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ENVIRONMENTAL SERVICES, INC.
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June 9, 2022

Ms. Bliss Higgins
Louisiana Department of Environmental Quality
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

Re: Louisiana Green Fuels LLC
Columbia, LA
Agency Interest # 234155
Minor Source Air Permit Application

Ms. Higgins:

On behalf of our client, Louisiana Green Fuels LLC (LGF), Eagle Environmental Services, Inc. (Eagle) is submitting a Minor Source Air Permit Application for a proposed renewable fuels bio-refinery in Caldwell Parish, LA. The proposed LGF facility will be powered by onsite-generated "green" power and will utilize Carbon Capture and Sequestration (CCS) technology to capture and sequester carbon dioxide (CO_2) from both the bio-refinery and the onsite power plant. With a Carbon Intensity (CI) score of approximately minus 294, the LGF facility will be the most deeply carbon-negative liquid renewable fuels production facility in the world.

A detailed description of the proposed facility is provided in Section 1.0 of this document. Please feel free to contact me or Barrett Kyle at (225) 757-0870 with any questions concerning this request.

Sincerely,

Charles Brumfield
Senior Environmental Engineer
Eagle Environmental Services, Inc.

RECEIVED
JUN 09 2022
By

LOUISIANA GREEN FUELS LLC

LOUISIANA GREEN FUELS

AGENCY INTEREST NO. 234155

CALDWELL PARISH, LOUISIANA

MINOR SOURCE AIR PERMIT APPLICATION

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LOUISIANA GREEN FUELS LLC

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AGENCY INTEREST NO. 234155

CALDWELL PARISH, LOUISIANA

MINOR SOURCE AIR PERMIT APPLICATION

June 2022

PREPARED BY:

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EAGLE PROJECT NO. 398-21-0004

TABLE OF CONTENTS

FIGURES

APPENDICES

Section 1.0
Introduction

1.0 INTRODUCTION

1.1 Background

With this Minor Source Air Permit Application, Louisiana Green Fuels LLC (LGF), a subsidiary of Strategic Biofuels LLC (SBF), seeks approval for the construction and operation of a renewable fuels bio-refinery in northeast Louisiana. Amid global commitments for the decarbonization of the energy sector, the Louisiana Green Fuels Project has been developed as an integral component of SBF's ambitious endeavor to set the standard in the conversion of renewable feedstock from the agroforestry sector to renewable fuels. The proposed LGF facility will be powered by onsite-generated "green" power and will utilize Carbon Capture and Sequestration (CCS) technology to capture and sequester carbon dioxide (CO_2) from both the bio-refinery and the onsite power plant. With a Carbon Intensity (CI) score of approximately minus 294, the LGF facility will be the most deeply carbon-negative liquid renewable fuels production facility in the world.

The LGF facility's bio-refinery feedstock will consist of abundant forestry-derived biomass in the form of wood chips. The bio-refinery feedstock will be composed primarily of whole chipped trees from the forest thinning activities of commercially managed and sustainable pine plantations. The bio-refinery will manufacture approximately 2,300 barrels per stream day of renewable diesel and renewable naphtha.

The LGF facility will employ an onsite 85.5-MW biomass-fired boiler to provide sufficient "green" electric power to operate the bio-refinery. The fuel for the power plant will be composed of forest-derived biomass materials (forest slash and sawmill materials) previously considered to have little economic value.

LGF has retained Crossbridge Energy Partners to operate and maintain the facility. Crossbridge is an experienced owner and operator of several legacy oil refineries around the world and provides tailored, full-service asset and commercial management services to next generation renewable energy assets.

An essential feature of the LGF facility that governs the facility's overall carbon negativity and drives its robust economics is the on-site CCS system that will capture over 90% of the CO_2 produced from both the bio-refinery and the electric power plant. The CO_2 will be compressed into a "supercritical" or near-liquid state and, through several onsite EPA-regulated "Class VI" wells, injected and stored permanently underground in a mile-deep sequestration reservoir.

