERATING PERMIT  
**Control Method:** (P) Internal floating roof  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Alcohol Tank (EQT 173)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 3.40 MM GALS/YR  
**Process Notes:** Tank volume = 87,569 gallons Group 2 storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.2600 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (P) Internal floating roof  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Wastewater Collection and Transfer System (EQT 1203)  
**Process Type:** 64.006 (Wastewater Collection & Treatment)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 4.1500 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Compliance with the applicable provisions of 40 CFR 61 Subpart FF and 40 CFR 63.2485(j) of Subpart FFFF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS** S-5500 Vent Knockout Drum (EQT 1206)

**NAME:**

**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** The S-5500 Vent Knockout Drum functions as a recovery device for various process equipment located within the Alcohol Unit (i.e., Dehydrator Tower ALC-DA-5501, Butanol Stripper Tower ALC-DA-5504, Ammonia Absorber Tower ALC-DA-5505, and Hydrolysis Reactor ALC-DC-5501).

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 20.4200 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , MACT , OPERATING PERMIT

**Control Method:** (P) Maintain the TRE index value above 5.0 consistent with 40 CFR 63.2455(a) and Table 1 to Subpart FFFF  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Alcohol Loading Rack (EQT 226)  
**Process Type:** 64.005 (Transfer of SOCM Chemicals (loading/unloading, filling, etc.))  
**Primary Fuel:**  
**Throughput:** 2400000.00 LB/YR  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1878.2200 LB/HR HOURLY MAXIMUM  
**Emission Limit 2:** 8.4300 TPY ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP , OPERATING PERMIT  
**Control Method:** (A) Carbon adsorption  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Growth Product Tanks (EQTs 1177 & 1180)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 124.51 MM GALS/YR

**Process Notes:** Tank volume = 235,000 gallons each Throughput = per tank Group 2 fixed roof storage vessels under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 5.9200 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** VOC limit is per tank.

### Process/Pollutant Information

**PROCESS NAME:** Growth Product Tanks (EQTs 1178 & 1179)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 126.55 MM GALS/YR

**Process Notes:** Tank volume = 241,000 gallons each Throughput = per tank Group 2 fixed roof storage vessels under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 4.5000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** VOC limit is per tank.

### Process/Pollutant Information

**PROCESS NAME:** Hydrolysis Water Storage Tank (EQT 1181)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 138.92 MM GALS/YR  
**Process Notes:** Tank volume = 104,000 gallons Fixed roof storage vessel

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.8300 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

### Process/Pollutant Information

**PROCESS NAME:** Wet Crude Alcohol Storage Tank (EQT 1182)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 291.16 MM GALS/YR  
**Process Notes:** Tank volume = 288,000 gallons Fixed roof storage vessel

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )



**Emission Limit 1:** 6.8100 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** HF 1000/LPA 140 Tank (EQT 1183)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 25.00 MM GALS/YR

**Process Notes:** Tank volume = 424,188 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 1.4000 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** TPT/LPA 140 Tank (EQT 1184)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 170563.00 GALS/YR

**Process Notes:** Tank volume = 12,925 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0900 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** C6 Alc A & B Tanks (EQTs 1185 & 1186)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 21.00 MM GALS/YR

**Process Notes:** Tank volume = 763,486 gallons each Throughput = per tank Fixed roof storage vessels

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 3.4200 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** VOC limit is per tank.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

### Process/Pollutant Information

**PROCESS NAME:** Light Pure Cut Tank (EQT 1187)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 25.00 MM GALS/YR  
**Process Notes:** Tank volume = 42,301 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.4400 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT , MACT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

**Process/Pollutant Information**

**PROCESS NAME:** C1214 Alcohol Tank (EQT 1188)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**

**Throughput:** 12.90 MM GALS/YR

**Process Notes:** Tank volume = 1.7 million gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 2.4700 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** EPA/OAR Mthd 10

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** C8 Pure Cut Tank (EQT 1189)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 10.00 MM GALS/YR  
**Process Notes:** Tank volume = 635,416 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.6600 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

### Process/Pollutant Information

**PROCESS NAME:** C10 Pure Cut Tank (EQT 1190)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 11.00 MM GALS/YR  
**Process Notes:** Tank volume = 635,416 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.6200 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**



**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

### Process/Pollutant Information

**PROCESS NAME:** C12 Pure Cut Tank (EQT 1191)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 8.00 MM GALS/YR  
**Process Notes:** Tank volume = 635,416 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.2900 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** EPA/OAR Mthd 10A  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

## Process/Pollutant Information

**PROCESS NAME:** C14 Pure Cut Tank (EQT 1192)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 5.00 MM GALS/YR  
**Process Notes:** Tank volume = 1.26 million gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.3500 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

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## Process/Pollutant Information

**PROCESS NAME:** C16 Pure Cut Tank (EQT 1193)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 3.00 MM GALS/YR  
**Process Notes:** Tank volume = 428,271 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.4000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

### Process/Pollutant Information

**PROCESS NAME:** C18 Pure Cut Tank (EQT 1194)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 2.00 MM GALS/YR  
**Process Notes:** Tank volume = 211,492 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.8500 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

### Process/Pollutant Information

**PROCESS NAME:** C810 Alcohol Tank (EQT 1195)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 21.00 MM GALS/YR  
**Process Notes:** Tank volume = 2.59 million gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 3.9000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT , MACT

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

### Process/Pollutant Information

**PROCESS NAME:** C1214 Alcohol Tank (EQT 1196)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 13.20 MM GALS/YR  
**Process Notes:** Tank volume = 1.7 million gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.5100 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

Process/Pollutant Information



**PROCESS NAME:** C1618 Alcohol Tank (EQT 1197)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 6.40 MM GALS/YR  
**Process Notes:** Tank volume = 845,968 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.8400 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

## Process/Pollutant Information

**PROCESS NAME:** C20+ Alcohol Tank (EQT 1198)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 4.20 MM GALS/YR  
**Process Notes:** Tank volume = 845,968 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.2400 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

### Process/Pollutant Information

**PROCESS NAME:** Alcohol/Butanol Tank (EQT 158)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 14.60 MM GALS/YR  
**Process Notes:** Tank volume = 42,203 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.3000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0010 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The PSD permit represents the CO limit as "

### Process/Pollutant Information

**PROCESS NAME:** Alcohol Tanks (EQTs 159 & 165)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 7.22 MM GALS/YR  
**Process Notes:** Tank volume = 138,924 gallons each Throughput of EQT 165: 7.19 MM gals/yr Group 2 fixed roof storage vessels under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.6900 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT , MACT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** VOC limit is per tank.

### Process/Pollutant Information

**PROCESS NAME:** Alcohol Tank (EQT 171)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 6.87 MM GALS/YR  
**Process Notes:** Tank volume = 132,192 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.6700 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Alcohol Tank (EQT 174)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 11.14 MM GALS/YR  
**Process Notes:** Tank volume = 214,173 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 3.4500 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Alcohol Tank (EQT 176)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 4.56 MM GALS/YR  
**Process Notes:** Tank volume = 87,545 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 1.5800 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Alcohol Tank (EQT 182)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 6.87 MM GALS/YR  
**Process Notes:** Tank volume = 132,192 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 3.0800 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Alcohol Storage Tank (EQT 188)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 22.08 MM GALS/YR  
**Process Notes:** Tank volume = 87,669 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 2.6400 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton



**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Alcohol Storage Tank (EQT 189)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 33.30 MM GALS/YR  
**Process Notes:** Tank volume = 132,192 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 3.9300 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Alkoxide Tank Service (EQT 205)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 3.67 MM GALS/YR

**Process Notes:** Tank volume = 146,880 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 1.7600 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** Alcohol Tank (EQT 210)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 102.94 MM GALS/YR

**Process Notes:** Tank volume = 635,460 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 15.0500 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Alcohol Tank (EQT 213)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 11.54 MM GALS/YR

**Process Notes:** Tank volume = 222,082 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 5.1200 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Alcohol Utility Tower Product Tank (EQT 192)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**  
**Throughput:** 19.22 MM GALS/YR  
**Process Notes:** Tank volume = 53,500 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.8400 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Hotwash Solvent Tank (EQT 149)  
**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))  
**Primary Fuel:**

**Throughput:** 5.96 MM GALS/YR

**Process Notes:** Tank volume = 108,936 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 8.5800 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Alcohol Utility Tower Product Tank (EQT 193)

**Process Type:** 64.004 (Storage Tanks (SOCMI only - also see 42.001-42.999 and 62.020))

**Primary Fuel:**

**Throughput:** 19.22 MM GALS/YR

**Process Notes:** Tank volume = 42,203 gallons Group 2 fixed roof storage vessel under 40 CFR 63 Subpart FFFF

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.7700 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT , MACT

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** ALEX Alkoxide Stripper Tower (EQT 1207)

**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (A) Flare

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vent through a closed vent system to the Elevated Flare (EQT 0133).

**Process/Pollutant Information**

**PROCESS** Reactor and Tower Process Vents  
**NAME:**  
**Process** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))  
**Type:**  
**Primary**  
**Fuel:**  
**Throughput:** 0  
**Process** Includes the following sources: Oxidation Reactor (ALC-DC-401C, EQT 0130) ALEX C6 Alcohol Tower (ALC-DA-6001, EQT 1213) ALEX C810 Alcohol Tower (ALC-DA-6002, EQT 1214) ALEX C1214 Alcohol Tower (ALC-DA-6003, EQT 1215) ALEX C1618 Alcohol Tower (ALC-DA-6004, EQT 1216) ALEX Batch Oxidation Reactor (ALC-DC-4001D, EQT 1225) ALEX Batch Oxidation Reactor (ALC-DC-4001E, EQT 1226) ALEX C6OH Hydrogenation Reactor (ALC-DC-6001, EQT 1228) ALEX C810OH Hydrogenation Reactor (ALC-DC-6002, EQT 1229) ALEX C1214OH Hydrogenation Reactor (ALC-DC-6003, EQT 1230) ALEX C1618OH Hydrogenation Reactor (ALC-DC-6004, EQT 1231) ALEX C20+ Hydrogenation Reactor (ALC-DC-6005, EQT 1232) ALEX ADEH Reactor (ALC-DC-2000, EQT 1218) ALEX Hydrogenation Reactor (ALC-DC-2001A, EQT 1219) ALEX Hydrogenation Reactor (ALC-DC-2001B, EQT 1220) ALEX Ethylation Reactor Stage 1 (ALC-DC-2002A, EQT 1221) ALEX Ethylation Reactor Stage 2 (ALC-DC-2002B, EQT 1222) ALEX Growth Reactor (ALC-DC-3001A, EQT 1223) ALEX Growth Reactor (ALC-DC-3001B, EQT 1224)  
**Notes:**  
**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT , MACT  
**Control Method:** (A) Flare  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vents through a closed vent system to the Emission Combustion Unit #3 Ground Flare (EQT 0500).

Process/Pollutant Information

**PROCESS NAME:** ALEX Utility Tower (EQT 1217)  
**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT , OPERATING PERMIT  
**Control Method:** (A) Combustion in a heater  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT is determined to be routing the above process vent through a closed vent system to Old Hot Oil Heater ALC-BA-801 (EQT 0119), to New Hot Oil Heater ALC-BA-802 (EQT 0120), or to SSO Column Heater ALC-H6-404 (EQT 0598).

Process/Pollutant Information

**PROCESS NAME:** Heat Exchangers



**Process** 64.999 (Other SOCOMI Processes)

**Type:**

**Primary**

**Fuel:**

**Throughput:** 0

**Process** Includes the following sources: ALEX Heat Exchanger (ALC-EA-4205, EQT 1241) ALEX Heat Exchanger (ALC-EA-4206, EQT 1242) ALEX Heat Exchanger (ALC-EA-4207, EQT 1243) ALEX Heat Exchanger (ALC-EA-4208, EQT 1244) ALEX Heat Exchanger (ALC-EA-4209, EQT 1245) ALEX Heat Exchanger (ALC-EA-4211, EQT 1246) ALEX Heat Exchanger (ALC-EA-5510, EQT 1247) ALEX Heat Exchanger (ALC-EA-5511, EQT 1248) ALEX Heat Exchanger (ALC-EA-5512, EQT 1249) ALEX Heat Exchanger (ALC-EA-5518, EQT 1250) ALEX Heat Exchanger (ALC-EA-6002, EQT 1251) ALEX Heat Exchanger (ALC-EA-6004, EQT 1252) ALEX Heat Exchanger (ALC-EA-6005, EQT 1253) ALEX Heat Exchanger (ALC-EA-6006, EQT 1254) ALEX Heat Exchanger (ALC-EA-6009, EQT 1255) ALEX Heat Exchanger (ALC-EA-6018, EQT 1256) ALEX Heat Exchanger (ALC-EA-6023, EQT 1257) ALEX Heat Exchanger (ALC-EA-6031, EQT 1258) ALEX Heat Exchanger (ALC-EA-6032, EQT 1259) ALEX Heat Exchanger (ALC-EA-6033, EQT 1260) ALEX Heat Exchanger (ALC-EA-6036, EQT 1261) ALEX Heat Exchanger (ALC-EA-6038, EQT 1262) ALEX Heat Exchanger (ALC-EA-6039, EQT 1263)

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT , OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 63.104

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT is determined to be compliance with the heat exchange system requirements of 40 CFR 63.104 (regardless if it is otherwise applicable). These provisions require Sasol to monitor the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak, repair any leaks that are detected, and confirm that the heat exchange system is no longer leaking following repair activities. This section also prescribes recordkeeping and reporting requirements.

## Facility Information

<b>RBLC ID:</b>	AR-0121 (final)	<b>Date</b>	
		<b>Determination</b>	
<b>Corporate/Company</b>	LSB INDUSTRIES, INC.	<b>Last Updated:</b>	06/17/2016
<b>Name:</b>		<b>Permit Number:</b>	0573-AOP-R16
<b>Facility Name:</b>	EL DORADO CHEMICAL COMPANY	<b>Permit Date:</b>	11/18/2013 (actual)
<b>Facility Contact:</b>	GREG WITHROW 8708631484 GWITHROW@EDC-ARK.COM	<b>FRS Number:</b>	110000746373
<b>Facility Description:</b>	CHEMICAL MANUFACTURING, INCLUDING NITRIC ACID PRODUCTION, SUFLURIC ACID PRODUCTION, AMMONIA PRODUCTION, AND AMMONIA NITRATE PRODUCTION	<b>SIC Code:</b>	2873
<b>Permit Type:</b>	B: Add new process to existing facility	<b>NAICS Code:</b>	325311
<b>Permit URL:</b>	HTTP://WWW.ADEQ.STATE.AR.US/FTP/ROOT/PUB/WEBDATABASES/PERMITSONLINE/AIR/0573-AOP-R16.PDF		
<b>EPA Region:</b>	6	<b>COUNTRY:</b>	USA
<b>Facility County:</b>	UNION		
<b>Facility State:</b>	AR		
<b>Facility ZIP Code:</b>	71730		
<b>Permit Issued By:</b>	ARKANSAS DEPT OF ENVIRONMENTAL QUALITY (Agency Name) MR. THOMAS RHEAUME(Agency Contact) (501) 682-0762 rheume@adeq.state.ar.us		
<b>Other Agency Contact Info:</b>	THOMAS RHEAUME, PERMIT BRANCH MANAGER JOSEPH HURT, ENGINEER		
<b>Permit Notes:</b>			
<b>Affected Boundaries:</b>	<b>Boundary Type:</b> CLASS1	<b>Class 1 Area State:</b> AL	<b>Boundary:</b> Sipsey
			<b>Distance:</b> 100km - 50km
<b>Facility-wide Emissions:</b>	<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>	
	Carbon Monoxide	161.7000 (Tons/Year)	
	Nitrogen Oxides (NOx)	724.7000 (Tons/Year)	
	Particulate Matter (PM)	120.9000 (Tons/Year)	
	Sulfur Oxides (SOx)	403.4000 (Tons/Year)	
	Volatile Organic Compounds (VOC)	184.8000 (Tons/Year)	

## Process/Pollutant Information

**PROCESS NAME:** DM WEATHERLY NITRIC ACID PLANT # 2

**Process Type:** 62.014 (Nitric Acid Plants)

**Primary Fuel:**

**Throughput:** 1265.00 T/D

**Process Notes:** 461,725 TON/YR OF 100% HNO3

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Other

**Other Test Method:**

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0640 LB/TON 30 DAY ROLLING AVERAGE EXCLUDING SSM

**Emission Limit 2:** 17.7600 T/YR ROLLING 12 MONTH TOTAL INCLUDING SSM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS , SIP , OTHER

**Control Method:** (A) SELECTIVE CATALYTIC REDUCTION (SCR)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:** CEMS TO VERIFY COMPLIANCE THIS SOURCE CONTAINS THE FOLLOWING INTERIM LIMITS DURING THE FIRST 12 MONTHS OF OPERATION AS ASSIGNED BY THE ADMINISTRATIVE LAW JUDGE AND APPROVED BY THE ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION: 0.32 LB/TON EXCLUDING SSM (30 DAY ROLLING AVERAGE) 25 PPMV

**POLLUTANT NAME:** Nitrous Oxide (N2O)

**CAS Number:** 10024-97-2

**Test Method:** Other

**Other Test Method:**

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 90.0400 T/YR ROLLING 12 MONTH TOTAL

**Emission Limit 2:** 30.0000 PPMV ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** SIP , OTHER

**Control Method:** (A) TERTIARY CATALYTIC REDUCTION

**Est. % Efficiency:** 98.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:** CEMS TO VERIFY COMPLIANCE THIS SOURCE CONTAINS THE FOLLOWING INTERIM LIMITS DURING THE FIRST 12 MONTHS OF OPERATION AS ASSIGNED BY THE ADMINISTRATIVE LAW JUDGE AND APPROVED BY THE ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION: 228.10 TPY (ROLLING 12 MONTHS) 76 PPMV (ROLLING 12 MONTHS)

**POLLUTANT NAME:** Ammonia (NH3)

**CAS Number:** 7664-41-7

**Test Method:** EPA/OAR Cond. Test Mthd 027

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 2.6400 LB/H ROLLING 3 HOUR AVERAGE

**Emission Limit 2:** 11.5400 T/YR ROLLING 12 MONTH TOTAL

**Standard Emission:** 10.0000 PPMV ROLLING 3 HOUR AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OTHER

**Control Method:** (N)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE THIS SOURCE CONTAINS THE FOLLOWING INTERIM LIMITS DURING THE FIRST 12 MONTHS OF OPERATION AS ASSIGNED BY THE ADMINISTRATIVE LAW JUDGE AND APPROVED BY THE ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION: 5.28 LB/HR (ROLLING 3 HOUR AVERAGE) 22.08 TPY (ROLLING 12 MONTH AVERAGE) 20 PPMV (ROLLING 12 MONTH AVERAGE)

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9

**Pollutant Group(s):**

**Emission Limit 1:** %  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP , OTHER  
**Control Method:** (A) SELECTIVE CATALYTIC REDUCTION (SCR) FOR NOX  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 6371.5000 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 27911.3000 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** AMMONIA PLANT PRIMARY REFORMER  
**Process Type:** 61.012 (Fertilizer Production (except 61.009))

**Primary Fuel:** NATURAL GAS  
**Throughput:** 1400.00 T/D AMMONIA  
**Process Notes:** 824 MMBTU/HR

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9

**Pollutant Group(s):**

**Emission Limit 1:** %

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OTHER

**Control Method:** (P) GOOD AND EFFICIENT COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)

**CAS Number:** 7446-09-5

**Test Method:** EPA/OAR Mthd 6C

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )

**Emission Limit 1:** 0.6100 LB/H ROLLING 3 HOUR AVERAGE

**Emission Limit 2:** 0.4400 T/YR ROLLING 12 MONTH AVERAGE

**Standard Emission:** 0.0007 LB/MMBTU ROLLING 3 HOUR AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** SIP

**Control Method:** (P) GOOD AND EFFICIENT COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.1500 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 5.0500 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0014 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** EPA/OAR Mthd 10  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 15.9900 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 70.0200 T/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:** 0.0194 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Other  
**Other Test Method:**  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0124 LB/MMBTU ROLLING 30 DAY AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP , OTHER  
**Control Method:** (A) SELECTIVE CATALYTIC REDUCTION (SCR)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No

**Pollutant/Compliance Notes:** CEMS TO VERIFY COMPLIANCE THIS LIMIT WAS ASSIGNED BY THE ADMINISTRATIVE LAW JUDGE AND LATER APPROVED BY THE ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION. THE ORIGINAL LIMIT AS PROPOSED BY THE FACILITY WAS 0.0124 LB/MMBTU (ROLLING 3 HOUR AVERAGE).

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** EPA/OAR Mthd 3A  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 117.0000 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**



**Control Method:** (P) GOOD OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Methane  
**CAS Number:** 74-82-8  
**Test Method:** EPA/OAR Mthd 18  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )  
**Emission Limit 1:** 0.0022 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Nitrous Oxide (N2O)  
**CAS Number:** 10024-97-2  
**Test Method:** EPA/OAR Mthd 320  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) GOOD OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE ASTM D6348-03 OR EQUIVALENT METHOD MAY BE USED IN LEIU OF EPA METHOD 320

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 96737.6000 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 423714.2000 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** AMMONIA PLANT CONDENSATE STEAM STRIPPER  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 1400.00 T/D AMMONIA PRODUCTION  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 5.8300 LB/H ROLLING 24 HOUR AVERAGE  
**Emission Limit 2:** 25.5500 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.1000 LB/TON ROLLING 24 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** EPA/OAR Mthd 3A  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 396.6400 LB/H ROLLING 24 HOUR AVERAGE  
**Emission Limit 2:** 6.8000 LB/TON ROLLING 24 HOUR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 396.7000 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 1737.4000 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** AMMONIA PLANT CO2 REGENERATOR  
**Process Type:** 61.012 (Fertilizer Production (except 61.009))  
**Primary Fuel:**  
**Throughput:** 1400.00 T/D AMMONIA PRODUCTION  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 33.6400 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 147.3500 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.1060 LB/TON ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP

**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** EPA/OAR Mthd 10  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 1.1700 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 5.1100 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** EPA/OAR Mthd 3A  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 146262.6000 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 640669.2000 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 2507.5000 LB/TON ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 146262.6000 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 640669.2000 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** AMMONIA PLANT AMMONIA VENT FLARE  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 0.26 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 22  
**Pollutant Group(s):**  
**Emission Limit 1:** %  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.0008 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0034 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0007 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0057 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0250 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0054 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0870 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.3800 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0820 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102



**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 792.0300 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 6.9000 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0980 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 117.0000 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Methane  
**CAS Number:** 74-82-8

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )  
**Emission Limit 1:** 0.0022 LB/MMBTU ROLLING 3 HOUR AVERAGE

**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICE

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)

**CAS Number:** 10024-97-2

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0002 LB/MMBTU ROLLING 3 HOUR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICE

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 719.9000 T/YR ROLLING 12 MONTH AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** AMMONIA PLANT PROCESS SSM FLARE  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 0.05 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** EPA/OAR Mthd 22  
**Pollutant Group(s):**  
**Emission Limit 1:** %  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.0007 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0031 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0007 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0051 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0230 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0054 LB/MMBTU  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 156.1000 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 39.3600 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0820 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0930 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.4100 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0980 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 117.0000 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Methane  
**CAS Number:** 74-82-8  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )  
**Emission Limit 1:** 0.0022 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICE

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)  
**CAS Number:** 10024-97-2  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 5179.8000 T/YR ROLLING 12 MONTH AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** AMMONIA STORAGE FLARE  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 0.05 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** EPA/OAR Mthd 22  
**Pollutant Group(s):**  
**Emission Limit 1:** %  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO2)  
**CAS Number:** 7446-09-5  
**Test Method:** Unspecified



**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )  
**Emission Limit 1:** 0.0001 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0006 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0006 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0011 LB/H ROLLINIG 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0041 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0054 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0170 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0630 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0820 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 10.0200 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 43.8800 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0980 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 117.0000 LB/MMBTU ROLLING 3 HOUR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Methane

**CAS Number:** 74-82-8

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )

**Emission Limit 1:** 0.0022 LB/MMBTU ROLLING 3 HOUR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)

**CAS Number:** 10024-97-2

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 89.9900 T/YR ROLLING 12 MONTH AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** AMMONIA PLANT START-UP HEATER

**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 38.00 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9

**Pollutant Group(s):**

**Emission Limit 1:** %

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** SIP , OTHER

**Control Method:** (P) GOOD COMBUSTION PRACTICE

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO2)

**CAS Number:** 7446-09-5

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SOx) )

**Emission Limit 1:** 0.0300 LB/H ROLLING 3 HOUR AVERAGE

**Emission Limit 2:** 0.0070 T/YR ROLLING 12 MONTH AVERAGE

**Standard Emission:** 0.0007 LB/MMBTU ROLLING 3 HOUR AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** SIP

**Control Method:** (P) GOOD COMBUSTION PRACTICE

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1900 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0480 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0020 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.7600 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.1900 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0100 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.2800 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.5700 T/YR ROLLING 12 MONTH AVERAGE  
**Standard Emission:** 0.0600 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD COMBUSTION PRACTICE  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 117.0000 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD OPERATING PRACTICES  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Methane  
**CAS Number:** 74-82-8  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )  
**Emission Limit 1:** 0.0022 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)  
**CAS Number:** 10024-97-2  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0002 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD OPERATING PRACTICES  
**Est. % Efficiency:**



**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 1115.3100 T/YR ROLLING 12 MONTH AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** START-UP BOILER  
**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 240.00 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** EPA/OAR Mthd 9  
**Pollutant Group(s):**

**Emission Limit 1:** %  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Sulfur Dioxide (SO<sub>2</sub>)  
**CAS Number:** 7446-09-5  
**Test Method:** EPA/OAR Mthd 6C  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Sulfur (SO<sub>x</sub>) )  
**Emission Limit 1:** 0.1800 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0007 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.9600 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0040 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** EPA/OAR Mthd 10  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 8.8800 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0370 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD AND EFFICIENT OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** EPA/OAR Mthd 7E  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 4.3200 LB/H ROLLING 3 HOUR AVERAGE  
**Emission Limit 2:** 0.0180 LB/MMBTU ROLLING 3 HOUR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) LOW NOX BURNERS AND FLUE GAS RECIRCULATION  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** PERIODIC STACK TESTING TO VERIFY COMPLIANCE

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 117.0000 LB/MMBTU ROLLING 3 HOUR AVERAGE

**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Methane  
**CAS Number:** 74-82-8  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )

**Emission Limit 1:** 0.0022 LB/MMBTU ROLLING 3 HOUR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD OPERATING PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)

**CAS Number:** 10024-97-2

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0002 LB/MMBTU ROLLING 3 HOUR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD OPERATING PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 123411.0000 T/YR ROLLING 12 MONTH AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** SIP  
**Control Method:** (P) GOOD OPERATING PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	IN-0179 (final)	<b>Date Determination</b>
		<b>Last Updated:</b> 05/04/2016
<b>Corporate/Company Name:</b>	OHIO VALLEY RESOURCES, LLC	<b>Permit Number:</b> 147-32322-00062
<b>Facility Name:</b>	OHIO VALLEY RESOURCES, LLC	<b>Permit Date:</b> 09/25/2013 (actual)
<b>Facility Contact:</b>	DOUG WILSON 6185990015	<b>FRS Number:</b> 110055148273
<b>Facility Description:</b>	NITROGENOUS FERTILIZER PRODUCTION PLANT	<b>SIC Code:</b> 2873
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>NAICS Code:</b> 325311
<b>Permit URL:</b>	HTTP://PERMITS.AIR.IDEM.IN.GOV/32322F.PDF	
<b>EPA Region:</b>	5	<b>COUNTRY:</b> USA
<b>Facility County:</b>	SPENCER	
<b>Facility State:</b>	IN	
<b>Facility ZIP Code:</b>	47635	
<b>Permit Issued By:</b>	INDIANA DEPT OF ENV MGMT, OFC OF AIR (Agency Name) MR. MATT STUCKEY(Agency Contact) (317) 233-0203 mstuckey@idem.in.gov	
<b>Other Agency Contact Info:</b>	SECTION CHIEF: NATHAN BELL (317) 233-5670 NBELL@IDEM.IN.GOV	
	PERMIT WRITER:	

DAVID MATOUSEK  
(317) 232-8253  
DMATOUSE@IDEM.IN.GOV

**Permit Notes:**

Process/Pollutant Information
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**PROCESS NAME:** FOUR (4) NATURAL GAS-FIRED BOILERS  
**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 218.00 MMBTU/HR, EACH  
**Process Notes:** FUEL INPUT TO ALL FOUR BOILERS SHALL NOT EXCEED 2,802 MMCF/YEAR

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.9000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PROPER DESIGN AND GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) PROPER DESIGN AND GOOD COMBUSTION  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 20.4000 LB/MMCF 24-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (B) ULTRA LOW NOX BURNERS FLUE GAS RECIRCULATION  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )



**Emission Limit 1:** 37.2200 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PROPER DESIGN AND GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 5.5000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PROPER DESIGN AND GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9

**Test Method:** Unspecified

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 59.6100 TONS/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) PROPER DESIGN AND GOOD COMBUSTION; ENERGY EFFICIENT DESIGN: AIR INLET CONTROLS, HEAT RECOVERY, CONDENSATE RECOVERY AND BLOWDOWN HEAT RECOVERY  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** MUST ACHIEVE A THERMAL EFFICIENCY OF 80% BASED ON THE HIGHER HEATING VALUE.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) PROPER DESIGN AND GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** PRIMARY REFORMER

**Process Type:** 61.012 (Fertilizer Production (except 61.009))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 1006.40 MMBTU/H  
**Process Notes:** NOX CEMS

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.9000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 9.0000 PPMVD 30 DAY ROLLING AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) SELECTIVE CATALYTIC REDUCTION (SCR) AND GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NOX CEMS

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 43.4500 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 5.5100 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 59.6100 TONS/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES; PROPER DESIGN: AIR INLET CONTROLS, AND FLUE GAS HEAT RECOVERY.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** MUST ACHIEVE A THERMAL EFFICIENCY OF 90% BASED ON THE HIGHER HEATING VALUE CO2 EMISSIONS SHALL NOT EXCEED 515,246 TONS PER YEAR.

### Process/Pollutant Information

**PROCESS NAME:** CO2 PURIFICATION PROCESS  
**Process Type:** 61.012 (Fertilizer Production (except 61.009))  
**Primary Fuel:**  
**Throughput:** 3570.00 TON CO2 PER DAY  
**Process Notes:** AMMONIA PRODUCTION LIMITED TO 1,022,000 TONS PER YEAR.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0

**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0117 LB/TON OF AMMONIA 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (B) PROCESS CATALYST AND GOOD OPERATIONAL PROCEDURES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0558 LB/TON AMMONIA 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) LOW VOC CATALYST  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 1.2750 TON CO2/TON AMMONIA 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD OPERATIONAL PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS** FRONT END PROCESS FLARE

**NAME:**

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:** NATURAL GAS PILOT

**Throughput:** 0.25 MMBTU/H

**Process Notes:** HEAT INPUT IS FOR NATURAL GAS PILOT ONLY. SSM EMISSIONS ARE CONTROLLED BY THE FLARE AND ARE LIMITED TO 336 HOURS OF VENTING PER YEAR.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.3700 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:** 3240.1600 LB/H, SSM VENTING 3-HR AVERAGE

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**



**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING LIMITED TO 336 HR PER YEAR.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 47.2600 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS FOR PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING LIMITED TO 336 HR PER YEAR.

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 116.8900 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 511.8000 TON/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING LIMITED TO 336 HOURS PER YEAR.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0019 LB/MMBUT 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS FOR PILOT FLARE, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO ADDITIONAL PM EMISSIONS DURING VENTING EVENTS

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS FOR PILOT, AND FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO ADDITIONAL PM10 EMISSIONS DURING VENTING EVENTS

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS FOR PILOT, USE FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0680 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 595.4700 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING HOURS LIMITED TO 336 PER YEAR.

### Process/Pollutant Information

**PROCESS NAME:** AMMONIA CATALYST STARTUP HEATER  
**Process Type:** 12.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 106.30 MMBTU/H  
**Process Notes:** ANNUAL NATURAL GAS USAGE LIMITED TO 20.84 MMCF.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.9000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS COMBUSTION ONLY, PROPER DESIGN AND GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS COMBUSTION ONLY, PROPER DESIGN AND GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 7.6000 LB/MMCF 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS COMBUSTION ONLY, PROPER DESIGN AND GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 183.7000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS COMBUSTION ONLY, PROPER DESIGN AND GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE TYPICALLY CONSIDERED NOT FEASIBLE FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 37.2300 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS COMBUSTION ONLY, PROPER DESIGN AND GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROL TYPICALLY CONSIDERED NOT FEASIBLE FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 5.5000 LB/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS COMBUSTION ONLY, PROPER DESIGN AND GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS TYPICALLY CONSIDERED NOT FEASIBLE ON LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 59.6100 TON/MMCF 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS COMBUSTION ONLY, PROPER DESIGN AND GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

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## Process/Pollutant Information

**PROCESS NAME:** BACK END AMMONIA FLARE

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:** NATURAL GAS

**Throughput:** 0.25 MMBTU/H

**Process Notes:** HEAT INPUT IS FOR PILOT ONLY. SSM EMISSIONS ARE CONTROLLED BY THE FLARE AND ARE LIMITED TO 336 HR/YR.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0019 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NO ADDITIONAL PM IS ANTICIPATED DURING SSM VENTING.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD



**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO ADDITIONAL EMISSIONS FOR SSM EVENTS.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0680 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 624.9400 LB/H, SSM EVENTS 3-HR AVERAGE  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM EVENTS LIMITED TO 336 HRS PER YEAR

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.3700 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 804.7600 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING LIMITED TO 336 HR PER YEAR.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 11.7300 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING LIMITED TO 336 HR PER YEAR.

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 116.8900 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 127.1200 TON/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING LIMITED TO 336 HR PER YEAR.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** AMMONIA STORAGE FLARE

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:** NATURAL GAS

**Throughput:** 0.13 MMBTU/H

**Process Notes:** HEAT INPUT IS FOR PILOT ONLY. SSM EVENTS HAVE SEPARATE LIMITS. SSM VENTING IS LIMITED TO 168 HOURS PER YEAR.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0019 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING LIMITED TO 168 HR PER YEAR.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM EVENTS ARE LIMITED TO 168 HR PER YEAR.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING LIMITED TO 168 HR PER YEAR.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0680 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 125.0000 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING IS LIMITED TO 168 HR PER YEAR.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.3700 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM EMISSIONS LIMITED TO 168 HR PER YEAR.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING LIMITED TO 168 HR PER YEAR.

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 52.0200 LB/H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** TWO (2) NITRIC ACID UNITS  
**Process Type:** 62.014 (Nitric Acid Plants)  
**Primary Fuel:**  
**Throughput:** 630.00 TONS NITRIC ACID/DAY, EACH  
**Process Notes:** COMBINED NITRIC ACID PRODUCTION FROM BOTH PLANTS IS LIMITED TO 459,900 TONS OF 100% NITRIC ACID PER YEAR.

**POLLUTANT NAME:** Nitrous Oxide (N<sub>2</sub>O)  
**CAS Number:** 10024-97-2  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NO<sub>x</sub>) , Particulate Matter (PM) )  
**Emission Limit 1:** 1.0500 LB/TON 100% ACID 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) CATALYTIC DECOMPOSITION  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.5000 LB/TON 100% ACID 30 DAY AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) SELECTIVE CATALYTIC REDUCTION (SCR)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** TWO (2) AMMONIUM NITRATE UNITS  
**Process Type:** 61.012 (Fertilizer Production (except 61.009))  
**Primary Fuel:**  
**Throughput:** 798.00 TON AN PER DAY, EACH  
**Process Notes:** UAN PRODUCTION IS LIMITED TO 1,314,000 TONS PER YEAR.



**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0128 LB/TON OF UAN 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) WET SCRUBBER WITH HIGH EFFICIENCY DEMISTER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0128 LB/TON UAN 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) WET SCRUBBER WITH HIGH EFFICIENCY DEMISTER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0128 LB/TON UAN 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) WET SCRUBBER WITH HIGH EFFICIENCY DEMISTER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 132.3100 LB/TON UAN 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD OPERATIONAL PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

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## Process/Pollutant Information

**PROCESS NAME:** LIQUID UAN LOADOUT  
**Process Type:** 42.010 (Volatile Organic Liquid Marketing (except 42.009))  
**Primary Fuel:**  
**Throughput:** 1314000.00 TONS UAN PER YEAR  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) SUBMERGED FILL AND CLEAN CARGO CARRIER OPERATION

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** UAN PLANT VENT FLARE  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0.19 MMBTU/H  
**Process Notes:** HEAT INPUT IS FOR NATUAL GAS PILOT. SSM EMISSIONS HAVE SEPARATE LIMITS. SSM VENTING LIMITED TO 336 HOURS PER YEAR.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0019 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING IS LIMITED TO 336 HR PER YEAR.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0075 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0680 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 332.0800 LB/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING LIMITED TO 336 HR PER YEAR.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.3700 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0054 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 116.8900 LB/MMBTU 3-HR AVERAGE  
**Emission Limit 2:** 5.5900 TON/H, SSM VENTING 3-HR AVERAGE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** SSM VENTING LIMITED TO 336 HR PER YEAR.

Process/Pollutant Information
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**PROCESS NAME:** TWO (2) UAN STORAGE TANKS  
**Process Type:** 42.009 (Volatile Organic Liquid Storage)  
**Primary Fuel:**  
**Throughput:** 30000.00 TONS UAN, EACH  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) WHITE TANK SHELLS, USE SUBMERGED FILL.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** THREE (3) UAN DAY TANKS

**Process Type:** 42.009 (Volatile Organic Liquid Storage)

**Primary Fuel:**

**Throughput:** 750.00 TONS UAN, EACH

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) WHITE TANK SHELLS, SUBMERGED FILL

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**



## Process/Pollutant Information

**PROCESS NAME:** ONE (1) DIESEL EXHAUST FLUID (DEF) TANK  
**Process Type:** 42.009 (Volatile Organic Liquid Storage)  
**Primary Fuel:**  
**Throughput:** 100.00 TONS UAN  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) WHITE TANK SHELL, SUBMERGED FILL

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** ONE (1) DIESEL EXHAUST FLUID (DEF) TRUCK LOADOUT  
**Process Type:** 42.010 (Volatile Organic Liquid Marketing (except 42.009))  
**Primary Fuel:**  
**Throughput:** 1314000.00 TONS UAN PER YEAR  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) USE OF SUBMERGED FILL  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** TWO (2) NITRIC ACID STORAGE TANKS  
**Process Type:** 62.014 (Nitric Acid Plants)  
**Primary Fuel:**  
**Throughput:** 806842.00 TONS OF 57% ACID PER YEAR.  
**Process Notes:** PERMIT LIMITS NITRIC ACID THROUGHPUT TO 806,842 TONS OF 57% ACID PER YEAR.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0015 LB NOX/TON 57% ACID 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) SUBMERGED FILL  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** DIESEL-FIRED EMERGENCY GENERATOR  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** NO. 2 FUEL OIL  
**Throughput:** 4690.00 B-HP  
**Process Notes:** ANNUAL HOURS OF OPERATION NOT TO EXCEED 200 HOURS.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 LB/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102

**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 4.4600 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.6100 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.3100 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 526.3900 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

Process/Pollutant Information

**PROCESS NAME:** DIESEL-FIRED EMERGENCY WATER PUMP  
**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** NO. 2 FUEL OIL  
**Throughput:** 481.00 BHP  
**Process Notes:** ANNUAL OPERATION LIMITED TO 200 HR,

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1500 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.8600 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES



**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.6000 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1410 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 527.4000 G/B-HP-H 3-HR AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** ADD ON CONTROLS ARE NOT NORMALLY REQUIRED FOR LIMITED USE EMISSION UNITS.

### Process/Pollutant Information

**PROCESS NAME:** TWO (2) COOLING TOWERS  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 179720.00 GPM, COMBINED  
**Process Notes:** ONE UNIT IS EIGHT CELL, THE OTHER IS SIX CELL.

**POLLUTANT NAME:** Particulate matter, filterable (FPM)  
**CAS Number:** PM  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % DRIFT CONTINUOUS  
**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS

**Est. % Efficiency:**

**Cost Effectiveness:** 4592 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** TOWERS USE ONSITE WELL WATER. IT IS HAS HIGHER THAN NORMAL TDS. COST EFFECTIVENESS BASED ON REDUCTION OF TDS FROM 2,000 MG/L TO 1,500 MG/L. ADVERSE ENVIRONMENTAL IMPACTS WERE CONSIDERED.

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0050 % DRIFT CONTINUOUS

**Emission Limit 2:** 2000.0000 MG/L TDS CONTINUOUS

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS

**Est. % Efficiency:**

**Cost Effectiveness:** 4592 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** TOWERS USE ONSITE WELL WATER. IT IS HAS HIGHER THAN NORMAL TDS. COST EFFECTIVENESS BASED ON REDUCTION OF TDS FROM 2,000 MG/L TO 1,500 MG/L. ADVERSE ENVIRONMENTAL IMPACTS WERE CONSIDERED.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0005 % DRIFT CONTINUOUS

**Emission Limit 2:** 2000.0000 MG/L CONTINUOUS

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) HIGH EFFICIENCY DRIFT ELIMINATORS

**Est. % Efficiency:**

**Cost Effectiveness:** 4592 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** TOWERS USE ONSITE WELL WATER. IT IS HAS HIGHER THAN NORMAL TDS. COST EFFECTIVENESS BASED ON REDUCTION OF TDS FROM 2,000 MG/L TO 1,500 MG/L. ADVERSE ENVIRONMENTAL IMPACTS WERE CONSIDERED.

## Process/Pollutant Information

**PROCESS NAME:** PAVED ROADWAYS AND PARKING LOTS WITH PUBLIC ACCESS

**Process Type:** 99.140 (Paved Roads)

**Primary Fuel:**

**Throughput:** 17160.00 VEHICLE MILES TRAVELED

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, filterable (FPM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 90.0000 % CONTROL CONTINUOUS

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PAVE ALL PLANT HAUL ROADS, DAILY SWEEPING AND WET SUPPRESSION, PROMPT CLEANUP OF ANY SPILLED MATERIAL

**Est. % Efficiency:** 90.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 90.0000 % CONTROL CONTINUOUS

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PAVE ALL PLANT HAUL ROADS, DAILY SWEEPING AND WET SUPPRESSION, PROMPT CLEANUP OF ANY SPILLED MATERIAL

**Est. % Efficiency:** 90.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 90.0000 % CONTROL CONTINUOUS

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) PAVE ALL PLANT HAUL ROADS, DAILY SWEEPING AND WET SUPPRESSION, PROMPT CLEANUP OF ANY SPILLED MATERIAL

**Est. % Efficiency:** 90.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** FUGITIVE VOC EMISSIONS

**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) USE OF A LEAK DETECTION AND REPAIR (LDAR) PROGRAM USING 40 CFR 60, SUBPART VVA PROCEDURES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	LA-0272 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	DYNO NOBEL LOUISIANA AMMONIA, LLC	<b>Last Updated:</b> 05/04/2016
<b>Facility Name:</b>	AMMONIA PRODUCTION FACILITY	<b>Permit Number:</b> PSD-LA-768
<b>Facility Contact:</b>	BARBARA CABOT (307) 771-5644 BARBARA.CABOT@AM.DYNONOBEL.COM	<b>Permit Date:</b> 03/27/2013 (actual)
<b>Facility Description:</b>	2780 TON PER DAY AMMONIA PRODUCTION FACILITY	<b>FRS Number:</b> Unknown
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>SIC Code:</b> 2873
<b>Permit URL:</b>		<b>NAICS Code:</b> 325311
<b>EPA Region:</b>	6	<b>COUNTRY:</b> USA
<b>Facility County:</b>	JEFFERSON	
<b>Facility State:</b>	LA	
<b>Facility ZIP Code:</b>	70094	
<b>Permit Issued By:</b>	LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name) MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV	
<b>Other Agency Contact Info:</b>	PERMIT WRITER: DASHENG "VICTOR" CHU, (225) 219-3417	
<b>Permit Notes:</b>	COMPLETE APPLICATION DATE = DATE OF ADMINISTRATIVE COMPLETENESS PSD-LA-768(M-1), ISSUED OCTOBER 14, 2013, CORRECTED THE CAPACITY OF THE AMDEA TANK (2009-F), REVISED THE EMISSION LIMITATIONS FOR THE AMMONIA STORAGE FLARE (2202-B), AND ADDED STARTUP EMISSIONS ATTRIBUTED TO THIS FLARE TO THE PERMIT. THESE CHANGES ARE REFLECTED IN THIS RBLC ENTRY.	

## Process/Pollutant Information

**PROCESS NAME:** PRIMARY REFORMER FURNACE (101-B)

**Process Type:** 11.390 (Other Gaseous Fuel & Gaseous Fuel Mixtures)

**Primary Fuel:** NATURAL GAS

**Throughput:** 956.20 MM BTU/HR

**Process Notes:** NATURAL GAS: 613.5 MM BTU/HR PURIFIER WASTE GAS: 326.1 MM BTU/HR HIGH PRESSURE FLASH GAS: 10.4 MM BTU/HR LP SCRUBBER OVERHEAD: 6.2 MM BTU/HR

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 8.5500 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 31.2100 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 8.5500 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 31.2100 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.

**Est. % Efficiency:**



**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 16.1500 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 58.9600 T/YR ANNUAL MAXIMUM  
**Standard Emission:** 0.0140 LB/MM BTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (A) SELECTIVE CATALYTIC REDUCTION (SCR) AND LOW NOX BURNERS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 49.1600 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 179.4300 T/YR ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 6.1900 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 22.5800 T/YR ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 490025.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Energy efficiency measures: process integration and improved combustion measures (i.e., combustion tuning, optimization using parametric testing, installation of advanced digital instrumentation).

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** AMMONIA START-UP HEATER (102-B)  
**Process Type:** 13.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 59.40 MM BTU/HR  
**Process Notes:** HEATER IS PERMITTED TO OPERATE 500 HOURS PER YEAR.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.5300 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 0.1100 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** HEATER IS PERMITTED TO OPERATE 500 HOURS PER YEAR.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5300 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.1100 T/YR ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** HEATER IS PERMITTED TO OPERATE 500 HOURS PER YEAR.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 14.6500 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 3.0500 T/YR ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** HEATER IS PERMITTED TO OPERATE 500 HOURS PER YEAR.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 2.9700 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.6200 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** HEATER IS PERMITTED TO OPERATE 500 HOURS PER YEAR.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.3800 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.0800 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** HEATER IS PERMITTED TO OPERATE 500 HOURS PER YEAR.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 1738.0000 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Energy efficiency measures: use of economizers and boiler insulation; improved combustion measures (i.e., tuning, optimization, and instrumentation); and minimization of air infiltration.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** HEATER IS PERMITTED TO OPERATE 500 HOURS PER YEAR.

### Process/Pollutant Information

**PROCESS NAME:** CO2 STRIPPER VENT (102-E)

**Process Type:** 62.999 (Other Inorganic Chemical Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 115.83 TONS/HR

**Process Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 1.4900 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 6.5400 T/YR ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) MAXIMIZATION OF THE SHIFT CONVERSION EFFICIENCY AND GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 21.7800 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 95.3800 T/YR ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 1280000.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) IMPROVED SOLVENTS TO MINIMIZE ENERGY USED TO CIRCULATE AND REGENERATE SOLVENT; ENERGY EFFICIENCY MEASURES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** COOLING TOWER (2101-U)  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 93467.00 GAL/MIN  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3400 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 1.2300 T/YR ANNUAL MAXIMUM  
**Standard Emission:**



**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) HIGH EFFICIENCY DRIFT ELIMINATORS TO CONTROL DRIFT TO NO MORE THAN 0.0005%.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5600 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 2.0500 T/YR ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) HIGH EFFICIENCY DRIFT ELIMINATORS TO CONTROL DRIFT TO NO MORE THAN 0.0005%.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** COMMISSIONING BOILERS 1 & 2 (CB-1 & CB-2)  
**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 217.50 MM BTU/HR

**Process Notes:** COMMISSIONING BOILERS ARE PERMITTED TO OPERATE FOR 4400 HOURS EACH. Boilers meet the definition of "temporary boiler" in 40 CFR 60.41b.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.9400 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 3.5700 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** COMMISSIONING BOILERS ARE PERMITTED TO OPERATE FOR 4400 HOURS EACH. Boilers meet the definition of "temporary boiler" in 40 CFR 60.41b.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.9400 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 3.5700 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** COMMISSIONING BOILERS ARE PERMITTED TO OPERATE FOR 4400 HOURS EACH. Boilers meet the definition of "temporary boiler" in 40 CFR 60.41b.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 11.9200 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 21.8600 T/YR ANNUAL MAXIMUM  
**Standard Emission:** 0.0500 LB/MM BTU ANNUAL AVERAGE

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (B) FLUE GAS RECIRCULATION, LOW NOX BURNERS, AND GOOD COMBUSTION PRACTICES (I.E., PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE).

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** COMMISSIONING BOILERS ARE PERMITTED TO OPERATE FOR 4400 HOURS EACH. Boilers meet the definition of "temporary boiler" in 40 CFR 60.41b.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 10.8700 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 19.9300 T/YR ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) GOOD COMBUSTION PRACTICES: PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** COMMISSIONING BOILERS ARE PERMITTED TO OPERATE FOR 4400 HOURS EACH. Boilers meet the definition of "temporary boiler" in 40 CFR 60.41b.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 1.4100 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 2.5800 T/YR ANNUAL MAXIMUM  
**Standard Emission:** 0.0054 LB/MM BTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (B) FLUE GAS RECIRCULATION AND GOOD COMBUSTION PRACTICES (I.E., PROPER DESIGN OF BURNER AND FIREBOX COMPONENTS; MAINTAINING THE PROPER AIR-TO-FUEL RATIO, RESIDENCE TIME, AND COMBUSTION ZONE TEMPERATURE).  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** COMMISSIONING BOILERS ARE PERMITTED TO OPERATE FOR 4400 HOURS EACH. Boilers meet the definition of "temporary boiler" in 40 CFR 60.41b.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 55986.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) Energy efficiency measures: use of economizers and boiler insulation; improved combustion measures (i.e., tuning, optimization, and instrumentation); and minimization of air infiltration.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** COMMISSIONING BOILERS ARE PERMITTED TO OPERATE FOR 4400 HOURS EACH. Boilers meet the definition of "temporary boiler" in 40 CFR 60.41b.

Process/Pollutant Information
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**PROCESS NAME:** EMERGENCY DIESEL GENERATOR (2205-B)  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** DIESEL  
**Throughput:** 1200.00 HP  
**Process Notes:** OPERATING TIME OF GENERATOR IS LIMITED TO 500 HR/YR.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:** 0.2000 G/KW-HR  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT , NSPS  
**Control Method:** (P) Compliance with 40 CFR 60 Subpart IIII; good combustion practices.

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** OPERATING TIME OF GENERATOR IS LIMITED TO 500 HR/YR.

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:** 0.2000 G/KW-HR

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 60 Subpart III; good combustion practices.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** OPERATING TIME OF GENERATOR IS LIMITED TO 500 HR/YR.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:** 6.4000 G/KW-HR NOX + NMHC

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 60 Subpart III; good combustion practices.

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** OPERATING TIME OF GENERATOR IS LIMITED TO 500 HR/YR. NOTE THAT THE 6.4 G/KW-HR LIMIT APPLIES TO NOX + NMHC CONSISTENT WITH 40 CFR 60 SUBPART III.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:** 3.5000 G/KW-HR  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , OPERATING PERMIT  
**Control Method:** (P) Compliance with 40 CFR 60 Subpart III; good combustion practices.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** OPERATING TIME OF GENERATOR IS LIMITED TO 500 HR/YR.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:** 6.4000 G/KW-HR NOX + NMHC  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) Compliance with 40 CFR 60 Subpart IIII; good combustion practices.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** OPERATING TIME OF GENERATOR IS LIMITED TO 500 HR/YR. NOTE THAT THE 6.4 G/KW-HR LIMIT APPLIES TO NOX + NMHC CONSISTENT WITH 40 CFR 60 SUBPART IIII.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) ENERGY EFFICIENCY MEASURES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** OPERATING TIME OF GENERATOR IS LIMITED TO 500 HR/YR. THE PSD PERMIT DOES NOT ESTABLISH MASS EMISSION LIMITS FOR CO2E EMISSIONS.

### Process/Pollutant Information

**PROCESS NAME:** AMDEA STORAGE TANK (2009-F)  
**Process Type:** 42.009 (Volatile Organic Liquid Storage)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** 395,000 GALLONS



**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** THE PSD PERMIT DOES NOT ESTABLISH MASS EMISSION LIMITS FOR THE AMDEA STORAGE TANK. TANK EMITS ONLY 0.003 TPY VOC.

### Process/Pollutant Information

**PROCESS NAME:** FUGITIVE EMISSIONS (FUG)  
**Process Type:** 62.999 (Other Inorganic Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** THE PSD PERMIT DOES NOT ESTABLISH MASS EMISSION LIMITS FOR FUGITIVE EMISSIONS. NO LDAR PROGRAM PRESCRIBED.

Process/Pollutant Information
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**PROCESS NAME:** AMMONIA STORAGE FLARE (2202-B)  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** NATURAL GAS (PILOT): 0.25 MM BTU/HR VENT GAS: 14.94 MM BTU/HR

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0010 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.0050 TPY ANNUAL MAXIMUM

**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** STARTUP PM10 LIMITS ATTRIBUTED TO THIS FLARE (2202-B SU, EQT 0014): 0.029 LB/HR & 0.04 TPY.

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0010 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.0050 T/YR ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** STARTUP PM2.5 LIMITS ATTRIBUTED TO THIS FLARE (2202-B SU, EQT 0014): 0.029 LB/HR & 0.04 TPY.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0400 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.1300 T/YR ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** STARTUP NOX LIMITS ATTRIBUTED TO THIS FLARE (2202-B SU, EQT 0014): 30.99 LB/HR & 9.75 TPY.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.2000 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 0.7100 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** STARTUP CO LIMITS ATTRIBUTED TO THIS FLARE (2202-B SU, EQT 0014): 15.67 LB/HR & 2.19 TPY.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0030 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 0.0100 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2e</sub>)

**CAS Number:** CO<sub>2e</sub>

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 290.0000 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) ENERGY EFFICIENCY MEASURES (I.E., MINIMIZE THE AMOUNT OF GAS ROUTED TO THE FLARE).

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** STARTUP CO<sub>2E</sub> LIMIT ATTRIBUTED TO THIS FLARE (2202-B SU, EQT 0014): 156 TPY.

Process/Pollutant Information

**PROCESS NAME:** FRONT END PROCESS FLARE (2203-B)  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** NATURAL GAS (PILOT): 1.829 MM BTU/HR VENT GAS: 6782.433 MM BTU/HR

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0050 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 0.0200 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0050 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 0.0200 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 0.5400 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.8100 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 2.9600 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**CAS Number:** CO<sub>2</sub>e

**Test Method:** Unspecified

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 1202.0000 TPY ANNUAL MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) ENERGY EFFICIENCY MEASURES (I.E., MINIMIZE THE AMOUNT OF GAS ROUTED TO THE FLARE).

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)



**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0100 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.0400 T/YR ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

### Process/Pollutant Information

**PROCESS NAME:** BACK END PROCESS FLARE (2204-B)  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** NATURAL GAS (PILOT): 1.829 MM BTU/HR VENT GAS: 8981.014 MM BTU/HR

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.0200 T/YR ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

**POLLUTANT NAME:** Particulate matter, total < 2.5 µ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.0200 T/YR ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.1500 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 0.5400 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.8100 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 2.9600 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0100 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.0400 T/YR ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO<sub>2</sub>e)  
**CAS Number:** CO<sub>2</sub>e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 1202.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) ENERGY EFFICIENCY MEASURES (I.E., MINIMIZE THE AMOUNT OF GAS ROUTED TO THE FLARE).

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** Mass limits in PSD permit exclude emissions associated with startup.

**Process/Pollutant Information**

**PROCESS NAME:** RAIL LOADING FLARE (2205-B)  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** 0.25 MM BTU/HR

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0010 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.0030 T/YR ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0010 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.0030 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0300 LB/H HOURLY MAXIMUM

**Emission Limit 2:** 0.0800 T/YR ANNUAL MAXIMUM

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.1100 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.4000 T/YR ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0010 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.0100 T/YR ANNUAL MAXIMUM  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** OPERATING PERMIT

**Control Method:** (P) COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 3990.0000 TPY ANNUAL MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** OPERATING PERMIT  
**Control Method:** (P) ENERGY EFFICIENCY MEASURES (I.E., MINIMIZE THE AMOUNT OF GAS ROUTED TO THE FLARE).

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	IA-0105 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	IOWA FERTILIZER COMPANY	<b>Last Updated:</b> 08/13/2013
<b>Facility Name:</b>	IOWA FERTILIZER COMPANY	<b>Permit Number:</b> 12-219
<b>Facility Contact:</b>	DAVE PEARSON (319) 246-2308 DAVE.PEARSON@IOWAFERTILIZERS.COM	<b>Permit Date:</b> 10/26/2012 (actual)
<b>Facility Description:</b>	NITROGENEOUS FERTILIZER MANUFACTURING	<b>FRS Number:</b> 110054890392
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>SIC Code:</b> 2873
		<b>NAICS Code:</b> 325311



**Permit URL:** https://aqbweb.iowadnr.gov/airpermit/eepsdpermit.jsp ,https://aqbweb.iowadnr.gov/airpermit/eepsdpermit.jsp ,https://aqbweb.iowadnr.gov/airpermit/eepsdpermit.jsp ,https://aqbweb.iowadnr.gov/airpermit/eepsdpermit.jsp ,https://aqbweb.iowadnr.gov/airpermit/eepsdpermit.jsp ,https://aqbweb.iowadnr.gov/airpermit/eepsdpermit.jsp ,https://aqbweb.iowadnr.gov/airpermit/eepsdpermit.jsp

**EPA Region:** 7 **COUNTRY:** USA

**Facility County:** LEE

**Facility State:** IA

**Facility ZIP Code:** 52658

**Permit Issued By:** IOWA DEPARTMENT OF NATURAL RESOURCES AIR QUALITY (Agency Name)  
MR. GARY SMITH(Agency Contact) (515) 725-9563 GARY.SMITH@DNR.IOWA.GOV

**Other Agency Contact Info:** CHRISTOPHER A. ROLING, PE  
ENVIRONMENTAL ENGINEER SENIOR  
(515) 725-9557  
CHRIS.ROLING@DNR.IOWA.GOV

**Permit Notes:** THE PROJECT WAS AMENDED ON 3/13/14 DUE TO SOME DESIGN CHANGES WHICH INCLUDED ADDITIONAL EMISSION UNITS/POINTS. THE NEW PROJECT IS UNDER PROJECT NUMBER/PERMIT NUMBER 13-355

<b>Facility-wide Emissions:</b>	<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>
	Carbon Monoxide	111.0000 (Tons/Year)
	Nitrogen Oxides (NOx)	95.7000 (Tons/Year)
	Particulate Matter (PM)	84.6000 (Tons/Year)
	Sulfur Oxides (SOx)	3.3000 (Tons/Year)
	Volatile Organic Compounds (VOC)	59.7000 (Tons/Year)

<b>Process/Pollutant Information</b>
--------------------------------------

**PROCESS NAME:** Primary Reformer

**Process Type:** 61.012 (Fertilizer Production (except 61.009))

**Primary Fuel:** natural gas

**Throughput:** 1.13 million cubic feet/h

**Process Notes:**

<b>POLLUTANT NAME:</b>	Particulate matter, total (TPM)
<b>CAS Number:</b>	PM
<b>Test Method:</b>	EPA/OAR Mthd 5 and 202
<b>Pollutant Group(s):</b>	( Particulate Matter (PM) )
<b>Emission Limit 1:</b>	0.0024 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS
<b>Emission Limit 2:</b>	11.9000 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** EPA/OAR Mthd 201 and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0024 LB/MMTU AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:** 11.9000 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)

**CAS Number:** PM

**Test Method:** EPA/OAR OTM 27 and Mthd 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0024 LB/MMBTU AVERAGE OF 3 TEST RUNS

**Emission Limit 2:** 11.9000 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9

**Pollutant Group(s):**

**Emission Limit 1:** %

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good operation practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** EPA/OAR Mthd 7E

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 9.0000 PPMV 30 DAY ROLLING AVERAGE

**Emission Limit 2:** 56.0000 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Selective Catalytic Reduction (SCR)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** EPA/OAR Mthd 25A

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0014 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:** 6.9500 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** EPA/OAR Mthd 10

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0194 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:** 96.3000 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9

**Test Method:** EPA/OAR Mthd 3A

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 117.0000 LB/MMBTU ROLLING 30 DAY AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Methane

**CAS Number:** 74-82-8

**Test Method:** EPA/OAR Mthd 18

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )

**Emission Limit 1:** 0.0023 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)

**CAS Number:** 10024-97-2

**Test Method:** EPA/OAR Mthd 320

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0006 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Other

**Other Test Method:** recordkeeping

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 596905.0000 TONS/YR ROLLING 12 MONTH TOTAL

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
--------------------------------------

**PROCESS NAME:** CO2 Regenerator

**Process Type:** 61.012 (Fertilizer Production (except 61.009))

**Primary Fuel:**

**Throughput:** 3012.00 metric tons/day

**Process Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** EPA/OAR Mthd 25A

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.1060 LB/TON OF AMMONIA AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:** 51.2000 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good operational practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** EPA/OAR Mthd 10

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0200 LB/TON OF AMMONIA AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:** 9.6500 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good operational practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9

**Test Method:** EPA/OAR Mthd 3A

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 1.2600 TONS/TON OF AMMONIA ROLLING 30 DAY AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good operational practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton



**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Other  
**Other Test Method:** recordkeeping  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 1211847.0000 TONS/YR ROLLING 12 MONTH TOTAL  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good operational practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Urea Ammonia Nitrate (UAN) Mixing Tank  
**Process Type:** 61.012 (Fertilizer Production (except 61.009))  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** The maximum capacity of the tank is 5,400 metric tons and it has an Acid Scrubber to control ammonia.

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** EPA/OAR Mthd 3A  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 1.1000 LB/H AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good operational practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)

**CAS Number:** CO2e

**Test Method:** Other

**Other Test Method:** recordkeeping

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )

**Emission Limit 1:** 4.9200 TONS/YR ROLLING 12 MONTH TOTAL

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good operational practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** Urea Synthesis

**Process Type:** 61.012 (Fertilizer Production (except 61.009))

**Primary Fuel:**

**Throughput:** 2500.00 metric tons/day

**Process Notes:** There is an Acid Scrubber for ammonia control

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** EPA/OAR Mthd 3A  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 165.4000 LB/H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good operational practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Other  
**Other Test Method:** recordkeeping  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 724.5000 TONS/YR ROLLING 12 MONTH TOTAL  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good operational practices  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** Nitric Acid Plant  
**Process Type:** 62.014 (Nitric Acid Plants)  
**Primary Fuel:**  
**Throughput:** 1905.00 metric tons/day  
**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** EPA/OAR Mthd 7E  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 5.0000 PPMV ROLLING 30 DAY AVERAGE  
**Emission Limit 2:** 30.0000 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) De-NOx system

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)  
**CAS Number:** 10024-97-2  
**Test Method:** EPA/OAR Mthd 320  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 30.0000 PPMV AVERAGE OF 3 TEST RUNS  
**Emission Limit 2:** 98.0000 % REDUCTION AVERAGE OF 3 TEST RUNS  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) De-N2O system  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Methane  
**CAS Number:** 74-82-8  
**Test Method:** EPA/OAR Mthd 18  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )  
**Emission Limit 1:** 40.0000 PPMV AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good operational practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Other  
**Other Test Method:** recordkeeping

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 29543.0000 TONS/YR ROLLING 12 MONTH TOTAL  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) De-N2O system  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Nitric Acid Storage Tank  
**Process Type:** 62.014 (Nitric Acid Plants)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** The maximum storage capacity of the tank is 1,935,773 gallons

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** EPA/OAR Mthd 7E  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.7200 TONS/YR ROLLING 12 MONTH TOTAL  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Acid/Water Vent Lock  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** Auxiliary Boiler  
**Process Type:** 11.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** natural gas  
**Throughput:** 472.40 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 5 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0024 LB/MMBTU AVERAGE OF 3 TEST RUNS  
**Emission Limit 2:** 1.0600 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** EPA/OAR OTM 27 and Mthd 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0024 LB/MMBTU AVERAGE OF 3 TEST RUNS  
**Emission Limit 2:** 1.0600 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0024 LB/MMBTU AVERAGE OF 3 TEST RUNS  
**Emission Limit 2:** 1.0600 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** EPA/OAR Mthd 9  
**Pollutant Group(s):**



**Emission Limit 1:** % OPACITY

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** EPA/OAR Mthd 7E

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0125 LB/MMBTU ROLLING 30 DAY AVERAGE

**Emission Limit 2:** 5.5200 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) Low NOx Burners (LNB) and Flue Gas Recirculation (FGR)

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** EPA/OAR Mthd 25A

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.0014 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.6200 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** EPA/OAR Mthd 10

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0013 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:** 0.5700 TON/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9

**Test Method:** EPA/OAR Mthd 3A

**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )

**Emission Limit 1:** 117.0000 LB/MMBTU ROLLING 30 DAY AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Methane

**CAS Number:** 74-82-8

**Test Method:** EPA/OAR Mthd 18

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )

**Emission Limit 1:** 0.0023 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)

**CAS Number:** 10024-97-2

**Test Method:** EPA/OAR Mthd 320

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0006 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Other  
**Other Test Method:** recordkeeping  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 51748.0000 TONS/YR ROLLING 12 MONTH TOTAL  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** Ammonia Flare

**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** natural gas  
**Throughput:** 0.40 MMBTU/H  
**Process Notes:** There are four (4) natural gas pilots

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** EPA/OAR Mthd 5 and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) work practice/good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** There is no numeric emission limit in the permit.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)

**CAS Number:** PM

**Test Method:** EPA/OAR Mthd 201 and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) work practice/good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There is no numeric emission limit in the permit.

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM

**Test Method:** EPA/OAR OTM 27 and 28

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:**

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) work practice/good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** There is no numeric emission limit in the permit.

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 22

**Pollutant Group(s):**

**Emission Limit 1:** %

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) work practice/good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)  
**CAS Number:** 10024-97-2  
**Test Method:** EPA/OAR Mthd 320  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) work practice/good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There is no numeric emission limit in the permit.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** EPA/OAR Mthd 7E  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) work practice/good combustion practices  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There is no numeric emission limit in the permit.

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Other  
**Other Test Method:** recordkeeping  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) work practice/good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There is no numeric emission limit in the permit.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) work practice/good combustion practices



**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There is no numeric emission limit in the permit.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** EPA/OAR Mthd 10  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) work practice/good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There is no numeric emission limit in the permit.

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** EPA/OAR Mthd 3A  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) work practice/good combustion practices

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There is no numeric emission limit in the permit.

**POLLUTANT NAME:** Methane  
**CAS Number:** 74-82-8  
**Test Method:** EPA/OAR Mthd 18  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) work practice/good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There is no numeric emission limit in the permit.

### Process/Pollutant Information

**PROCESS NAME:** Emergency Generator  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** diesel fuel  
**Throughput:** 142.00 GAL/H  
**Process Notes:** rated @ 2,000 KW

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 5 and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2000 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.2200 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2000 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.2200 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** EPA/OAR OTM 27 and 28

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2000 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.2200 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** EPA/OAR Mthd 9  
**Pollutant Group(s):**  
**Emission Limit 1:** 5.0000 % OPACITY 6 MINUTE AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** 20% opacity is allowed during periods of startup, shutdown, malfunction (SSM)

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** EPA/OAR Mthd 7E

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 6.0000 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 6.6100 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** EPA/OAR Mthd 25A

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.4000 G/KW-H AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:** 0.4400 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** EPA/OAR Mthd 10

**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 3.5000 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 3.8600 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Other  
**Other Test Method:** recordkeeping  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 788.5000 TONS/YR ROLLING 12 MONTH TOTAL  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9

**Test Method:** EPA/OAR Mthd 3A  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 1.5500 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Methane  
**CAS Number:** 74-82-8  
**Test Method:** EPA/OAR Mthd 18  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )  
**Emission Limit 1:** 0.0001 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** Fire Pump  
**Process Type:** 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** diesel fuel  
**Throughput:** 14.00 GAL/H  
**Process Notes:** rated @ 235 KW

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2000 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.0300 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 5 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2000 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.0300 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices



**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** EPA/OAR OTM 27 and 28  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2000 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.0300 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** EPA/OAR Mthd 9  
**Pollutant Group(s):**  
**Emission Limit 1:** 5.0000 % 6 MINUTE AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** standard is 20% during periods of startup, shutdown, and malfunction (SSM)

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** EPA/OAR Mthd 7E  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 3.7500 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.4900 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.2500 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.0300 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** EPA/OAR Mthd 10  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 3.5000 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.4500 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide  
**CAS Number:** 124-38-9  
**Test Method:** EPA/OAR Mthd 3A  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 1.5500 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Methane  
**CAS Number:** 74-82-8  
**Test Method:** EPA/OAR Mthd 18  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )  
**Emission Limit 1:** 0.0001 G/KW-H AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Other  
**Other Test Method:** recordkeeping  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 91.0000 TONS/YR ROLLING 12 MONTH TOTAL  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Startup Heater  
**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** Natural gas  
**Throughput:** 110.12 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0024 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.0100 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM

**Test Method:** EPA/OAR Mthd 5 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0024 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.0100 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** EPA/OAR OTM 27 and 28  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0024 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.0100 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9  
**Pollutant Group(s):**  
**Emission Limit 1:** % OPACITY  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.0014 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.0100 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102

**Test Method:** EPA/OAR Mthd 7E  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.1190 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 0.6300 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** EPA/OAR Mthd 10

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 0.0194 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:** 0.1000 TONS/YR ROLLING 12 MONTH TOTAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) good combustion practices

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide

**CAS Number:** 124-38-9



**Test Method:** EPA/OAR Mthd 3A  
**Pollutant Group(s):** ( Acid Gasses/Mist , Greenhouse Gasses (GHG) , InOrganic Compounds )  
**Emission Limit 1:** 117.0000 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Methane

**CAS Number:** 74-82-8

**Test Method:** EPA/OAR Mthd 18

**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , Organic Compounds (all) , Organic Non-HAP Compounds )

**Emission Limit 1:** 0.0023 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrous Oxide (N2O)

**CAS Number:** 10024-97-2

**Test Method:** EPA/OAR Mthd 320  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) , InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0006 LB/MMBTU AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Carbon Dioxide Equivalent (CO2e)  
**CAS Number:** CO2e  
**Test Method:** Other  
**Other Test Method:** recordkeeping  
**Pollutant Group(s):** ( Greenhouse Gasses (GHG) )  
**Emission Limit 1:** 638.0000 TONS/YR ROLLING 12 MONTH TOTAL  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

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**PROCESS NAME:** Urea Granulator  
**Process Type:** 61.012 (Fertilizer Production (except 61.009))  
**Primary Fuel:**  
**Throughput:** 1500.00 metric tons/day  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 5 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1000 KG/METRIC TON AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 60.4000 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Wet Scrubber  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1000 KG/METRIC TON AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 60.4000 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (A) Wet Scrubber  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)  
**CAS Number:** PM  
**Test Method:** EPA/OAR OTM 27 and 28  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0250 KG/METRIC TON AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:** 15.1000 TONS/YR ROLLING 12 MONTH TOTAL  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Wet Scrubber  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** EPA/OAR Mthd 9  
**Pollutant Group(s):**  
**Emission Limit 1:** % OPACITY  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (A) wet scrubber  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Process/Pollutant Information

**PROCESS NAME:** Cooling Tower

**Process Type:**

61.999 (Other Agricultural Chemical Manufacturing Sources)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** There are 2 cooling towers. One has 6 cells with a total flowrate of 74,040 gal/min and the other has 9 cells with a total flowrate of 111,060 gal/min

**POLLUTANT NAME:** Particulate matter, total (TPM)

**CAS Number:** PM

**Test Method:** EPA/OAR Mthd 5 and 202

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0005 %

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) drift eliminator

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** There is no numerical emission limit. The drift eliminator is required to have a control efficiency of 0.0005%.

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)

**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 %  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) drift eliminator

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** There is no numerical emission limit. The drift eliminator is required to have a control efficiency of 0.0005%.

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** EPA/OAR Mthd 9

**Pollutant Group(s):**

**Emission Limit 1:** % OPACITY

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) drift eliminator

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total < 2.5 μ (TPM2.5)

**CAS Number:** PM  
**Test Method:** EPA/OAR OTM 27 and 28  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 %  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) drift eliminator  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There is no numerical emission limit. The drift eliminator is required to have a control efficiency of 0.0005%.

### Process/Pollutant Information

**PROCESS NAME:** Granulated Urea Transfer  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 1500.00 metric tons/day  
**Process Notes:** There are six (6) different emission points. The transfer points are for the warehouse, train loading, and truck loading.

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 5 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 GR/DSCF AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (A) bin vent filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The ton/yr limit varies for each of the 6 emission points depending on the flowrate.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0050 GR/DSCF AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) bin vent filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The ton/yr limit varies for each of the 6 emission points depending on the flowrate.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** EPA/OAR OTM 27 and 28  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0013 GR/DSCF AVERAGE OF 3 STACK TEST RUNS  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**



**Control Method:** (A) bin vent filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** The ton/yr limit varies for each of the 6 emission points depending on the flowrate.

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** EPA/OAR Mthd 9  
**Pollutant Group(s):**  
**Emission Limit 1:** % OPACITY  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) bin vent filter  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** MDEA storage tank  
**Process Type:** 61.999 (Other Agricultural Chemical Manufacturing Sources)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** The storage tank capacity is 390,000 gallons

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC

**Test Method:** EPA/OAR Mthd 25A  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.1000 TONS/YR ROLLING 12 MONTH TOTAL  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Nitrogen gas blanket  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** Haul Roads  
**Process Type:** 99.140 (Paved Roads)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** There are two (2) paved haul roads. The length of one is 0.97 miles and the other is 1.07 miles long.

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 5 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) paved road, water flushing, and sweeping

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There is no numeric emission limit in the permits.

**POLLUTANT NAME:** Particulate matter, total < 10  $\mu$  (TPM10)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 201 and 202  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) paved road, water flushing, and sweeping  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There is no numeric emission limit in the permits.

**POLLUTANT NAME:** Particulate matter, total < 2.5  $\mu$  (TPM2.5)  
**CAS Number:** PM  
**Test Method:** EPA/OAR OTM 27 and 28  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) paved road, water flushing, and sweeping

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** There are no numeric emission limits in the permits.

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** EPA/OAR Mthd 22  
**Pollutant Group(s):**  
**Emission Limit 1:** % OPACITY  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) paved road, water flushing, and sweeping  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	LA-0264 (final)	<b>Date Determination</b>
<b>Corporate/Company Name:</b>	AIR PRODUCTS AND CHEMICALS, INC.	<b>Last Updated:</b> 09/06/2013
<b>Facility Name:</b>	NORCO HYDROGEN PLANT	<b>Permit Number:</b> PSD-LA-750(M1)
<b>Facility Contact:</b>	DAN DILLER 5042541590 DILLERDJ@AIRPRODUCTS.COM	<b>Permit Date:</b> 09/04/2012 (actual)
<b>Facility Description:</b>	A new hydrogen plant (SMR) which was previously proposed by Valero (LA-0245)	<b>FRS Number:</b> 110000597140
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>SIC Code:</b> 2813
<b>Permit URL:</b>		<b>NAICS Code:</b> 325120

**EPA Region:** 6 **COUNTRY:** USA  
**Facility County:** ST. CHARLES  
**Facility State:** LA  
**Facility ZIP Code:** 70079  
**Permit Issued By:** LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name)  
 MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV  
**Other Agency Contact Info:** Permit Writer: Dan Nguyen

**Permit Notes:**

<b>Facility-wide Emissions:</b>	<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>
	Carbon Monoxide	82.4300 (Tons/Year)
	Nitrogen Oxides (NOx)	80.9600 (Tons/Year)
	Particulate Matter (PM)	44.4700 (Tons/Year)
	Sulfur Oxides (SOx)	3.3100 (Tons/Year)
	Volatile Organic Compounds (VOC)	30.6200 (Tons/Year)

**Process/Pollutant Information**

**PROCESS NAME:** Reformer  
**Process Type:** 11.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** fuel gas  
**Throughput:** 1320.00 MMBTU/H  
**Process Notes:** Supplement fuel: natural gas

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** EPA/OAR Mthd 7E  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 48.7400 LB/H HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:** 0.0150 LB/MMBTU ANNUAL AVERAGE  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) Ultra Low NOx Burners (ULNB) and SCR  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** EPA/OAR Mthd 5 and OTM 28  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 11.2400 LB/H HOURLY AVERAGE  
**Emission Limit 2:**  
**Standard Emission:** 0.0075 LB/MMBTU  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Proper equipment designs, good combustion practices, and gaseous fuel  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PM = PM10 = PM2.5

Process/Pollutant Information
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**PROCESS NAME:** Flare (EQT0003)  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** natural gas  
**Throughput:** 0.31 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0300 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** 0.0900 T/YR ANNUAL MAXIMUM  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Proper Equipment designs and good combustion practices  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0100 LB/H HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Maintain minimum heat content of the flare gas at 200 btu/scf to ensure the flame at the flare tips at all the times.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** Cooling Tower (EQT0004)

**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 11200.00 GAL/MIN  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total (TPM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.7800 LB/H HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:** 0.0010 PERCENT DRIFT RATE MAXIMUM  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Drift eliminators  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PM = PM10 = PM2.5

## Facility Information

<b>RBLC ID:</b>	LA-0244 (final)	<b>Date Determination</b>	
<b>Corporate/Company Name:</b>	SASOL NORTH AMERICA, INC.	<b>Last Updated:</b>	07/06/2011
<b>Facility Name:</b>	LAKE CHARLES CHEMICAL COMPLEX - LAB UNIT	<b>Permit Number:</b>	PSD-LA-291(M3)
<b>Facility Contact:</b>	MAGGIE PAGELS 337-494-5769 MARGARET.PAGELS@US.SASOL.COM	<b>Permit Date:</b>	11/29/2010 (actual)
<b>Facility Description:</b>	Chemical Production Unit for Linear Alkyl Benzene (LAB)production.	<b>FRS Number:</b>	110017418061
<b>Permit Type:</b>	C: Modify process at existing facility	<b>SIC Code:</b>	2869
<b>Permit URL:</b>		<b>NAICS Code:</b>	325110
<b>EPA Region:</b>	6	<b>COUNTRY:</b>	USA



**Facility County:** CALCASIEU  
**Facility State:** LA  
**Facility ZIP Code:** 70669  
**Permit Issued By:** LOUISIANA DEPARTMENT OF ENV QUALITY (Agency Name)  
MR. BRYAN D. JOHNSTON(Agency Contact) (225)219-3450 BRYAN.JOHNSTON@LA.GOV  
**Other Agency Contact Info:** Permit Writer: Dan Nguyen (225) 219-3395  
**Permit Notes:** Modification to an existing PSD Permit (PSD-LA-291(M2), dated October 18, 1988) to increase operating time of the heater. Emissions will not be increased above the permitted limits. Existing BACT will not be revised.

### Process/Pollutant Information

**PROCESS NAME:** EQT0026 - LAB Unit Flare LF-1  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:** Natural Gas  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 10.2300 LB/H HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Steam Assisted  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT was determined in 1983

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3700 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** % OPACITY  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) Steam assisted  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT was determined in 1983

### Process/Pollutant Information

**PROCESS NAME:** EQT0027 - PACOL CHARGE HEATER H-201  
**Process Type:** 13.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** Natural Gas  
**Throughput:** 87.30 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 7.1500 LB/H HOURLY MAXIMUM  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) Low NOX Burners  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT was determined in 1983

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.8600 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** % OPACITY  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT was determined in 1983

**Process/Pollutant Information**

**PROCESS NAME:** EQT0028 - PACOL STARTUP HEATER H-202  
**Process Type:** 13.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** natural gas  
**Throughput:** 21.00 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 µ (TPM10)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2100 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** % OPACITY  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) No additional Control  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT was determined in 1983

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 2.7100 LB/H HOURLY MAXIMUM  
**Emission Limit 2:** % OPACITY  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) low nox burners  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT was determined in 1983

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**PROCESS NAME:** EQT0029 - Hot Oil Heater H-601  
**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))  
**Primary Fuel:** natural gas  
**Throughput:** 170.00 MMBTU/H

**Process Notes:**

**POLLUTANT NAME:** Particulate matter, total < 10 μ (TPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.7100 LB/H HOURLY MAXIMUM

**Emission Limit 2:** % OPACITY

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) No additional control

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** BACT was determined in 1983

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 19.6900 LB/H HOURLY MAXIMUM

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) low nox burners  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** BACT was determined in 1983

## Facility Information

<b>RBLC ID:</b>	TX-0575 (final)	<b>Date</b>
<b>Corporate/Company Name:</b>	SABINA PETROCHEMICALS LLC	<b>Determination</b>
<b>Facility Name:</b>	SABINA PETROCHEMICALS LLC	<b>Last Updated:</b> 05/12/2016
<b>Facility Contact:</b>	4099605000 CHRISTOPHER.WITTE@BASF.COM	<b>Permit Number:</b> 41945, N018M1
<b>Facility Description:</b>	C4 OLEFINS COMPLEX BRIEF PLANT DESCRIPTION/NARRATIVE (FOR EXAMPLE - CHEMICAL PLANT, STEEL MILL, PAINT MANUFACTURING, ETC.): C4 OLEFINS COMPLEX BRIEF EMISSION SOURCE(S) DESCRIPTION (FOR EXAMPLE - BOILER, PAINT SPRAY BOOTH, FURNACE, ETC.): STORM WATER TANK, COOLING TOWER, FUGITIVES, TANK TRUCK LOADING , AND ABOILER, TYPE(S) OF FUEL USED AT THIS FACILITY: DESCRIPTION OF THE POLLUTION ABATEMENT STRATEGY (FOR EXAMPLE - FABRIC FILTER, ESP, CARBON ADSORBERS, POWDER COATINGS, ETC.): HIGH AND LOW-PRESSURE FLARES, AND AN AMMONIA SCRUBBER FACILITY NOTES: THE FACILITY INCLUDES A BUTADIENE UNIT WITH A MAXIMUM CAPACITY OF 1 BILLION POUNDS PER YEAR OF BUTADIENE, AN ALKYLATE (MIXTURE OF OCTANES) UNIT (REFERRED TO AS INALK UNIT) WITH A MAXIMUM CAPACITY OF 1 BILLION POUNDS PER YEAR OF ALKYLATE, AND ANCILLARY SUPPORT EQUIPMENT.	<b>Permit Date:</b> 08/20/2010 (actual)
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>FRS Number:</b> 110006134691
<b>Permit URL:</b>		<b>SIC Code:</b> 2869
<b>EPA Region:</b>	6	<b>NAICS Code:</b> 325199
<b>Facility County:</b>	JEFFERSON	<b>COUNTRY:</b> USA
<b>Facility State:</b>	TX	
<b>Facility ZIP Code:</b>		
<b>Permit Issued By:</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) (Agency Name) MICHAEL PARTEE(Agency Contact) (512) 239-3312 michael.partee@tceq.texas.gov	

**Other Agency** AGENCY CONTACT: DANIEL A. SMOTHERS  
**Contact Info:** TELEPHONE NUMBER: (512) 239-1664 FAX:  
 E-MAIL ADDRESS:DSMOTHER@TCEQ.STATE.TX.US  
 ADDRESS: OFFICE OF PERMITTING AND REGISTRATION  
 AIR PERMITS DIVISION, MC-163, P.O. BOX 13087  
 CITY: AUSTIN STATE: TEXAS ZIP CODE: 78711-3087

**Permit Notes:** BRIEF PLANT DESCRIPTION/NARRATIVE (FOR EXAMPLE - CHEMICAL PLANT, STEEL MILL, PAINT MANUFACTURING, ETC.):  
 C4 OLEFINS COMPLEX BRIEF EMISSION SOURCE(S) DESCRIPTION (FOR EXAMPLE - BOILER, PAINT SPRAY BOOTH, FURNACE,  
 ETC.): STORM WATER TANK, COOLING TOWER, FUGITIVES, TANK TRUCK LOADING , AND ABOILER, TYPE(S) OF FUEL USED  
 AT THIS FACILITY: DESCRIPTION OF THE POLLUTION ABATEMENT STRATEGY (FOR EXAMPLE - FABRIC FILTER, ESP,  
 CARBON ADSORBERS, POWDER COATINGS, ETC.): HIGH AND LOW-PRESSURE FLARES, AND AN AMMONIA SCRUBBER  
 FACILITY NOTES: THE FACILITY INCLUDES A BUTADIENE UNIT WITH A MAXIMUM CAPACITY OF 1 BILLION POUNDS PER  
 YEAR OF BUTADIENE, AN ALKYLATE (MIXTURE OF OCTANES) UNIT (REFERRED TO AS INALK UNIT) WITH A MAXIMUM  
 CAPACITY OF 1 BILLION POUNDS PER YEAR OF ALKYLATE, AND ANCILLARY SUPPORT EQUIPMENT.

<b>Affected</b>	<b>Boundary Type:</b>	<b>Class 1 Area State:</b>	<b>Boundary:</b>	<b>Distance:</b>
<b>Boundaries:</b>	CLASS1	AL	Sipsey	> 250 km
<b>Facility-wide</b>	<b>Pollutant Name:</b>		<b>Facility-wide Emissions Increase:</b>	
<b>Emissions:</b>	Nitrogen Oxides (NOx)		9.0700 (Tons/Year)	
	Volatile Organic Compounds (VOC)		10.3300 (Tons/Year)	

Process/Pollutant Information
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**PROCESS** HIGH AND LOW PRESSURE FLARES

**NAME:**

**Process** 19.310 (Chemical Plant Flares)

**Type:**

**Primary** NATURAL GAS

**Fuel:**

**Throughput:** 1600.00 T/YR

**Process** THE NOX EMISSIONS INCREASES FROM THE FLARES ARE DUE TO THE COMBUSTION OF NATURAL GAS USED AS SWEEP GAS IN

**Notes:** THE FLARE HEADER SYSTEM. THE NATURAL GAS ALSO HELPS TO MAINTAIN THE MINIMUM HEATING VALUE NECESSARY TO  
 ENSURE DESTRUCTION OF THE VOCs IN THE VENT STREAMS. THE NATURAL GAS FLOW WAS NOT COMPLETELY ACCOUNTED  
 FOR IN THE ORIGINAL PERMIT REPRESENTATIONS AND IS BEING ADDED TO THE PERMIT AT THIS TIME. THERE IS NO APPLICABLE  
 POST-COMBUSTION TECHNOLOGY TO REDUCE NOX EMISSIONS FROM FLARES. EMISSIONS ARE MINIMIZED BY PROPER  
 OPERATION OF THE FLARES, INCLUDING COMPLIANCE WITH THE APPLICABLE PROVISIONS IN SECTION 60.18 OF SUBPART A OF  
 THE FEDERAL NEW SOURCE PERFORMANCE STANDARDS (NSPS) IN 40 CFR PART 60 AND THE PROVISIONS OF SPECIAL CONDITION  
 13 OF PERMIT 41945. SPECIAL CONDITION 13 REQUIRES THE FLARES TO BE OPERATED WITH A FLAME PRESENT AT ALL TIMES,  
 MONITORING TO ENSURE THE PRESENCE OF A CONSTANT PILOT FLAME, NO VISIBLE EMISSIONS, AND CONTINUOUS FLOW RATE  
 AND BTU CONTENT MONITORING OF THE FLARED STREAMS. THESE OPERATING REQUIREMENTS WERE DETERMINED TO  
 SATISFY LAER IN THE ORIGINAL PERMITTING OF THE FLARES, AND THERE HAVE BEEN NO CHANGES IN FLARE TECHNOLOGY

SINCE THAT TIME THAT WOULD FURTHER IMPROVE FLARE OPERATION. THE FLARES WILL CONTINUE TO OPERATE IN COMPLIANCE WITH THESE CONDITIONS; THEREFORE, THE LAER REQUIREMENT WILL BE MET.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 9.0700 T/YR ANNUAL  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:**  
**Control Method:** (N)  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Yes  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)  
**CAS Number:** VOC  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )  
**Emission Limit 1:** 0.3200 T/YR ANNUAL  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** LAER  
**Other Applicable Requirements:**  
**Control Method:** (A) FLARE  
**Est. % Efficiency:** 98.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Yes



**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS** ALKFUG, BDEFUG, AND UTILFUG

**NAME:**

**Process** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))

**Type:**

**Primary**

**Fuel:**

**Throughput:** 0

**Process** THE INCREASE IN VOC EMISSIONS FROM THE PROCESS FUGITIVE EPNS (ALKFUG, BDEFUG, AND UTILFUG) ARE THE RESULT OF A  
**Notes:** CORRECTION TO THE UNDERESTIMATED COMPONENT COUNTS. THE COMPONENTS ARE CURRENTLY INCLUDED IN SABINA'S LEAK DETECTION AND REPAIR (LDAR) DATABASE AND ARE MONITORED IN ACCORDANCE WITH THE SAME 28LAER LDAR PROGRAM REQUIRED FOR THE COMPONENTS THAT ARE CURRENTLY AUTHORIZED BY THE PERMIT. AS THE NAME IMPLIES, 28LAER WAS SPECIFICALLY DEVELOPED BY TCEQ TO SATISFY THE LAER REQUIREMENT FOR FUGITIVE EMISSIONS THAT ARE SUBJECT TO NNSR. SPECIAL CONDITION 9 OF THE DRAFT CONDITIONS FOR THIS PERMIT AMENDMENT CONTAINS TCEQ'S MOST CURRENT 28LAER LDAR LANGUAGE; THEREFORE, IT REPRESENTS CURRENT LAER REQUIREMENTS. IN ADDITION TO THE STANDARD 28LAER REQUIREMENT, SPECIAL CONDITION 10 OF THE PERMIT REQUIRES FLANGES AND CONNECTORS IN GAS/VAPOR AND LIGHT LIQUID SERVICE TO BE MONITORED QUARTERLY IN ACCORDANCE WITH THE SAME REQUIREMENTS SPECIFIED IN SPECIAL CONDITION 9 FOR VALVES. BECAUSE THE ADDITIONAL COMPONENTS ARE ALSO MONITORED IN ACCORDANCE WITH THESE SAME REQUIREMENTS AND WILL CONTINUE TO BE AS SPECIFIED IN THE PERMIT, THE LAER REQUIREMENT IS MET.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 9.0100 T/YR ANNUAL

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:**

**Control Method:** (P) THE FACILITY UTILIZES THE LOWEST ACHEIVABLE EMISSION RATE (LAER) LDAR (LEAK DETECTION AND REPAIR) PROGRAM.

**Est. % Efficiency:** 98.000

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS** STORMWATER TANK

**NAME:**

**Process** 64.006 (Wastewater Collection & Treatment)

**Type:**

**Primary** N/A

**Fuel:**

**Throughput:** 15.00 MGAL/YR

**Process** THERE IS A SMALL INCREASE, 0.31 TPY, IN THE ALLOWABLE VOC EMISSIONS FROM THE STORMWATER TANK (TK-9804) DUE TO  
**Notes:** A CHANGE IN THE EMISSION CALCULATION METHOD THAT IS MORE APPLICABLE TO THE TANK AND ITS CONTENTS THAN THE CALCULATION ORIGINALLY USED FOR THE TANK. THE TANK IS EQUIPPED WITH AN EXTERNAL FLOATING ROOF WITH A MECHANICAL PRIMARY SEAL AND A RIM-MOUNTED SECONDARY SEAL TO CONTROL VOC EMISSIONS. THIS LEVEL OF EMISSIONS CONTROL IS THE MOST STRINGENT CONTROL KNOWN TO BE USED FOR STORAGE OF STORMWATER CONTAINING TRACE AMOUNTS OF VOC AND IS THEREFORE CONSIDERED TO BE LAER

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 0.3100 T/YR ANNUAL

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:**

**Control Method:** (A) EXTERNAL FLOATING ROOF

**Est. % Efficiency:** 88.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS** BOILER

**NAME:**

**Process Type:** 13.310 (Natural Gas (includes propane and liquefied petroleum gas))

**Primary Fuel:** NATURAL GAS

**Throughput:** 228.00 SCF/H

**Process Notes:** THE BOILER, EPN BLR, HAS SCR WITH LOW NOX BURNERS, A NOX LONG-TERM EMISSION FACTOR OF 0.007 LB NOX /MMBTU AND A SHORT-TERM EMISSION FACTOR OF 0.020 LB NOX /MMBTU TO ACCOMMODATE FOR HOT STANDBY. BECAUSE OF THE LOW ANNUAL EMISSION FACTOR, THIS WAS ACCEPTED AS LAER.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 0.0200 LB/MMBTU HOURLY

**Emission Limit 2:** 0.0070 LB/MMBTU ANNUAL

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** LAER

**Other Applicable Requirements:**

**Control Method:** (A) LOW NOX BURNERS AND SCR

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS** COOLING TOWER

**NAME:**

**Process Type:** 50.007 (Petroleum Refining Equipment Leaks/Fugitive Emissions)

**Primary Fuel:** N/A

**Throughput:** 73000.00 GAL/MIN

**Process Notes:** THE COOLING TOWER, EPN CT, HAS A NON-CONTACT DESIGN, UTILIZES MONTHLY MONITORING OF VOC IN WATER PER APPENDIX P OR APPROVED EQUIVALENT AND IDENTIFIED LEAKS ARE REPAIRED AS SOON AS POSSIBLE, BUT BEFORE NEXT SCHEDULED SHUTDOWN.

**POLLUTANT NAME:** Volatile Organic Compounds (VOC)

**CAS Number:** VOC

**Test Method:** Unspecified

**Pollutant Group(s):** ( Volatile Organic Compounds (VOC) )

**Emission Limit 1:** 13.4300 T/YR ANNUAL

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) THE COOLING TOWER, EPN CT, HAS A NON-CONTACT DESIGN, UTILIZES MONTHLY MONITORING OF VOC IN WATER PER APPENDIX P OR APPROVED EQUIVALENT AND IDENTIFIED LEAKS ARE REPAIRED AS SOON AS POSSIBLE, BUT BEFORE NEXT SCHEDULED SHUTDOWN.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

## Facility Information

<b>RBLC ID:</b>	AL-0249 (final)	<b>Date Determination</b>	
<b>Corporate/Company Name:</b>	EVONIK DEGUSSA CORPORATION	<b>Last Updated:</b>	08/17/2010
<b>Facility Name:</b>	EVONIK DEGUSSA CORPORATION	<b>Permit Number:</b>	X001, X008, X043, X125
<b>Facility Contact:</b>	2514434763 BILL.KLUTZ@EVONIK.COM	<b>Permit Date:</b>	01/07/2010 (actual)
<b>Facility Description:</b>	CHEMICAL MANUFACTURING FACILITY	<b>FRS Number:</b>	110017408296
<b>Permit Type:</b>	A: New/Greenfield Facility	<b>SIC Code:</b>	2869
		<b>NAICS Code:</b>	11

**Permit URL:****EPA Region:** 4**COUNTRY:** USA**Facility County:** MOBILE**Facility State:** AL**Facility ZIP Code:****Permit Issued By:** ALABAMA DEPT OF ENVIRONMENTAL MGMT (Agency Name)  
MR. DALE HURST(Agency Contact) (334) 271-7882 ADH@ADEM.STATE.AL.US**Permit Notes:**

<b>Facility-wide Emissions:</b>	<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>
	Nitrogen Oxides (NOx)	463.1000 (Tons/Year)
	Particulate Matter (PM)	21.9000 (Tons/Year)

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** METHIONINE PRODUCTION UNIT - THERMAL OXIDIZER**Process Type:** 64.999 (Other SO2MI Processes)**Primary Fuel:** NATURAL GAS**Throughput:** 62.40 MMBTU/H**Process Notes:** EXPANDING METHIONINE PRODUCTION**POLLUTANT NAME:** Visible Emissions (VE)**CAS Number:** VE**Test Method:** Unspecified**Pollutant Group(s):****Emission Limit 1:** 10.0000 % OPACITY**Emission Limit 2:****Standard Emission:****Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown**Case-by-Case Basis:** BACT-PSD**Other Applicable Requirements:****Control Method:** (N) GOOD COMBUSTION PRACTICES**Est. % Efficiency:****Cost Effectiveness:** 0 \$/ton**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.4900 LB/H

**Emission Limit 2:** 0.0260 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.4900 LB/H

**Emission Limit 2:** 0.0260 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 16.0700 LB/H

**Emission Limit 2:** 360.0000 PPM @ 3% O2

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) THERMAL OXIDIZER - SNCR

**Est. % Efficiency:** 64.800

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.4900 LB/H

**Emission Limit 2:** 0.0260 G/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** METHIONINE PRODUCTION UNIT - CEILCOTE SCRUBBER A  
**Process Type:** 64.999 (Other SOCOMI Processes)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 10.0000 % OPACITY  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 µ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3700 LB/H  
**Emission Limit 2:** 0.0023 GR/DSCF



**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) PACKED BED SCRUBBER

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3700 LB/H

**Emission Limit 2:** 0.0023 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) PACKED BED SCRUBBER

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3700 LB/H

**Emission Limit 2:** 0.0023 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) PACKED BED SCRUBBER

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS NAME:** METHIONINE PRODUCTION UNIT - CEILCOTE SCRUBBER B

**Process Type:** 64.999 (Other SO2MI Processes)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** Unspecified

**Pollutant Group(s):**

**Emission Limit 1:** 10.0000 % OPACITY

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) PACKED BED SCRUBBER

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3700 LB/H  
**Emission Limit 2:** 0.0023 GR/DSCF  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10  $\mu$  (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3700 LB/H  
**Emission Limit 2:** 0.0023 GR/DSCF  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3700 LB/H  
**Emission Limit 2:** 0.0023 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
--------------------------------------

**PROCESS NAME:** METHIONINE PRODUCTION UNIT - CEILCOTE SCRUBBER C  
**Process Type:** 64.999 (Other SO2MI Processes)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 10.0000 % OPACITY  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5500 LB/H  
**Emission Limit 2:** 0.0023 GR/DSCF  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5500 LB/H  
**Emission Limit 2:** 0.0023 GR/DSCF  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) PACKED BED SCRUBBER

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.5500 LB/H

**Emission Limit 2:** 0.0023 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) PACKED BED SCRUBBER

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** METHIONINE PRODUCTION UNIT - CEILCOTE SCRUBBER D

**Process Type:** 64.999 (Other SO2MI Processes)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 10.0000 % OPACITY  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5500 LB/H  
**Emission Limit 2:** 0.0023 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5500 LB/H  
**Emission Limit 2:** 0.0023 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.5500 LB/H  
**Emission Limit 2:** 0.0023 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**



## Process/Pollutant Information

**PROCESS NAME:** METHIONINE PRODUCTION UNIT - CEILCOTE SCRUBBER E

**Process Type:** 64.999 (Other SOCOMI Processes)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** Unspecified

**Pollutant Group(s):**

**Emission Limit 1:** 10.0000 % OPACITY

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) PACKED BED SCRUBBER

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3700 LB/H

**Emission Limit 2:** 0.0023 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10  $\mu$  (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3700 LB/H  
**Emission Limit 2:** 0.0023 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5  $\mu$  (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3700 LB/H  
**Emission Limit 2:** 0.0023 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) PACKED BED SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

### Process/Pollutant Information

**PROCESS NAME:** EXISTING HCN PRODUCTION UNIT - WASTE HEAT BOILER  
**Process Type:** 12.300 (Gaseous Fuel & Gaseous Fuel Mixtures (>100 million BTU/H & >250 million Btu/H))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 212.60 MMBTU/H  
**Process Notes:** HCN PRODUCTION UNIT WASTE HEAT BOILER

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 59.1000 LB/H  
**Emission Limit 2:** 243.0000 PPM @ 3% O<sub>2</sub>  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) SNCR  
**Est. % Efficiency:** 60.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.5800 LB/H  
**Emission Limit 2:** 0.0050 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10  $\mu$  (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.5800 LB/H  
**Emission Limit 2:** 0.0050 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 1.5800 LB/H  
**Emission Limit 2:** 0.0050 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 10.0000 % OPACITY  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

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## Process/Pollutant Information

**PROCESS NAME:** HCN PRODUCTION UNIT - FLARE A1  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** HCN PRODUCTION UNIT EMERGENCY FLARE - A1

**POLLUTANT NAME:** Particulate matter, filterable < 10  $\mu$  (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0700 LB/H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5  $\mu$  (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0700 LB/H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 14.2900 LB/H ANNUAL AVERAGE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0700 LB/H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 63.11(B) SEE NOTES  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** HCN PRODUCTION UNIT - FLARE A2  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** HCN PRODUCTION UNIT EMERGENCY FLARE A2

**POLLUTANT NAME:** Nitrogen Oxides (NOx)



**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 14.2900 LB/H ANNUAL AVERAGE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0700 LB/H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0700 LB/H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5  $\mu$  (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0700 LB/H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 63.11(B) SEE NOTES  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** U  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

Process/Pollutant Information
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**PROCESS NAME:** HCN PRODUCTION UNIT - TANK FARM FLARE - A5  
**Process Type:** 19.310 (Chemical Plant Flares)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** HCN PRODUCTION UNIT TANK FARM FLARE A5

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 1.7900 LB/H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0160 LB/H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0160 LB/H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0160 LB/H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 63.11(B) SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** MACT

**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

### Process/Pollutant Information

**PROCESS NAME:** AMSUL PRODUCTION UNIT - DUST SCRUBBER - A10  
**Process Type:** 64.999 (Other SOCOMI Processes)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2400 LB/H  
**Emission Limit 2:** 0.0145 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (A) WET SCRUBBER  
**Est. % Efficiency:** 85.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM

**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2400 LB/H  
**Emission Limit 2:** 0.0145 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (A) WET SCRUBBER  
**Est. % Efficiency:** 85.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.2400 LB/H  
**Emission Limit 2:** 0.0145 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (A) WET SCRUBBER  
**Est. % Efficiency:** 85.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE

**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 10.0000 % OPACITY  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (A) WET SCRUBBER  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** ACROLEIN PRODUCTION UNIT - THERMAL OXIDIZER  
**Process Type:** 64.999 (Other SOCM I Processes)  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 77.44 MMBTU/H  
**Process Notes:** ACROLEIN PRODUCTION UNIT THERMAL OXIDIZER

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 15.4900 LB/H  
**Emission Limit 2:** 61.0000 PPM @ 3% O2  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) LOW NOX BURNERS



**Est. % Efficiency:** 45.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.8330 LB/H  
**Emission Limit 2:** 0.0030 GR/DSCF  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.8330 LB/H  
**Emission Limit 2:** 0.0030 GR/DSCF  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.8330 LB/H  
**Emission Limit 2:** 0.0030 GR/DSCF  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 10.0000 % OPACITY  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
-------------------------------

**PROCESS NAME:** ANDRUSSOW HCN PRODUCTION UNIT - THERMAL OXIDIZER / WASTE HEAT BOILER  
**Process Type:** 12.300 (Gaseous Fuel & Gaseous Fuel Mixtures (>100 million BTU/H & <250 million Btu/H))  
**Primary Fuel:** NATURAL GAS  
**Throughput:** 48.30 MMBTU/H  
**Process Notes:** ANDRUSSOW WASTE HEAT BOILER/ THERMAL OXIDIZER

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3600 LB/H

**Emission Limit 2:** 0.0544 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.3600 LB/H  
**Emission Limit 2:** 0.0544 GR/DSCF  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 10.0000 % OPACITY  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 18.3100 LB/H  
**Emission Limit 2:** 150.0000 PPM @ 3% O2

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) SNCR

**Est. % Efficiency:** 60.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3600 LB/H

**Emission Limit 2:** 0.0544 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:** ANDRUSSOW HCN PRODUCTION UNIT - FLARE HCNA - 2

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:**

**Throughput:** 0

**Process Notes:** ANDRUSSOW FLARE HCNA - 2

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 20.0100 LB/H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.1100 LB/H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1100 LB/H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5 μ (FPM2.5)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.1100 LB/H  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)  
**CAS Number:** VE  
**Test Method:** Unspecified  
**Pollutant Group(s):**  
**Emission Limit 1:** 63.11(B) SEE NOTE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** U

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** MACT  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

## Process/Pollutant Information

**PROCESS NAME:** ANDRUSSOW AMSUL PRODUCTION UNIT DUST SCRUBBER  
**Process Type:** 64.999 (Other SOCM I Processes)  
**Primary Fuel:**  
**Throughput:** 0  
**Process Notes:** ANDRUSSOW DUST SCRUBBER HCNA - 3

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )



**Emission Limit 1:** 0.3600 LB/H  
**Emission Limit 2:** 0.0544 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (A) WET SCRUBBER

**Est. % Efficiency:** 85.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10  $\mu$  (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3600 LB/H

**Emission Limit 2:** 0.0544 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (A) WET SCRUBBER

**Est. % Efficiency:** 85.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 2.5  $\mu$  (FPM2.5)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.3600 LB/H  
**Emission Limit 2:** 0.0544 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (A) WET SCRUBBER

**Est. % Efficiency:** 85.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Visible Emissions (VE)

**CAS Number:** VE

**Test Method:** Unspecified

**Pollutant Group(s):**

**Emission Limit 1:** 10.0000 % OPACITY

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (A) WET SCRUBBER

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**Facility Information**

**RBLC ID:** ID-0017 (final)

**Corporate/Company Name:** SOUTHEAST IDAHO ENERGY, LLC

**Facility Name:** POWER COUNTY ADVANCED ENERGY CENTER

**Facility Contact:** TOM HORNYAK 3039534297 T.HORNYAK@REHINC.COM

**Facility Description:** COAL/PETCOKE GASIFICATION PLANT PRODUCING AMMONIA, UREA, UAN, AND ELEMENTAL SULFUR.

**Permit Type:** A: New/Greenfield Facility

**Permit URL:**

**EPA Region:** 10

**Facility County:** POWER

**Facility State:** ID

**Facility ZIP Code:** 83211

**Permit Issued By:** IDAHO DEPT OF ENVIRONMENTAL QUALITY (Agency Name)  
MR. BILL ROGERS(Agency Contact) (208)373-0437 WILLIAM.ROGERS@DEQ.IDAHO.GOV

**Permit Notes:** FACILITY LOCATION: LAMB WESTON ROAD, AMERICAN FALLS, IDAHO. DESIGNATED FACILITY (FUEL CONVERSION PLANT AND CHEMICAL PLANT). PSD THRESHOLD IS 100 T/YR. BACT REQ'D FOR PM, PM10, CO, AND NOX.

<b>Affected Boundaries:</b>	<b>Boundary Type:</b>	<b>Class 1 Area State:</b>	<b>Boundary:</b>	<b>Distance:</b>
	CLASS1	WY	Bridger	100km - 50km
	CLASS1	ID	Craters of the Moon	< 100 km
	CLASS1	WY	Fitzpatrick	100km - 50km
	CLASS1	NV	Jarbridge	100km - 50km
	CLASS1	MT	Red Rock Lakes	100km - 50km
	CLASS1	ID	Sawtooth	100km - 50km
	CLASS1	WY	Teton	100km - 50km
	CLASS1	WY	Washakie	100km - 50km
	CLASS1	WY	Yellowstone NP	100km - 50km

<b>Facility-wide Emissions:</b>	<b>Pollutant Name:</b>	<b>Facility-wide Emissions Increase:</b>
	Carbon Monoxide	166.0000 (Tons/Year)
	Nitrogen Oxides (NOx)	109.0000 (Tons/Year)
	Particulate Matter (PM)	60.2000 (Tons/Year)
	Sulfur Oxides (SOx)	23.4000 (Tons/Year)
	Volatile Organic Compounds (VOC)	5.1000 (Tons/Year)

**Date Determination Last Updated:**

02/05/2010

**Permit Number:** P-2008.0066

**Permit Date:** 02/10/2009 (actual)

**FRS Number:** UNKNOWN

**SIC Code:** 2873

**NAICS Code:** 113210

**COUNTRY:** USA

Process/Pollutant Information

**PROCESS NAME:** ZLDS COOLING TOWER, SRC30  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 985.00 GAL/MIN  
**Process Notes:** ZERO LIQUID DISCHARGE SYSTEM - COOLING WATER FLOW RATE 985 GPM. TDS MAX 50,000 MG/L.

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0010 % OF TOTAL CIRC FLOW  
**Emission Limit 2:** 0.3000 LB/H  
**Standard Emission:** 20.0000 %  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) DRIFT/MIST ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0010 % OF TOTAL CIRC FLOW  
**Emission Limit 2:** 0.3000 LB/H  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) DRIFT/MIST ELIMINATORS

**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

Process/Pollutant Information
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**PROCESS** COAL/PETCOKE RAILCAR UNLOADING & STORAGE, SRC01-SRC07

**NAME:**

**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)

**Primary Fuel:**

**Throughput:** 5000.00 T/H

**Process Notes:** ENCLOSED RAILCAR UNLOADING AT NEGATIVE PRESSURE. COVERED CONVEYORS AND ENCLOSED TRANSFER POINTS. STORAGE IN EUROSILLO OR EQUIVALENT. HIGH EFFICIENCY BAGHOUSES (RAILCAR UNLOADING, CONVEYORS, STORAGE SILO VENTS).

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0900 LB/H

**Emission Limit 2:** 0.0009 GR/DSCF

**Standard Emission:** 5.0000 %

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (B) ENCLOSED RAILCAR UNLOADING AT NEGATIVE PRESSURE. COVERED CONVEYORS AND ENCLOSED TRANSFER POINTS. STORAGE IN EUROSILLO OR EQUIVALENT. HIGH EFFICIENCY BAGHOUSES (RAILCAR UNLOADING, CONVEYORS, STORAGE SILO VENTS).

**Est. % Efficiency:** 99.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:** PMT LIMIT IS IN LB/H (APPROX. EQUIV TO GRAIN LOADING SHOWN AS EMISSION LIMIT 2). NSPS SUBPART Y: CURRENT OPACITY=20%, 2008 PROPOSED= 5%.

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0400 LB/H

**Emission Limit 2:** 0.0004 GR/DSCF

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (B) ENCLOSED RAILCAR UNLOADING AT NEGATIVE PRESSURE. COVERED CONVEYORS AND ENCLOSED TRANSFER POINTS. STORAGE IN EUROSILO OR EQUIVALENT. HIGH EFFICIENCY BAGHOUSES (RAILCAR UNLOADING, CONVEYORS, STORAGE SILO VENTS).

**Est. % Efficiency:** 99.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:** PMT LIMIT IS IN LB/H (APPROX. EQUIV TO GRAIN LOADING SHOWN AS EMISSION LIMIT 2).

## Process/Pollutant Information

**PROCESS NAME:** COAL/PETCOKE RECLAIM TO ROD MILL, SRC08-SRC12

**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)

**Primary Fuel:**

**Throughput:** 105.00 T/H

**Process Notes:** COVERED CONVEYORS WITH ENCLOSED TRANSFER POINTS. CAPACITY IS 105 T/H FOR EACH CONVEYOR.

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0020 LB/H

**Emission Limit 2:** GR/DSCF SEE NOTE

**Standard Emission:** 5.0000 %  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (B) COVERED CONVEYORS WITH ENCLOSED TRANSFER POINTS. HIGH EFFICIENCY BAGHOUSES.  
**Est. % Efficiency:** 99.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PMT LIMIT IS IN LB/H (APPROX EQUIV TO GRAIN LOADING SHOWN AS EMISSION LIMIT 2). NSPS SUBPART Y: CURRENT OPACITY=20%, 2008 PROPOSED= 5%.

**POLLUTANT NAME:** Particulate matter, filterable < 10 µ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0010 LB/H  
**Emission Limit 2:** GR/DSCF SEE NOTE  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (B) COVERED CONVEYORS WITH ENCLOSED TRANSFER POINTS. HIGH EFFICIENCY BAGHOUSES.  
**Est. % Efficiency:** 99.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PMT LIMIT IS IN LB/H (APPROX EQUIV TO GRAIN LOADING SHOWN AS EMISSION LIMIT 2).

Process/Pollutant Information
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**PROCESS NAME:** FLUXANT TRUCK LDOUT & CONVEYING, FUG

**Process Type:** 90.019 (Lime/Limestone Handling/Kilns/Storage/Manufacturing)  
**Primary Fuel:**  
**Throughput:** 250.00 T/H  
**Process Notes:** GASIFIER FLUXANT VARIES, BUT MAY INCLUDE LIMESTONE, IRON ORE OR SAND.

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 20.0000 %  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) COVERED CONVEYORS AND ENCLOSED TRANSFER POINTS. FUGITIVE DUST BMPS.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10  $\mu$  (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) COVERED CONVEYORS AND ENCLOSED TRANSFER POINTS. FUGITIVE DUST BMPS.

**Est. % Efficiency:**



**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

### Process/Pollutant Information

**PROCESS NAME:** FLUXANT STORAGE, SRCXX

**NAME:**

**Process Type:** 90.019 (Lime/Limestone Handling/Kilns/Storage/Manufacturing)

**Primary Fuel:**

**Throughput:** 250.00 T/H

**Process Notes:** GASIFIER FLUXANT VARIES, BUT MAY INCLUDE LIMESTONE, IRON ORE, OR SAND. MAX FILL RATE PRESUMED TO BE 250 T/H. MAX USE RATE IN GASIFIER IS 250 T/D.

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0020 LB/H

**Emission Limit 2:** LB/T SEE NOTE

**Standard Emission:** 20.0000 %

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) HIGH EFFICIENCY BAGHOUSE(S) ON STORAGE SILO VENT(S)

**Est. % Efficiency:** 99.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** PMT LIMIT IS LB/H (EQUIVALENT LB/T LIMIT IS SHOWN AS EMISSION LIMIT 2), BASED ON 250 T/H FILL RATE.

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0020 LB/H  
**Emission Limit 2:** LB/T SEE NOTE  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) HIGH EFFICIENCY BAGHOUSE(S) ON STORAGE SILO VENT(S)  
**Est. % Efficiency:** 99.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** PMT LIMIT IS LB/H (EQUIVALENT LB/T LIMIT IS SHOWN AS EMISSION LIMIT 2), BASED ON 250 T/H FILL RATE.

<b>Process/Pollutant Information</b>
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**PROCESS NAME:** SLAG HAND, FUG  
**Process Type:** 99.190 (Other Fugitive Dust Sources)  
**Primary Fuel:**  
**Throughput:** 580.00 T/D  
**Process Notes:** GASIFIER SLAG IS WET WHEN CONVEYED TO STORAGE.

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 20.0000 %  
**Emission Limit 2:**  
**Standard Emission:** %  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) STORAGE IN 3-SIDED BUNKER. FUGITIVE DUST BMPS.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 µ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) STORAGE IN 3-SIDED BUNKER. FUGITIVE DUST BMPS.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**Process/Pollutant Information**

**PROCESS NAME:** LEAKS - SYNGAS PIPING OR VALVES, CO FUG  
**Process Type:** 64.002 (Equipment Leaks (valves, compressors, pumps, etc.))  
**Primary Fuel:**  
**Throughput:**  
**Process Notes:** HIGH CO CONCENTRATION IN SYNGAS FROM GASIFIER TO FINAL CO-SHIFT REACTOR.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) FUGITIVE CO BMPS.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

### Process/Pollutant Information

**PROCESS NAME:** ASU REGEN HEATER, 0.1 MMBTU/H, SRC13  
**Process Type:** 19.600 (Misc. Boilers, Furnaces, Heaters)  
**Primary Fuel:** NAT GAS  
**Throughput:** 0.10 MMBTU/H  
**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 20.0000 %  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

Process/Pollutant Information
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**PROCESS NAME:** GASIFIER HEATERS (2), 25 MMBTU/H, SRC14 & SRC15  
**Process Type:** 19.600 (Misc. Boilers, Furnaces, Heaters)  
**Primary Fuel:** NAT GAS  
**Throughput:** 25.00 MMBTU/H  
**Process Notes:** BOTH HEATERS AT APPROX 25 MMBTU/H FOR STARTUP. NORMAL OPS ONE HEATER OFF, ONE ON STANDBY AT 9 MMBTU/H.

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 20.0000 %  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE



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**PROCESS**      GASIFIER FLARE, SRC16

**NAME:**

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:** SWEET SYNGAS

**Throughput:** 900000.00 LB/H

**Process Notes:** FLARING DURING STARUP AND UPSETS. SYNGAS CLEANUP PRIOR TO FLARING - GASIFIER QUENCH, SOUR WATER SCRUB, ACTIVATED CARBON BEDS (MIN 95% HG REMOVAL), AMINE SCRUB (MIN 95% S REMOVAL AS SO2). 1.5 MMBTU/HR NAT GAS PILOT.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) SMOKELESS FLARE. AIR OR STEAM-ASSIST ONLY IF UNASSISTED FLARE PRODUCES SMOKE. GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE. VE PER 40 CFR 60.18: NO VE AS DETERMINED BY METHOD 22, EXCEPT FOR TOTAL OF 5 MINS IN ANY 2-HR PERIOD. NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) SMOKELESS FLARE. AIR OR STEAM-ASSIST ONLY IF UNASSISTED FLARE PRODUCES SMOKE. GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) FLARE DESIGNED TO MINIMIZE CO EMISSIONS. GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.

**Est. % Efficiency:** 98.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**Process/Pollutant Information**

**PROCESS NAME:** SELEXOL AGR CO2 VENT, SRC17

**Process Type:** 64.003 (Processes Vents (emissions from air oxidation, distillation, and other reaction vessels))

**Primary Fuel:**

**Throughput:**

**Process Notes:** CO2-RICH STREAM FROM ACID GAS REMOVAL (AGR) UNIT.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** 8.7000 LB/H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) THERMAL OXIDIZER (CAT-OX)

**Est. % Efficiency:** 95.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Yes  
**Pollutant/Compliance Notes:** TOTAL FLOW 299,585 LB/HR AT 28 F AND 44 PSIG. FLOW IS 98.89% CO2, 0.09% CO.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.9000 LB/H  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) GOOD COMBUSTION PRACTICES FOR THERMAL OXIDIZER (CAT-OX) USED TO CONTROL CO EMISSIONS.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NOX EMISSIONS BASED ON 9 MMBTU/H NAT GAS BURNER ASSOCIATED WITH THE T.O/CAT-OX

## Process/Pollutant Information

**PROCESS NAME:** UREA GRANULATION VENT, SRC19  
**Process Type:** 61.012 (Fertilizer Production (except 61.009))  
**Primary Fuel:**  
**Throughput:** 1800.00 T/D  
**Process Notes:**

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0110 LB/T

**Emission Limit 2:** 20.5000 LB/H

**Standard Emission:** 20.0000 %

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) WET SCRUBBER IS INTEGRAL PART OF GRANULATION PROCESS, IS PROCESS EQUIPMENT. DESIGNED FOR MIN 98% CAPTURE AND RECYCLING OF PM/PM10.

**Est. % Efficiency:** 98.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0050 LB/T

**Emission Limit 2:** 9.0000 LB/H

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) WET SCRUBBER IS INTEGRAL PART OF GRANULATION PROCESS, IS PROCESS EQUIPMENT. DESIGNED FOR MIN 98% CAPTURE AND RECYCLING OF PM/PM10.

**Est. % Efficiency:** 98.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** No

**Pollutant/Compliance Notes:**

Process/Pollutant Information

**PROCESS NAME:**

NITRIC ACID PLANT TAILGAS, SRC20

**Process Type:** 62.014 (Nitric Acid Plants)

**Primary Fuel:**

**Throughput:** 575.00 T/D

**Process Notes:**

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** 50.0000 PPMV

**Emission Limit 2:** 1.1200 LB/T

**Standard Emission:** 10.0000 %

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (A) SCR, AMMONIA SLIP MAX 10 PPMV (DRY) CONVERTED TO 15% O2.

**Est. % Efficiency:** 98.000

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Yes

**Pollutant/Compliance Notes:** AT 575 T/D OF 57% ACID, PMT LIMIT IS 15.3 LB/H - (100% ACID/57% ACID) X 15.3 X 24 LB/DAY/ 575 TPD = 1.12 LB/TON OF 100% ACID.

## Process/Pollutant Information

**PROCESS** PROCESS FLARE, SRC21

**NAME:**

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:** PROCESS & PURGE GASES

**Throughput:**

**Process Notes:** PROCESS & PURGE GASES FROM 2000 T/D AMMONIA PLANT AND 2400 T/D UREA PLANT (LIQUID SOLUTION). 1.5 MMBTU/HR NAT GAS PILOT.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (N) SMOKELESS FLARE. AIR OR STEAM-ASSIST ONLY IF UNASSISTED FLARE PRODUCES SMOKE. GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE. VE PER 40 CFR 60.18; NO VE AS DETERMINED BY METHOD 22, EXCEPT FOR TOTAL OF 5 MINS IN ANY 2-HR PERIOD. NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) SMOKELESS FLARE. AIR OR STEAM-ASSIST ONLY IF UNASSISTED FLARE PRODUCES SMOKE. GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** SEE NOTE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE



## Process/Pollutant Information

**PROCESS NAME:** COOLING TOWER, SRC22  
**Process Type:** 99.009 (Industrial Process Cooling Towers)  
**Primary Fuel:**  
**Throughput:** 121000.00 GAL/MIN  
**Process Notes:** COOLING WATER FLOW RATE 121,000 GPM. TDS MAX 5000 MG/L.

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % OF TOTAL CIRC FLOW  
**Emission Limit 2:** 1.5000 LB/H  
**Standard Emission:** 20.0000 %  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (A) DRIFT/MIST ELIMINATORS  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10  $\mu$  (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0005 % OF TOTAL CIRC FLOW  
**Emission Limit 2:** 1.5000 LB/H  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** N  
**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (A) DRIFT/MIST ELIMINATORS

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

<b>Process/Pollutant Information</b>
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**PROCESS** 250 MMBTU/H PACKAGE BOILER, SRC24

**NAME:**

**Process Type:** 12.310 (Natural Gas (includes propane and liquefied petroleum gas))

**Primary Fuel:** NAT GAS

**Throughput:** 250.00 MMBTU/H

**Process Notes:** OPERATED ONLY DURING STARTUP AND SHUTDOWN, RAMPS DOWN/UP AS STEAM SUPERHEATER BOILER RAMPS UP/DOWN.  
COMBINED HEAT INPUT BALANCED

**POLLUTANT NAME:** Particulate Matter (PM)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 0.0052 LB/MMBTU

**Emission Limit 2:** 1.3000 LB/H

**Standard Emission:** 20.0000 %

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (P) GOOD COMBUSTION PRACTICES

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** LB/MMBTU AND LB/H LIMITS APPLY TO PACKAGE BOILER AND STEAM SUPERHEATER  
COMBINED EMISSIONS.

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0052 LB/MMBTU  
**Emission Limit 2:** 1.3000 LB/H  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** LIMITS APPLY TO PACKAGE BOILER AND STEAM SUPERHEATER COMBINED EMISSIONS.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0740 LB/MMBTU  
**Emission Limit 2:** 18.5000 LB/H  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** LIMITS APPLY TO PACKAGE BOILER AND STEAM SUPERHEATER COMBINED EMISSIONS.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0200 LB/MMBTU  
**Emission Limit 2:** 5.0000 LB/H  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (B) LOW-NOX BURNER AND FGR  
**Est. % Efficiency:** 95.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** LIMITS APPLY TO PACKAGE BOILER AND STEAM SUPERHEATER COMBINED EMISSIONS.

Process/Pollutant Information
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**PROCESS** 250 MMBTU/H STEAM SUPERHEATER BOILER, SRC31

**NAME:**

**Process Type:** 12.300 (Gaseous Fuel & Gaseous Fuel Mixtures (>100 million BTU/H & >250 million Btu/H))

**Primary Fuel:** NAT GAS & PSA TAILGAS

**Throughput:** 250.00 MMBTU/H

**Process Notes:** OPERATED DURING STEADY-STATE PRODUCTION ON NATURAL GAS AND (HYDROGEN-RICH) PRESSURE SWING ADSORBER (PSA) TAILGAS. BALANCED WITH PACKAGE BOILER AT STARTUP/SHUTDOWN SO COMBINED HEAT INPUT

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0052 LB/MMBTU  
**Emission Limit 2:** 1.3000 LB/H

**Standard Emission:** 20.0000 %  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** LB/MMBTU AND LB/H LIMITS APPLY TO PACKAGE BOILER AND STEAM SUPERHEATER COMBINED EMISSIONS.

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** 0.0052 LB/MMBTU  
**Emission Limit 2:** 1.3000 LB/H  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** LB/MMBTU AND LB/H LIMITS APPLY TO PACKAGE BOILER AND STEAM SUPERHEATER COMBINED EMISSIONS.

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** 0.0740 LB/MMBTU

**Emission Limit 2:** 18.5000 LB/H  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (N) GOOD COMBUSTION PRACTICES  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** LIMITS APPLY TO PACKAGE BOILER AND STEAM SUPERHEATER COMBINED EMISSIONS.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** 0.0200 LB/MMBTU  
**Emission Limit 2:** 5.0000 LB/H  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) LOW-NOX BURNER & SCR, AMMONIA SLIP LIMITED TO 10 PPM (DRY) CORRECTED TO 15% O2.  
**Est. % Efficiency:** 97.000  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** No  
**Pollutant/Compliance Notes:** LIMITS APPLY TO PACKAGE BOILER AND STEAM SUPERHEATER COMBINED EMISSIONS.

Process/Pollutant Information
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**PROCESS NAME:** 2 MW EMERGENCY GENERATOR, SRC25  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))

**Primary Fuel:** ASTM #1, 2, DIESEL  
**Throughput:** 2000.00 KW  
**Process Notes:** LIMITED TO 100 H/YR FOR ROUTINE TESTING AND MAINTENANCE

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** N

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS , NSPS  
**Control Method:** (P) ULSD FUEL, GOOD COMBUSTION PRACTICES, EPA CERTIFIED PER NSPS IIII  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** VE PER NSPS SUBPART IIII. NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Particulate matter, filterable < 10 µ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:**  
**Control Method:** (P) ULSD FUEL, GOOD COMBUSTION PRACTICES, EPA CERTIFIED PER NSPS IIII  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (N) GOOD COMBUSTION PRACTICES. EPA CERTIFIED PER NSPS IIII  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:**  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (N) GOOD COMBUSTION PRACTICES. EPA CERTIFIED PER NSPS IIII  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton



**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:**

**Process/Pollutant Information**

**PROCESS NAME:** 500 KW EMERGENCY GENERATOR, FIRE PUMP, SRC26  
**Process Type:** 17.110 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** ASTM #1, 2, DIESEL  
**Throughput:** 500.00 KW  
**Process Notes:** LIMITED TO 100 H/YR FOR ROUTINE TESTING AND MAINTENANCE

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**  
**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y  
**Case-by-Case Basis:** BACT-PSD  
**Other Applicable Requirements:** NSPS  
**Control Method:** (P) ULSD FUEL, EPA CERTIFICATION PER NSPS IIII  
**Est. % Efficiency:**  
**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** VE PER NSPS SUBPART IIII. NO EMISSION LIMITS AVAILABLE.

**POLLUTANT NAME:** Particulate matter, filterable < 10 µ (FPM10)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (P) ULSD FUEL, EPA CERTIFICATION PER NSPS IIII

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NO EMISSION LIMITSAVAILABLE.

**POLLUTANT NAME:** Carbon Monoxide

**CAS Number:** 630-08-0

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds )

**Emission Limit 1:** SEE NOTE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (N) GOOD COMBUSTION PRACTICES. EPA CERTIFICATION PER NSPS IIII.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NO EMISSION KLIMITS AVAILABLE.

**POLLUTANT NAME:** Nitrogen Oxides (NOx)

**CAS Number:** 10102

**Test Method:** Unspecified

**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:** NSPS

**Control Method:** (N) GOOD COMBUSTION PRACTICES. EPA CERTIFICATION PER NSPS III.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**Process/Pollutant Information**

**PROCESS NAME:** AMMONIA STORAGE FLARE, SRC27

**Process Type:** 19.310 (Chemical Plant Flares)

**Primary Fuel:** AMMONIA

**Throughput:**

**Process Notes:** 0.75 MMBTU/H NAT GAS PILOT.

**POLLUTANT NAME:** Particulate matter, filterable < 10  $\mu$  (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** SEE NOTE

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) SMOKELESS FLARE. AIR OR STEAM-ASSIST ONLY IF UNASSISTED FLARE PRODUCES SMOKE. GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) SMOKELESS FLARE. AIR OR STEAM-ASSIST ONLY IF UNASSISTED FLARE PRODUCES SMOKE. GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** VE PER 40 CFR 60.18: NO VE AS DETERMINED BY METHOD 22, EXCEPT FOR TOTAL OF 5 MINS IN ANY 2-HR PERIOD. NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Carbon Monoxide  
**CAS Number:** 630-08-0  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton  
**Incremental Cost Effectiveness:** 0 \$/ton  
**Compliance Verified:** Unknown  
**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

**POLLUTANT NAME:** Nitrogen Oxides (NOx)  
**CAS Number:** 10102  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM) )  
**Emission Limit 1:** SEE NOTE  
**Emission Limit 2:**  
**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:** NO EMISSION LIMITS AVAILABLE

## Process/Pollutant Information

**PROCESS NAME:** AMMONIUM NITRATE NEUTRALIZER VENT, SRC29

**Process Type:** 61.012 (Fertilizer Production (except 61.009))

**Primary Fuel:**

**Throughput:** 715.00 T/D

**Process Notes:** AMMONIUM NITRATE/UAN PLANT PRODUCTION ~715 TPD AMMONIUM NITRATE AND ~1600 TPD UAN

**POLLUTANT NAME:** Particulate Matter (PM)  
**CAS Number:** PM  
**Test Method:** Unspecified  
**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.5000 LB/H

**Emission Limit 2:** 20.0000 %

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) WET SCRUBBER IS INTEGRAL TO PROCESS. MUST BE DESIGNED TO CAPTURE AND RECYCLE 90% OF PM/PM10.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** Particulate matter, filterable < 10 μ (FPM10)

**CAS Number:** PM

**Test Method:** Unspecified

**Pollutant Group(s):** ( Particulate Matter (PM) )

**Emission Limit 1:** 1.5000 LB/H

**Emission Limit 2:**

**Standard Emission:**

**Did factors, other than air pollution technology considerations influence the BACT decisions:** Y

**Case-by-Case Basis:** BACT-PSD

**Other Applicable Requirements:**

**Control Method:** (N) WET SCRUBBER IS INTEGRAL TO PROCESS. MUST BE DESIGNED TO CAPTURE AND RECYCLE 90% OF PM/PM10.

**Est. % Efficiency:**

**Cost Effectiveness:** 0 \$/ton

**Incremental Cost Effectiveness:** 0 \$/ton

**Compliance Verified:** Unknown

**Pollutant/Compliance Notes:**

Comments	RBLCID	FACILITY_NAME	CORPORATE_OR_CO MPANY_NAME	FACILITY_COUNTY	FACILITY_STATE	PERMIT_NUM	SIC_CODE	PERMIT_ISSUANCE DATE	DATE_DET ERMINATI ON_LAST_UPDATED	FACILITY_DESCRIPTION	PROCESS_NAME	PROCESS_TYPE	PRIMARY_FUEL	THROUGH_PUT	THROUGH_PUT_UNIT	PROCESS_NOTES	POLLUTANT	CAS_NUM BER	CONTROL_METHOD_DESCRIPTION	EMISSION_LIMIT_1	EMISSION_LIMIT_1_UNIT	EMISSION_LIMIT_1_AVG_TIME_CONDITION	CASE-BY-CASE_BASIS	COMPLIANCE_VERIFIED	EMISSION_LIMIT_2	EMISSION_LIMIT_2_UNIT	EMISSION_LIMIT_2_AVG_TIME_CONDITION	STANDARD AD_EMISSION_LIMIT	STANDARD EMISSION_LIMIT	STANDARD LIMIT_AVERAGE TIME_CONDITION	POLLUTANT_COMPLIANCE_NOTES				
LAER 0.068 lb/MMBtu	AK-0082	POINT THOMSON PRODUCTION FACILITY	EXXON MOBIL CORPORATION	USA	AK	AQ1201C PT03	1382	42027	42419	OIL GAS EXPLORATION AND PRODUCTION FACILITY.	Drilling, HP, and LP Flares	19.31	Gas	50	MMscf/yr	50 MMscf/yr Drilling Flare, 35 MMscf/yr HP Flare-Pilot/Purge, 20 MMscf/yr LP Flare-Pilot/Purge	Nitrogen Oxides (NOx)	10102		0.068	U		BACT-PSD	U	0		0								
LAER 0.068 lb/MMBtu	AK-0083	KENAI NITROGEN OPERATIONS	AGRIUM U.S. INC.	USA	AK	AQ0083C PT06	2873	42010	42419	The Kenai Nitrogen Operations Facility is located at Mile 21 of the Kenai Spur Highway, near Kenai Alaska. It is classified as a nitrogenous fertilizer manufacturing facility under Standard Industrial Classification code 2873 and under North American Industrial Classification code 325311. The facility will produce ammonia and urea for bulk sale.  There are two ammonia and two urea plants at Agrium's KNO facility. This permit authorizes the restart of one ammonia and one urea plant (plants 4 and 5). The ammonia plant converts natural gas with added steam and air to produce ammonia (NH3) and carbon dioxide (CO2). Feedstocks for the urea plant include CO2 and NH3. The utility plant generates the power and steam needed to operate the ammonia and urea plants. Final products are loaded at the Product Loading Wharf for shipment.	Three (3) Flares	19.31	Natural Gas	1.25	MMBTU/Small Flare	1.25 MMBtu/hr Ammonia Tank Flare, 0.4 MMBtu/hr Emergency Flare, and 1.25 MMBtu/hr Small Flare	Nitrogen Oxides (NOx)	10102	Work Practice Requirements and Limited Use (limit venting to 168 hr/yr each during startup, shutdown, and maintenance events)	0.068	U		BACT-PSD	U	0			0							
	AL-0249	EVONIK DEGUSSA CORPORATION	EVONIK DEGUSSA CORPORATION	MOBILE	AL	X001, X008, X043, X125	2869	40185	40407	CHEMICAL MANUFACTURING FACILITY	HCN PRODUCTION UNIT - FLARE A1	19.31		0		HCN PRODUCTION UNIT EMERGENCY FLARE - A1	Nitrogen Oxides (NOx)	10102	GOOD COMBUSTION PRACTICES	14.29	LB/H	ANNUAL AVERAGE	BACT-PSD	U	0		0								
	AL-0249	EVONIK DEGUSSA CORPORATION	EVONIK DEGUSSA CORPORATION	MOBILE	AL	X001, X008, X043, X125	2869	40185	40407	CHEMICAL MANUFACTURING FACILITY	HCN PRODUCTION UNIT - FLARE A2	19.31		0		HCN PRODUCTION UNIT EMERGENCY FLARE A2	Nitrogen Oxides (NOx)	10102	GOOD COMBUSTION PRACTICES	14.29	LB/H	ANNUAL AVERAGE	BACT-PSD	U	0		0								
	AL-0249	EVONIK DEGUSSA CORPORATION	EVONIK DEGUSSA CORPORATION	MOBILE	AL	X001, X008, X043, X125	2869	40185	40407	CHEMICAL MANUFACTURING FACILITY	HCN PRODUCTION UNIT - TANK FARM FLARE - A5	19.31		0		HCN PRODUCTION UNIT TANK FARM FLARE A5	Nitrogen Oxides (NOx)	10102	GOOD COMBUSTION PRACTICES	1.79	LB/H		BACT-PSD	U	0		0								
	AL-0249	EVONIK DEGUSSA CORPORATION	EVONIK DEGUSSA CORPORATION	MOBILE	AL	X001, X008, X043, X125	2869	40185	40407	CHEMICAL MANUFACTURING FACILITY	ANDRUSSOW HCN PRODUCTION UNIT - FLARE HCNA - 2	19.31		0		ANDRUSSOW FLARE HCNA - 2	Nitrogen Oxides (NOx)	10102	GOOD COMBUSTION PRACTICES	20.01	LB/H		BACT-PSD	U	0		0								
see Nox standard reported for flare 0.098 lb/MMBtu	AR-0121	EL DORADO CHEMICAL COMPANY	LSB INDUSTRIES, INC.	UNION	AR	0573-AOP-R16	2873	41596	42538	CHEMICAL MANUFACTURING, INCLUDING NITRIC ACID PRODUCTION, SULFURIC ACID PRODUCTION, AMMONIA PRODUCTION, AND AMMONIA NITRATE PRODUCTION	AMMONIA PLANT AMMONIA VENT FLARE	19.31	NATURAL GAS	0.26	MMBTU/H		Nitrogen Oxides (NOx)	10102	GOOD COMBUSTION PRACTICE	792.03	LB/H	3046.269 AVERAGE	BACT-PSD	N	6.9	T/YR	ROLLING 12 MONTH AVERAGE	0.098	U	ROLLING 3 HOUR AVERAGE					
	AR-0121	EL DORADO CHEMICAL COMPANY	LSB INDUSTRIES, INC.	UNION	AR	0573-AOP-R16	2873	41596	42538	CHEMICAL MANUFACTURING, INCLUDING NITRIC ACID PRODUCTION, SULFURIC ACID PRODUCTION, AMMONIA PRODUCTION, AND AMMONIA NITRATE PRODUCTION	AMMONIA PLANT AMMONIA VENT FLARE	19.31	NATURAL GAS	0.26	MMBTU/H		Nitrous Oxide (N2O)	10024-97-2	GOOD COMBUSTION PRACTICE	0.0002	U		BACT-PSD	N	0		0								
see Nox standard reported for flare 0.098 lb/MMBtu	AR-0121	EL DORADO CHEMICAL COMPANY	LSB INDUSTRIES, INC.	UNION	AR	0573-AOP-R16	2873	41596	42538	CHEMICAL MANUFACTURING, INCLUDING NITRIC ACID PRODUCTION, SULFURIC ACID PRODUCTION, AMMONIA PRODUCTION, AND AMMONIA NITRATE PRODUCTION	AMMONIA PLANT PROCESS SSM FLARE	19.31	NATURAL GAS	0.05	MMBTU/H		Nitrogen Oxides (NOx)	10102	GOOD COMBUSTION PRACTICE	0.093	LB/H	1.86 AVERAGE	BACT-PSD	N	0.41	T/YR	ROLLING 12 MONTH AVERAGE	0.098	U	ROLLING 3 HOUR AVERAGE					
	AR-0121	EL DORADO CHEMICAL COMPANY	LSB INDUSTRIES, INC.	UNION	AR	0573-AOP-R16	2873	41596	42538	CHEMICAL MANUFACTURING, INCLUDING NITRIC ACID PRODUCTION, SULFURIC ACID PRODUCTION, AMMONIA PRODUCTION, AND AMMONIA NITRATE PRODUCTION	AMMONIA PLANT PROCESS SSM FLARE	19.31	NATURAL GAS	0.05	MMBTU/H		Nitrous Oxide (N2O)	10024-97-2	GOOD COMBUSTION PRACTICE	0.0002	U		BACT-PSD	N	0		0								
see Nox standard reported for flare 0.098 lb/MMBtu	AR-0121	EL DORADO CHEMICAL COMPANY	LSB INDUSTRIES, INC.	UNION	AR	0573-AOP-R16	2873	41596	42538	CHEMICAL MANUFACTURING, INCLUDING NITRIC ACID PRODUCTION, SULFURIC ACID PRODUCTION, AMMONIA PRODUCTION, AND AMMONIA NITRATE PRODUCTION	AMMONIA STORAGE FLARE	19.31	NATURAL GAS	0.05	MMBTU/H		Nitrogen Oxides (NOx)	10102	GOOD AND EFFICIENT OPERATING PRACTICES	10.02	LB/H	200.4 AVERAGE	BACT-PSD	N	43.88	T/YR	ROLLING 12 MONTH AVERAGE	0.098	U	ROLLING 3 HOUR AVERAGE					
	AR-0121	EL DORADO CHEMICAL COMPANY	LSB INDUSTRIES, INC.	UNION	AR	0573-AOP-R16	2873	41596	42538	CHEMICAL MANUFACTURING, INCLUDING NITRIC ACID PRODUCTION, SULFURIC ACID PRODUCTION, AMMONIA PRODUCTION, AND AMMONIA NITRATE PRODUCTION	AMMONIA STORAGE FLARE	19.31	NATURAL GAS	0.05	MMBTU/H		Nitrous Oxide (N2O)	10024-97-2	GOOD AND EFFICIENT OPERATING PRACTICES	0.0002	U		BACT-PSD	N	0		0								
	IA-0105	IOWA FERTILIZER COMPANY	IOWA FERTILIZER COMPANY	LEE	IA	12-219	2873	41208	41499	NITROGENOUS FERTILIZER MANUFACTURING	Ammonia Flare	19.31	natural gas	0.4	MMBTU/H	There are four (4) natural gas pilots	Nitrous Oxide (N2O)	10024-97-2	work practice/good combustion practices	0	U		BACT-PSD	U	0		0					There is no numeric emission limit in the permit.			
	IA-0105	IOWA FERTILIZER COMPANY	IOWA FERTILIZER COMPANY	LEE	IA	12-219	2873	41208	41499	NITROGENOUS FERTILIZER MANUFACTURING	Ammonia Flare	19.31	natural gas	0.4	MMBTU/H	There are four (4) natural gas pilots	Nitrogen Oxides (NOx)	10102	work practice/good combustion practices	0	U		BACT-PSD	U	0		0					There is no numeric emission limit in the permit.			
	ID-0017	POWER COUNTY ADVANCED ENERGY CENTER	SOUTHEAST IDAHO ENERGY, LLC	POWER	ID	P-2008.0066	2873	39854	40214	COAL/PETCOKE GASIFICATION PLANT PRODUCING AMMONIA, UREA, UAN, AND ELEMENTAL SULFUR.	GASIFIER FLARE, SRC16	19.31	SWEET SYNGAS	900000	LB/H	FLARING DURING STARUP AND UPSETS. SYNGAS CLEANUP PRIOR TO FLARING - GASIFIER QUENCH, SOUR WATER SCRUB, ACTIVATED CARBON BEDS (MIN 95% HG REMOVAL), AMINE SCRUB (MIN 95% S REMOVAL AS SO2). 1.5 MMBTU/HR NAT GAS PILOT.	Nitrogen Oxides (NOx)	10102	MEET 40 CFR 60.18.	0	U	SEE NOTE	BACT-PSD	U	0		0				NO EMISSION LIMITS AVAILABLE				
	ID-0017	POWER COUNTY ADVANCED ENERGY CENTER	SOUTHEAST IDAHO ENERGY, LLC	POWER	ID	P-2008.0066	2873	39854	40214	COAL/PETCOKE GASIFICATION PLANT PRODUCING AMMONIA, UREA, UAN, AND ELEMENTAL SULFUR.	PROCESS FLARE, SRC21	19.31	PROCESS & PURGE GASES			PROCESS & PURGE GASES FROM 2000 T/D AMMONIA PLANT AND 2400 T/D UREA PLANT (LIQUID SOLUTION). 1.5 MMBTU/HR NAT GAS PILOT.	Nitrogen Oxides (NOx)	10102	GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.	0	U	SEE NOTE	BACT-PSD	U	0		0				NO EMISSION LIMITS AVAILABLE				
	ID-0017	POWER COUNTY ADVANCED ENERGY CENTER	SOUTHEAST IDAHO ENERGY, LLC	POWER	ID	P-2008.0066	2873	39854	40214	COAL/PETCOKE GASIFICATION PLANT PRODUCING AMMONIA, UREA, UAN, AND ELEMENTAL SULFUR.	AMMONIA STORAGE FLARE, SRC27	19.31	AMMONIA			0.75 MMBTU/HR NAT GAS PILOT.	Nitrogen Oxides (NOx)	10102	GOOD COMBUSTION PRACTICES. MEET 40 CFR 60.18.	0	U	SEE NOTE	BACT-PSD	U	0		0				NO EMISSION LIMITS AVAILABLE				
LAER 0.068 lb/MMBtu	IN-0173	MIDWEST FERTILIZER CORPORATION	MIDWEST FERTILIZER CORPORATION	POSEY	IN	129-33576-00059	2873	41794	42494	A STATIONARY NITROGEN FERTILIZER MANUFACTURING FACILITY	FRONT END FLARE	19.31	NATURAL GAS	4	MMBTU/H	SSM VENTING IS LIMITED TO 336 HOURS PER YEAR. HEAT INPUT OF 4 MMBTU/HR IS FOR PILOT ONLY.	Nitrogen Oxides (NOx)	10102	NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES	0.068	U	3-HR AVERAGE	BACT-PSD		595.49	LB/H, SSM VENTING	3-HR AVERAGE	0							
LAER 0.068 lb/MMBtu	IN-0173	MIDWEST FERTILIZER CORPORATION	MIDWEST FERTILIZER CORPORATION	POSEY	IN	129-33576-00059	2873	41794	42494	A STATIONARY NITROGEN FERTILIZER MANUFACTURING FACILITY	BACK END FLARE	19.31	NATURAL GAS	4	MMBTU/H	SSM VENTING SHALL NOT EXCEED 336 HOURS PER YEAR. HEAT INPUT IS PILOT ONLY.	Nitrogen Oxides (NOx)	10102	NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES	0.068	U	3-HR AVERAGE	BACT-PSD		624.94	LB/H, SSM VENTING	3-HR AVERAGE	0							

Comments	RBLCID	FACILITY_NAME	CORPORATE_OR_COMPANY_NAME	FACILITY_COUNTY	FACILITY_STATE	PERMIT_NUMBER	SIC_CODE	PERMIT_ISSUANCE_DATE	DATE_DETERMINATION_LAST_UPDATED	FACILITY_DESCRIPTION	PROCESS_NAME	PROCESS_TYPE	PRIMARY_FUEL	THROUGHPUT	THROUGHPUT_UNIT	PROCESS_NOTES	POLLUTANT	CAS_NUMBER	CONTROL_METHOD_DESCRIPTION	EMISSION_LIMIT_1	EMISSION_LIMIT_1_UNIT	EMISSION_LIMIT_1_AVG_TIME_CONDITION	CASE-BY-CASE_BASIS	COMPLIANCE_VERIFIED	EMISSION_LIMIT_2	EMISSION_LIMIT_2_UNIT	EMISSION_LIMIT_2_AVG_TIME_CONDITION	STANDARD_EMISSION_LIMIT	STANDARD_EMISSION_LIMIT_UNIT	STANDARD_LIMIT_AVERAGE_TIME_CONDITION	POLLUTANT_COMPLIANCE_NOTES		
LAER 0.068 lb/MMBtu	IN-0173	MIDWEST FERTILIZER CORPORATION	MIDWEST FERTILIZER CORPORATION	POSEY	IN	129-33576-00059	2873	41794	42494	A STATIONARY NITROGEN FERTILIZER MANUFACTURING FACILITY	AMMONIA STORAGE FLARE	19.31	NATURAL GAS	1.5	MMBTU/H	HEAT INPUT IS FOR PILOT ONLY. SSM EMISSIONS HAVE SEPARATE LIMITS. SSM VENTING LIMITED TO 168 HOURS.	Nitrogen Oxides (NOx)	10102	NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES	0.068	LB/MMBTU	3-HR AVERAGE	BACT-PSD	U	125	LB/H, SSM VENTING	3-HR AVERAGE	0					
LAER 0.068 lb/MMBtu	IN-0179	OHIO VALLEY RESOURCES, LLC	OHIO VALLEY RESOURCES, LLC	SPENCER	IN	147-32322-00062	2873	41542	42494	NITROGENOUS FERTILIZER PRODUCTION PLANT	FRONT END PROCESS FLARE	19.31	NATURAL GAS PILOT	0.25	MMBTU/H	HEAT INPUT IS FOR NATURAL GAS PILOT ONLY. SSM EMISSIONS ARE CONTROLLED BY THE FLARE AND ARE LIMITED TO 336 HOURS OF VENTING PER YEAR.	Nitrogen Oxides (NOx)	10102	NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES	0.068	LB/MMBTU	3-HR AVERAGE	BACT-PSD	U	595.47	LB/H, SSM VENTING	3-HR AVERAGE	0			SSM VENTING HOURS LIMITED TO 336 PER YEAR.		
LAER 0.068 lb/MMBtu	IN-0179	OHIO VALLEY RESOURCES, LLC	OHIO VALLEY RESOURCES, LLC	SPENCER	IN	147-32322-00062	2873	41542	42494	NITROGENOUS FERTILIZER PRODUCTION PLANT	BACK END AMMONIA FLARE	19.31	NATURAL GAS	0.25	MMBTU/H	HEAT INPUT IS FOR PILOT ONLY. SSM EMISSIONS ARE CONTROLLED BY THE FLARE AND ARE LIMITED TO 336 HR/YR.	Nitrogen Oxides (NOx)	10102	NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES	0.068	LB/MMBTU	3-HR AVERAGE	BACT-PSD	U	624.94	LB/H, SSM EVENTS	3-HR AVERAGE	0			SSM EVENTS LIMITED TO 336 HRS PER YEAR		
LAER 0.068 lb/MMBtu	IN-0179	OHIO VALLEY RESOURCES, LLC	OHIO VALLEY RESOURCES, LLC	SPENCER	IN	147-32322-00062	2873	41542	42494	NITROGENOUS FERTILIZER PRODUCTION PLANT	AMMONIA STORAGE FLARE	19.31	NATURAL GAS	0.13	MMBTU/H	HEAT INPUT IS FOR PILOT ONLY. SSM EMISSIONS HAVE SEPARATE LIMITS. SSM VENTING IS LIMITED TO 168 HOURS PER YEAR.	Nitrogen Oxides (NOx)	10102	NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES	0.068	LB/MMBTU	3-HR AVERAGE	BACT-PSD	U	125	LB/H, SSM VENTING	3-HR AVERAGE	0			SSM VENTING IS LIMITED TO 168 HR PER YEAR.		
LAER 0.068 lb/MMBtu	IN-0179	OHIO VALLEY RESOURCES, LLC	OHIO VALLEY RESOURCES, LLC	SPENCER	IN	147-32322-00062	2873	41542	42494	NITROGENOUS FERTILIZER PRODUCTION PLANT	UAN PLANT VENT FLARE	19.31	NATURAL GAS	0.19	MMBTU/H	HEAT INPUT IS FOR NATURAL GAS PILOT. SSM EMISSIONS HAVE SEPARATE LIMITS. SSM VENTING LIMITED TO 336 HOURS PER YEAR.	Nitrogen Oxides (NOx)	10102	NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES	0.068	LB/MMBTU	3-HR AVERAGE	BACT-PSD	U	332.08	LB/H, SSM VENTING	3-HR AVERAGE	0			SSM VENTING LIMITED TO 336 HR PER YEAR.		
LAER 0.068 lb/MMBtu	IN-0180	MIDWEST FERTILIZER CORPORATION	MIDWEST FERTILIZER CORPORATION	POSEY	IN	129-33576-00059	2873	41794	42495	A STATIONARY NITROGEN FERTILIZER MANUFACTURING FACILITY	FRONT END FLARE	19.31	NATURAL GAS	4	MMBTU/H	SSM VENTING IS LIMITED TO 336 HOURS PER YEAR. HEAT INPUT OF 4 MMBTU/HR IS FOR PILOT ONLY.	Nitrogen Oxides (NOx)	10102	NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES	0.068	LB/MMBTU	3-HR AVERAGE	BACT-PSD	U	595.49	LB/H, SSM VENTING	3-HR AVERAGE	0					
LAER 0.068 lb/MMBtu	IN-0180	MIDWEST FERTILIZER CORPORATION	MIDWEST FERTILIZER CORPORATION	POSEY	IN	129-33576-00059	2873	41794	42495	A STATIONARY NITROGEN FERTILIZER MANUFACTURING FACILITY	BACK END FLARE	19.31	NATURAL GAS	4	MMBTU/H	SSM VENTING SHALL NOT EXCEED 336 HOURS PER YEAR. HEAT INPUT IS PILOT ONLY.	Nitrogen Oxides (NOx)	10102	NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES	0.068	LB/MMBTU	3-HR AVERAGE	BACT-PSD	U	624.94	LB/H, SSM VENTING	3-HR AVERAGE	0					
LAER 0.068 lb/MMBtu	IN-0180	MIDWEST FERTILIZER CORPORATION	MIDWEST FERTILIZER CORPORATION	POSEY	IN	129-33576-00059	2873	41794	42495	A STATIONARY NITROGEN FERTILIZER MANUFACTURING FACILITY	AMMONIA STORAGE FLARE	19.31	NATURAL GAS	1.5	MMBTU/H	HEAT INPUT IS FOR PILOT ONLY. SSM EMISSIONS HAVE SEPARATE LIMITS. SSM VENTING LIMITED TO 168 HOURS.	Nitrogen Oxides (NOx)	10102	NATURAL GAS PILOT, FLARE MINIMIZATION PRACTICES	0.068	LB/MMBTU	3-HR AVERAGE	BACT-PSD	U	125	LB/H, SSM VENTING	3-HR AVERAGE	0					
	LA-0244	LAKE CHARLES CHEMICAL COMPLEX LAB UNIT	SASOL NORTH AMERICA, INC.	CALCASIEU	LA	PSD-LA-291(M3)	2869	40511	40730	Chemical Production Unit for Linear Alkyl Benzene (LAB) production.	EQT0026 - LAB Unit Flare LF-1	19.31	Natural Gas	0			Nitrogen Oxides (NOx)	10102	Steam Assisted	10.23	LB/H	HOURLY MAXIMUM	BACT-PSD	U	0						BACT was determined in 1983		
	LA-0264	NORCO HYDROGEN PLANT	AIR PRODUCTS AND CHEMICALS, INC.	ST. CHARLES	LA	PSD-LA-750(M1)	2813	41156	41523	A new hydrogen plant (SMR) which was previously proposed by Valero (LA-0245)	Flare (EQT0003)	19.31	natural gas	0.31	MMBTU/H		Nitrogen Oxides (NOx)	10102	Proper Equipment designs and good combustion practices	0.03	LB/H	0.096774	HOURLY MAXIMUM	BACT-PSD	U	0.09	T/YR	ANNUAL MAXIMUM	0				
application on LADQ has emissions during SU of 30.99 lb/hr max, 25.83 lb/hr avg, 4.34 tpy with 14.94 MMBtu/hr 2.07lb/MMBtu and 0.02 lb/hr max, 0.25 MMBtu/hr 0.08 lb/MMBtu	LA-0272	AMMONIA PRODUCTION FACILITY	DYNO NOBEL LOUISIANA AMMONIA, LLC	JEFFERSON	LA	PSD-LA-768	2873	41360	42494	2780 TON PER DAY AMMONIA PRODUCTION FACILITY	AMMONIA STORAGE FLARE (2202-B)	19.31		15.19		NATURAL GAS (PILOT): 0.25 MM BTU/HR VENT GAS: 14.94 MM BTU/HR	Nitrogen Oxides (NOx)	10102	COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.	0.04	LB/H	0.002633	HOURLY MAXIMUM	BACT-PSD	U	0.13	T/YR	ANNUAL MAXIMUM	0			STARTUP NOX LIMITS ATTRIBUTED TO THIS FLARE (2202-B SU, EQT 0014): 30.99 LB/HR & 9.75 TPY.	
LAEQ application 0.15 lb/hr max, 1.829 MMBtu/hr 0.082lb/MMBtu	LA-0272	AMMONIA PRODUCTION FACILITY	DYNO NOBEL LOUISIANA AMMONIA, LLC	JEFFERSON	LA	PSD-LA-768	2873	41360	42494	2780 TON PER DAY AMMONIA PRODUCTION FACILITY	FRONT END PROCESS FLARE (2203-B)	19.31		8982.843		NATURAL GAS (PILOT): 1.829 MM BTU/HR VENT GAS: 6782.433 MM BTU/HR	Nitrogen Oxides (NOx)	10102	COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.	0.15	LB/H	1.67E-05	HOURLY MAXIMUM	BACT-PSD	U	0.54	T/YR	ANNUAL MAXIMUM	0			Mass limits in PSD permit exclude emissions associated with startup.	
LAEQ application 0.15 lb/hr max, 1.829 MMBtu/hr 0.082lb/MMBtu	LA-0272	AMMONIA PRODUCTION FACILITY	DYNO NOBEL LOUISIANA AMMONIA, LLC	JEFFERSON	LA	PSD-LA-768	2873	41360	42494	2780 TON PER DAY AMMONIA PRODUCTION FACILITY	BACK END PROCESS FLARE (2204-B)	19.31		8982.843		NATURAL GAS (PILOT): 1.829 MM BTU/HR VENT GAS: 8981.014 MM BTU/HR	Nitrogen Oxides (NOx)	10102	COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.	0.15	LB/H	1.67E-05	HOURLY MAXIMUM	BACT-PSD	U	0.54	T/YR	ANNUAL MAXIMUM	0			Mass limits in PSD permit exclude emissions associated with startup.	
	LA-0272	AMMONIA PRODUCTION FACILITY	DYNO NOBEL LOUISIANA AMMONIA, LLC	JEFFERSON	LA	PSD-LA-768	2873	41360	42494	2780 TON PER DAY AMMONIA PRODUCTION FACILITY	RAIL LOADING FLARE (2205-B)	19.31		0.25	0.25 MM BTU/HR	Nitrogen Oxides (NOx)	10102	COMPLY WITH THE MINIMUM HEAT CONTENT AND MAXIMUM TIP VELOCITY PROVISIONS OF 40 CFR 63 SUBPART A OR ADHERE TO THE REQUIREMENTS OF 40 CFR 63.11(B)(6)(i); OPERATE FLARE AT ALL TIMES EMISSIONS ARE BEING VENTED TO IT; OPERATE WITH FLAME PRESENT AT ALL TIMES.	0.03	LB/H	0.12	HOURLY MAXIMUM	BACT-PSD	U	0.08	T/YR	ANNUAL MAXIMUM	0					
	LA-0275	LINEAR ALKYL BENZENE (LAB) UNIT	SASOL CHEMICALS (USA) LLC	CALCASIEU	LA	PSD-LA-291(M4)	2865	42489	42853	LAB production unit, PSD-LA-291(M2) issued October 18, 1998 - PSD-LA-291(M3) issued November 29, 2010. Permit PSD-LA-291(M4) for emission limits revision, No BACT change.	LF-1 - LAB Unit Flare	19.31	Natural Gas	0			Nitrogen Oxides (NOx)	10102	Steam assisted	10.15	LB5/HR	HOURLY MAXIMUM	BACT-PSD	U	0								



Comments	RBLCID	FACILITY_NAME	CORPORATE_OR_CO MPANY_NAME	FACILITY_COUNTY	FACILITY_STATE	PERMIT_NUM	SIC_CODE	PERMIT_ISSUANCE DATE	DATE_DET ERMINATI ON_LAST UPDATED	FACILITY_DESCRIPTION	PROCESS_NAME	PROCESS_TYPE	PRIMARY_FUEL	THROUGH_PUT	THROUGH_PUT_UNIT	PROCESS_NOTES	POLLUTANT	CAS_NUM BER	CONTROL_METHOD_DESCRIPTION	EMISSION_LIMIT_1 LIMIT_1	EMISSION_LIMIT_2 LIMIT_2	EMISSION_LIMIT_1 AVG_TIME_CONDI TION	CASE-BY- CASE_BASIS	COMPLIANCE_V ERIFIED	EMISSION_LIMIT_2 LIMIT_2	EMISSION_LIMIT_2 UNIT	EMISSION_LIMIT_2 AVG_AVERAGE_TIME_C ONDITION	STANDAR D_AVERA GE	STANDAR D_AVERA GE	STANDAR D_AVERA GE	POLLUTANT_COMPLIANCE_NOTES	
N/A Ground flare	LA-0291	LAKE CHARLES CHEMICAL COMPLEX GTL UNIT	SASOL CHEMICALS (USA) LLC	CALCASIEU	LA	PSD-LA- 778	2869	41782	42632		Multi-Point Ground Flares (EQT 836 & 837)	19.31		0		Nitrogen Oxides (NOx)	10102	Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subparts FFFF and 55, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987; minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.	1072.86	LB/HR		HOURLY MAXIMUM	BACT-PSD	U	44.86	TPY	ANNUAL MAXIMUM	0				
	LA-0295	WESTLAKE FACILITY	EQUISTAR CHEMICALS, LP	CALCASIEU	LA	PSD-LA- 806	2821	42563	42632	Polypropylene manufacturing facility	Cogeneration Plant Flare (449, EQT 326)	19.31		0		Nitrogen Oxides (NOx)	10102	Flare is subject to 40 CFR 60.18 and Subpart DDD.	12.6	LB/H		HOURLY MAXIMUM	BACT-PSD	U	0						Annual NOx emissions from the Cogeneration Plant Flare (449, EQT 326); the M-Line Production Area Flare (22, EQT 19); and the Plant 5 Flare (21, EQT 138) (not addressed in the PSD permit) are limited to 36.65 TPY (GRP 12).	
	LA-0296	LAKE CHARLES CHEMICAL COMPLEX LDPE UNIT	SASOL CHEMICALS (USA) LLC	CALCASIEU	LA	PSD-LA- 779	2821	41782	42853	The Low Density Polyethylene (LDPE) Unit will produce LDPE by the high pressure polymerization of ethylene.	LLPDE/LDPE Multi- Point Ground Flare (EQT 640)	19.31		0		Nitrogen Oxides (NOx)	10102	The flare controls the following process vents: Purgas C-1 (LDPE-C-1, EQT 0641) Compressor Area C-2 (LDPE-C-2, EQT 0642) Comonomer Degassing Column C-3 (LDPE-C-3, EQT 0643) Isopentane Degassing Column C-4 (LDPE-C-4, EQT 0644) Purification Bed Regeneration C-7 (LDPE-C-7, EQT 0645) Analyzer Vents C-8 (LDPE-C-8, EQT 0646) Vent Recovery Accumulator C-9 (LDPE-C-9, EQT 0647)	174.09	LB/HR		HOURLY MAXIMUM	BACT-PSD	U	39.25	TPY	ANNUAL MAXIMUM	0				BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart 55, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987.  BACT is also determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); continuously monitoring the volume of vent gas routed to the flare, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.
	LA-0299	LAKE CHARLES CHEMICAL COMPLEX ETHOXYLATION UNIT	SASOL CHEMICALS (USA) LLC	CALCASIEU	LA	PSD-LA- 779	2869	41782	42853		ETO/Guerbet Elevated Flare (EQT 1079)	19.31		0		Nitrogen Oxides (NOx)	10102	Compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart PPP	8.51	LB/HR		HOURLY MAXIMUM	BACT-PSD	U	3.26	TPY	ANNUAL MAXIMUM	0				The permittee shall continuously monitor and record the volume of vent gas routed to the following flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips.
	LA-0301	LAKE CHARLES CHEMICAL COMPLEX ETHYLENE 2 UNIT	SASOL CHEMICALS (USA) LLC	CALCASIEU	LA	PSD-LA- 779	2869	41782	42853		Elevated Flare (EQT 981)	19.31		0		Nitrogen Oxides (NOx)	10102	Compliance with 40 CFR 63.11(b) and 40 CFR 63 Subpart 55; minimization of flaring through adherence to Sasol's SSMP; monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.	12383.13	LB/HR		HOURLY MAXIMUM	BACT-PSD	U	22.62	TPY	ANNUAL MAXIMUM	0				BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart 55, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987.  In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.

Comments	RBLCID	FACILITY_NAME	CORPORATE_OR_COMPANY_NAME	FACILITY_COUNTY	FACILITY_STATE	PERMIT_NUMBER	SIC_CODE	PERMIT_ISSUANCE_DATE	DATE_DET ERMINATI ON_LAST_UPDATED	FACILITY_DESCRIPTION	PROCESS_NAME	PROCESS_TYPE	PRIMARY_FUEL	THROUGH_PUT	THROUGH_PUT_UNIT	PROCESS_NOTES	POLLUTANT	CAS_NUMBER	CONTROL_METHOD_DESCRIPTION	EMISSION_LIMIT_1	EMISSION_LIMIT_1_UNIT	EMISSION_LIMIT_1_AVG_TIME_CONDITION	CASE-BY-CASE-BASIS	COMPLIANCE_VERIFIED	EMISSION_LIMIT_2	EMISSION_LIMIT_2_UNIT	EMISSION_LIMIT_2_AVG_TIME_CONDITION	STANDARD_AVERAGE_LIMIT	STANDARD_AVERAGE_LIMIT_UNIT	STANDARD_AVERAGE_LIMIT_CONDITION	POLLUTANT_COMPLIANCE_NOTES	
N/A Ground flare	LA-0301	LAKE CHARLES CHEMICAL COMPLEX ETHYLENE 2 UNIT	SASOL CHEMICALS (USA) LLC	CALCASIEU	LA	PSD-LA-779	2869	41782	42853	Ground Flare (EQT 982)	19.31			0		Nitrogen Oxides (NOx)	10102	gas	8565.31	LB/HR	HOURLY MAXIMUM	BACT-PSD	U	80.84	TPY	ANNUAL MAXIMUM	0			BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987, and the flame monitoring requirements of 40 CFR 63.987.  In addition, BACT is minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.		
	LA-0302	LAKE CHARLES CHEMICAL COMPLEX EQ/MEG UNIT	SASOL CHEMICALS (USA) LLC	CALCASIEU	LA	PSD-LA-779	2869	41782	42853	Elevated Flare and Ground Flare (EQTs 1012 & 1013)	19.31			Normal operating rate = 79,370 lb/hr		Nitrogen Oxides (NOx)	10102	natural gas as pilot gas	2.43	LB/HR	HOURLY MAXIMUM	BACT-PSD	U	1.06	TPY*	ANNUAL MAXIMUM	0			Pound per hour NOx limitations are per flare.  *Annual NOx emissions from both flares are limited to the TPY value reported.		
	LA-0303	LAKE CHARLES CHEMICAL COMPLEX ZIEGLER ALCOHOL UNIT	SASOL CHEMICALS (USA) LLC	CALCASIEU	LA	PSD-LA-779	2869	41782	42853	Elevated Flare (EQT 133)	19.31			Normal operating rate = 860.33 MM lb/yr		Nitrogen Oxides (NOx)	10102	natural gas as pilot gas	55.32	LB/HR	HOURLY MAXIMUM	BACT-PSD	U	41.42	TPY	ANNUAL MAXIMUM	0			BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987.  In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.		
N/A Ground flare	LA-0303	LAKE CHARLES CHEMICAL COMPLEX ZIEGLER ALCOHOL UNIT	SASOL CHEMICALS (USA) LLC	CALCASIEU	LA	PSD-LA-779	2869	41782	42853	Emission Combustion Unit #3 Ground Flare (EQT 500)	19.31			Normal operating rate = 860.33 MM lb/yr		Nitrogen Oxides (NOx)	10102	natural gas as pilot gas	49.68	LB/HR	HOURLY MAXIMUM	BACT-PSD	U	10.78	TPY	ANNUAL MAXIMUM	0			BACT is compliance with 40 CFR 63.11(b) and the applicable provisions of 40 CFR 63 Subpart SS, including, but not limited to, the closed vent system requirements of 40 CFR 63.983, the flare compliance assessment requirements of 40 CFR 63.987 and 40 CFR 63.2450(f), and the flame monitoring requirements of 40 CFR 63.987.  In addition, BACT is determined to be minimization of flaring through adherence to the Lake Charles Chemical Complex's startup, shutdown, and malfunction plan (SSMP) developed in accordance with 40 CFR 63.6(e)(3); monitoring the volume of vent gas routed to the flares, the lower heating value or composition of the vent gas, the fuel gas flow rate, and for steam-assisted flares, the flow of steam to the flare tips; and the use of natural gas as pilot gas.		
	LA-0305	LAKE CHARLES METHANOL FACILITY	LAKE CHARLES METHANOL, LLC	CALCASIEU PARISH	LA	PSD-LA-803(M1)	2869	42551	42853	Proposed facility to produce methanol, H2, H2SO4, CO2, Argon and electricity from Pet Coke	Flares	19.31	Fuel Gas	1008	MM BTU/hr		Nitrogen Oxides (NOx)	10102		0			BACT-PSD	U	0			0				
LAER 0.068 lb/MMBtu	LA-0314	INDORAMA LAKE CHARLES FACILITY	INDORAMA VENTURES OLEFINS, LLC	CALCASIEU	LA	PSD-LA-813	2869	42585	42853	modify and restart-up a mothballed facility to produce 1,009 million lbs/yr of ethylene	Flare No. 1 - 008	19.31	natural gas	85097	MM BTU/yr		Nitrogen Oxides (NOx)	10102	complying with 40 CFR 60.18; good combustion practices (including establishment of flare minimization practices)	0.068	LB/MM BTU		BACT-PSD	U	0		0		0			
LAER 0.068 lb/MMBtu	LA-0314	INDORAMA LAKE CHARLES FACILITY	INDORAMA VENTURES OLEFINS, LLC	CALCASIEU	LA	PSD-LA-813	2869	42585	42853	modify and restart-up a mothballed facility to produce 1,009 million lbs/yr of ethylene	Pyrolysis Gasoline Tank Flare - 009	19.31	natural gas	0.66	mm btu/hr		Nitrogen Oxides (NOx)	10102	complying with 40 CFR 60.18 and 63.11; good combustion practices (including establishment of flare minimization practices)	0.068	LB/MM BTU		BACT-PSD	U	0		0		0			
LAER 0.068 lb/MMBtu	LA-0314	INDORAMA LAKE CHARLES FACILITY	INDORAMA VENTURES OLEFINS, LLC	CALCASIEU	LA	PSD-LA-813	2869	42585	42853	modify and restart-up a mothballed facility to produce 1,009 million lbs/yr of ethylene	vessel evacuation flare - 018	19.31	natural gas	3.04	mm btu/hr		Nitrogen Oxides (NOx)	10102	good combustion practices (including establishment of flare minimization practices)	0.068	LB/MM BTU	THREE ONE-HOUR TEST AVERAGE	BACT-PSD	U	0		0		0			

Comments	RBLCID	FACILITY_NAME	CORPORATE_OR_COMPANY_NAME	FACILITY_COUNTY	FACILITY_STATE	PERMIT_NUMBER	SIC_CODE	PERMIT_ISSUANCE_DATE	DATE_DET_ERMINATION_LAST_UPDATED	FACILITY_DESCRIPTION	PROCESS_NAME	PROCESS_TYPE	PRIMARY_FUEL	THROUGHPUT	THROUGHPUT_UNIT	PROCESS_NOTES	POLLUTANT	CAS_NUMBER	CONTROL_METHOD_DESCRIPTION	EMISSION_LIMIT_1	EMISSION_LIMIT_1_UNIT	EMISSION_LIMIT_1_AVG_TIME_CONDITION	CASE-BY-CASE_BASIS	COMPLIANCE_VERIFIED	EMISSION_LIMIT_2	EMISSION_LIMIT_2_UNIT	EMISSION_LIMIT_2_AVG_TIME_CONDITION	STANDARD_EMISSION_LIMIT	STANDARD_EMISSION_LIMIT_UNIT	STANDARD_LIMIT_AVERAGE_TIME_CONDITION	POLLUTANT_COMPLIANCE_NOTES
	LA-0317	METHANEX-GEISMAR METHANOL PLANT	METHANEX USA, LLC	ASCENSION	LA	PSD-LA-761(M4)	2869	42726	42853	methanol plant (Unit I and Unit II) to produce 6000 metric tons of methanol by steam reforming natural gas	flares (I-X-703, II-X-703)	19.31	natural gas	3723	mm btu/hr		Nitrogen Oxides (NOx)	10102	complying with 40 CFR 63.11	0			BACT-PSD	U	0		0				BACT = LAER (Permit 0180-00210-V4, dated 12/22/2016)
	LA-0323	MONSANTO LULING PLANT	MONSANTO COMPANY	ST. CHARLES PARISH	LA	PSD-LA-890	2879	42744	43231	Chemical Manufacture	Emergency Flare	19.31	Natural Gas	0.4	mmbtu/h		Nitrogen Oxides (NOx)	10102	Proper design and operation	0			BACT-PSD	U	0		0				
	OH-0378	PTTGCA PETROCHEMICAL COMPLEX	PTTGCA PETROCHEMICAL COMPLEX	BELMONT	OH	P0124972	2869	43455	43635	Petrochemical Complex	High Pressure Ground Flare (P003)	19.31	Natural gas	1.8	MMBTU/H	pressure, multi-point, staged ground flare. The high pressure (HP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the HP ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting.	Nitrogen Oxides (NOx)	10102	use of natural gas as pilot light fuel	0.536	T/YR	PER ROLLING 12 MONTH PERIOD. SEE NOTES.	BACT-PSD	U	0		0			The high pressure (HP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the HP ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements.  The high pressure (HP) flare controls VOC emissions from units P801, P802, P803, P804, and P805.	
	OH-0378	PTTGCA PETROCHEMICAL COMPLEX	PTTGCA PETROCHEMICAL COMPLEX	BELMONT	OH	P0124972	2869	43455	43635	Petrochemical Complex	Low Pressure Ground Flare (P004)	19.31	Natural gas	0.78	MMBTU/H	pressure, multi-point, staged ground flare. The low pressure (LP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the ECU ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting.	Nitrogen Oxides (NOx)	10102	use of natural gas as pilot light fuel	0.232	T/YR	PER ROLLING 12 MONTH PERIOD. SEE NOTES.	BACT-PSD	U	0		0			The low pressure (LP) ground flare is used to meet control requirements associated with BACT, NSPS, BAT, and MACT for affected facility operations and process vents. For efficient permitting structure, the ECU ground flare has been permitted as a separate and individual emissions unit to contain limitations, operational restrictions, monitoring, record keeping, reporting, and testing associated with control requirements.  The low pressure (LP) flare controls VOC emissions from units P804 and P805.	
	TX-0575	SABINA PETROCHEMICALS LLC	SABINA PETROCHEMICALS LLC	JEFFERSON	TX	41945, N018M1	2869	40410	42502	C4 OLEFINS COMPLEX BRIEF PLANT DESCRIPTION/NARRATIVE (FOR EXAMPLE - CHEMICAL PLANT, STEEL MILL, PAINT MANUFACTURING, ETC.): C4 OLEFINS COMPLEX BRIEF EMISSION SOURCE(S) DESCRIPTION (FOR EXAMPLE - BOILER, PAINT SPRAY BOOTH, FURNACE, ETC.): STORM WATER TANK, COOLING TOWER, FUGITIVES, TANK TRUCK LOADING, AND ABOILER. TYPE(S) OF FUEL USED AT THIS FACILITY: DESCRIPTION OF THE POLLUTION ABATEMENT STRATEGY (FOR EXAMPLE - FABRIC FILTER, ESP, CARBON ADSORBERS, POWDER COATINGS, ETC.): HIGH AND LOW-PRESSURE FLARES, AND AN AMMONIA SCRUBBER FACILITY NOTES: THE FACILITY INCLUDES A BUTADIENE UNIT WITH A MAXIMUM CAPACITY OF 1 BILLION POUNDS PER YEAR OF BUTADIENE, AN ALKYLATE (MIXTURE OF OCTANES) UNIT (REFERRED TO AS INALK UNIT) WITH A MAXIMUM CAPACITY OF 1 BILLION POUNDS PER YEAR OF ALKYLATE, AND ANCILLARY SUPPORT EQUIPMENT.	HIGH AND LOW PRESSURE FLARES	19.31	NATURAL GAS	1600	T/YR	INCREASES FROM THE FLARES ARE DUE TO THE COMBUSTION OF NATURAL GAS USED AS SWEEP GAS IN THE FLARE HEADER SYSTEM. THE NATURAL GAS ALSO HELPS TO MAINTAIN THE MINIMUM HEATING VALUE NECESSARY TO ENSURE DESTRUCTION OF THE VOCs IN THE VENT STREAMS. THE NATURAL GAS FLOW WAS NOT COMPLETELY ACCOUNTED FOR IN THE ORIGINAL PERMIT REPRESENTATIONS AND IS BEING ADDED TO THE PERMIT AT THIS	Nitrogen Oxides (NOx)	10102		9.07	T/YR	ANNUAL	LAER	Y	0		0				

Comments	RBLCID	FACILITY_NAME	CORPORATE_OR_CO MPANY_NAME	FACILITY_COUNTY	FACILITY_STATE	PERMIT_N UM	SIC_CODE	PERMIT_I SSUANCE DATE	DATE_DET ERMINATI ON_LAST UPDATED	FACILITY_DESCRIPTION	PROCESS_NAME	PROCESS TYPE	PRIMARY FUEL	THROUGH PUT	THROUGH PUT_UNIT	PROCESS_NOTES	POLLUTANT	CAS_NUM BER	CONTROL_METHOD_DESCRIPTION	EMISSION LIMIT_1	EMISSION LIMIT_1_ UNIT	EMISSION_LIMIT_1 AVG_TIME_CONDI TION	CASE-BY- CASE_BASIS	COMPLI ANCE_VER IFIED	EMISSION LIMIT_2	EMISSION_LIMIT_2 UNIT	EMISSION_LIMIT_2 AVGVERAGE_TIME_C ONDITION	STANDAR D_EMISS ION_LIMI T	STANDAR D_EMISS ION_LIMI T	STANDAR D_LIMIT_ AVERAGE TIME_CO NDITION	POLLUTANT_COMPLIANCE_NOTES					
	TX-0728	PEONY CHEMICAL MANUFACTURING FACILITY	BASF	BRAZORIA	TX	118239, N200	2813	42095	42506	Ammonia production with hydrogen imported	ammonia flare	19.31	Natural gas, ammonia, hydrogen	106396	MMBtu/yr	throughput limit A flare is used to combust unreacted hydrogen, destroy impure hydrogen/ammonia streams, and to control process shutdowns. The Flare is claimed to achieve 99% control for ammonia. Best Available Control Technology (BACT) for carbon monoxide (CO) from flares is good combustion practices. Sulfur Dioxide (SO2) emissions are controlled with the use of pipeline quality natural gas as fuel gas. The only volatile organic compound (VOC)	Nitrogen Oxides (NOx)	10102	no control	223.41	LB/H	0.11053	LAER	U	5.39	T/YR		0			The TPY emission rate is based on all operating scenarios. the lb/hr rate is based on worst case MSS scenarios.					
	TX-0815	PORT ARTHUR ETHANE SIDE CRACKER	TOTAL PETROCHEMICALS & REFINING USA, INC.	JEFFERSON	TX	PSDTX142 6, GHGSPDT X114	2869	42752	43055	Ethylene Production	Multi Point Ground Flare	19.31	NATURAL GAS	0		Applicant will obtain an AMOC and AMEL prior to startup of the MPGF	Nitrogen Oxides (NOx)	10102	Good Combustion Practices & Design	94.27	T/YR		BACT-PSD	U	0		0			Emission rate of 94.27 tpy is the sum of 35.86 tpy NOx for routine operations and 58.41 tpy NOx for MSS operations.						
	*TX-0838	BEAUMONT CHEMICAL PLANT	EXXONMOBIL OIL CORPORATION	JEFFERSON	TX	PSDTX843 M2, PSDTX860 M2, GHGSPD	2869	43264	43773	Increase in supplemental natural gas to two flares in a cap, 3 other flares, with attendant increase in fugitive and MSS emissions from associated piping.	High and Low Pressure Flare cap	19.31		0			Nitrogen Oxides (NOx)	10102	Meet the design and operating requirements of 40 CFR §660.18.	0		BACT-PSD	U	0		0										
	*TX-0838	BEAUMONT CHEMICAL PLANT	EXXONMOBIL OIL CORPORATION	JEFFERSON	TX	PSDTX843 M2, PSDTX860 M2, GHGSPD	2869	43264	43773	Increase in supplemental natural gas to two flares in a cap, 3 other flares, with attendant increase in fugitive and MSS emissions from associated piping.	UDEX FLARE	19.31		0			Nitrogen Oxides (NOx)	10102	Meet the design and operating requirements of 40 CFR §660.18.	0		BACT-PSD	U	0		0										
	*TX-0838	BEAUMONT CHEMICAL PLANT	EXXONMOBIL OIL CORPORATION	JEFFERSON	TX	PSDTX843 M2, PSDTX860 M2, GHGSPD	2869	43264	43773	Increase in supplemental natural gas to two flares in a cap, 3 other flares, with attendant increase in fugitive and MSS emissions from associated piping.	PARAXYLENE FLARE	19.31		0			Nitrogen Oxides (NOx)	10102	Meet the design and operating requirements of 40 CFR §660.18.	0		BACT-PSD	U	0		0										
	*TX-0838	BEAUMONT CHEMICAL PLANT	EXXONMOBIL OIL CORPORATION	JEFFERSON	TX	PSDTX843 M2, PSDTX860 M2, GHGSPD	2869	43264	43773	Increase in supplemental natural gas to two flares in a cap, 3 other flares, with attendant increase in fugitive and MSS emissions from associated piping.	C & S FLARE	19.31		0			Nitrogen Oxides (NOx)	10102	Meet the design and operating requirements of 40 CFR §660.18.	0		BACT-PSD	U	0		0										
	*TX-0863	POLYETHYLENE 7 FACILITY	THE DOW CHEMICAL COMPANY	BRAZORIA	TX	153106 AND N268	2869	43711	43749	Addition of new polyethylene manufacturing plant at the Dow Freeport Site.	FLARE	19.31		0			Nitrogen Oxides (NOx)	10102	GOOD COMBUSTION PRACTICES	0		BACT-PSD	U	0		0										
	*TX-0864	EQUISTAR CHEMICALS CHANNELVIEW COMPLEX	EQUISTAR CHEMICALS, LP	HARRIS	TX	N266, PSDTX154 2, GHGSPDT X183	2869	43717	43741	new propane dehydrogenation (PDH) unit and a new polypropylene (PP) production unit: (1)The action concerns the authorization for the PDH unit is under TCEQ Project No. 286455 with assigned Permit Nos. 152181, PSDTX1540, GHGSPDTX182, and N264. (2)The action concerns the authorization for the PP unit is under TCEQ Project No. 286467 with assigned Permit Nos. 152184, PSDTX1542, GHGSPDTX183and N266.  evaluated as a single project for purposes of evaluating major NSR. The project is subject to Nonattainment New Source Review (NNSR) requirements for significant increases of VOC (an ozone precursor) and is subject to Prevention of Significant Deterioration (PSD) requirements for CO and particulate (PM, PM10 and PM2.5). Affected units with no modifications include the wastewater treatment system (WWTS) and C3 Splitter project of the Olefin plants	Multi Point Ground Flare	19.31	natural gas	0			Nitrogen Oxides (NOx)	10102	good combustion practices, design, natural gas fuel	0		BACT-PSD	U	0		0		0								
	*TX-0864	EQUISTAR CHEMICALS CHANNELVIEW COMPLEX	EQUISTAR CHEMICALS, LP	HARRIS	TX	N266, PSDTX154 2, GHGSPDT X183	2869	43717	43741	new propane dehydrogenation (PDH) unit and a new polypropylene (PP) production unit: (1)The action concerns the authorization for the PDH unit is under TCEQ Project No. 286455 with assigned Permit Nos. 152181, PSDTX1540, GHGSPDTX182, and N264. (2)The action concerns the authorization for the PP unit is under TCEQ Project No. 286467 with assigned Permit Nos. 152184, PSDTX1542, GHGSPDTX183and N266.  evaluated as a single project for purposes of evaluating major NSR. The project is subject to Nonattainment New Source Review (NNSR) requirements for significant increases of VOC (an ozone precursor) and is subject to Prevention of Significant Deterioration (PSD) requirements for CO and particulate (PM, PM10 and PM2.5). Affected units with no modifications include the wastewater treatment system (WWTS) and C3 Splitter project of the Olefin plants	Elevated Flare	19.31	natural gas	0			Nitrogen Oxides (NOx)	10102	good combustion practices, design, natural gas fuel	0		BACT-PSD	U	0		0		0								
	*TX-0865	EQUISTAR CHEMICALS CHANNELVIEW COMPLEX	EQUISTAR CHEMICALS, LP	HARRIS	TX	N264, PSDTX154 0, GHGSPDT X182	2869	43717	43741	new PDH unit. Includea four heaters, one ground flare, one steam-assisted elevated flare, one cooling tower, one CCR vent scrubber, one ammonia vent scrubber, catalyst handling systems, several tanks/drums, wastewater, fugitive components and MSS activities.	MULTIPOINT GROUND FLARE	19.31	NATURAL GAS	0			Nitrogen Oxides (NOx)	10102	Good combustion practices, proper design and operation	0		BACT-PSD	U	0		0										
	*TX-0865	EQUISTAR CHEMICALS CHANNELVIEW COMPLEX	EQUISTAR CHEMICALS, LP	HARRIS	TX	N264, PSDTX154 0, GHGSPDT X182	2869	43717	43741	new PDH unit. Includea four heaters, one ground flare, one steam-assisted elevated flare, one cooling tower, one CCR vent scrubber, one ammonia vent scrubber, catalyst handling systems, several tanks/drums, wastewater, fugitive components and MSS activities.	MEROX ELEVATED FLARE	19.31	NATURAL GAS	0			Nitrogen Oxides (NOx)	10102	Good combustion practices, proper design and operation	0		BACT-PSD	U	0		0										