The proposed LGF facility will be located at the Port of Columbia in Caldwell Parish, approximately 5 miles north of Columbia, Louisiana and 25 miles south of Monroe, Louisiana. The site consists of roughly 300 acres of mostly agricultural land and is bounded by a four-lane highway (US Highway 165) and the Ouachita River. Figure 1 (Site Location Map) illustrates the location of the proposed facility.

Section 2.0 of this document contains a completed Application for Approval of Emissions of Air Pollutants from Minor Sources for the proposed facility. A Certificate of Good Standing report is provided in Appendix D.

1.2 Facility Description

The bio-refinery is designed to process cellulosic biomass with a combined hydrogen and carbon content of 57% (on a dry basis) which is gasified to produce a raw synthetic gas (syngas) and ash. The syngas is cooled and cleaned of particulates within the primary gas clean-up process. Syngas is then compressed and sent to the secondary syngas clean-up process for trace contaminant treatment. A water gas shift (WGS) unit is included to adjust the hydrogen to carbon monoxide (H_2:CO) ratio of the syngas. Downstream of the WGS unit, acid gas species need to be removed to reduce carbon dioxide (CO_2) build-up and the sulfur load, with the objective of meeting an optimum composition prior to being routed to the Fischer-Tropsch (FT) synthesis unit. The CO_2 and hydrogen sulfide (H_2S) removal is accomplished through the inclusion of a Rectisol® unit, in which over 99.0% of the CO_2 within the process stream is removed, and H_2S levels are reduced to the ppbv level.

The purified syngas, with optimized H_2:CO ratio, is sent to the FT synthesis where wax and light hydrocarbons are produced. The wax and light hydrocarbon products from the FT synthesis loop are directed to the upgrading unit, wherein the raw synthetic hydrocarbon products are hydrocracked and fractionated into saleable fuels such as naphtha and diesel.

The prefeasibility level design of the project concluded that the production facility is bounded by the delivery of nominally 3,000 US short tons per day of woody biomass feedstock, resulting in a nominal combined diesel and naphtha production rate of 2,354 bpsd.

The LGF facility's 85.5-MW biomass-fired boiler is a significant contributor to the overall air emissions of the facility. Substantial efforts have been made to control emissions of the boiler. NOx emissions are controlled by an SNCR and SCR system. Carbon monoxide (CO) emissions are controlled by CO catalyst. Sulfur dioxide (SO_2) and condensable particulate matter (PM) are controlled by a circulating dry scrubber. Filterable PM Emissions are controlled by a mechanical collector. Approximately 90% of CO_2 emissions are recovered and injected via the facility's onsite CO_2 sequestration well.

Miscellaneous equipment used for emergency power generation, fire mitigation and fugitive dust control are also addressed in this application. Enclosed conveyors are utilized to move materials between various plant operations, storage, and loading operations. A baghouse will also control particulate emissions at various key locations throughout the woody biomass handling and transfer area.

A Block Flow Diagram for the proposed facility is provided as Figure 3.

1.3 Regulatory Applicability

Federal Regulatory Analysis

NNSR/PSD

The NNSR/PSD regulations apply to new major stationary sources and to modifications at existing major stationary sources. The LGF facility will have total emissions below the 100 tpy threshold for NNSR/PSD applicability. Therefore, these regulations do not apply.

40 CFR 70 – Operating Permit Program

The proposed LGF facility emissions are not estimated to exceed the 100 tpy threshold for individual criteria pollutants or the 10 tpy individual/25 tpy total HAP emission thresholds that would trigger a Part 70 permit. Therefore, the LGF facility is considered a Minor Source under the Part 70 Permit Program.

40 CFR 60 – New Source Performance Standards (NSPS)

40 CFR 60 Subpart A — General Provisions

Any stationary source that is subject to any NSPS regulation is subject to the general notification, recordkeeping, and monitoring requirement of 40 CFR 60 General Provisions, unless an applicable part 60 Subpart regulation specifically exempts the source from the provisions of Subpart A. The NSPS regulations listed below are applicable for certain sources at the LGF facility. Therefore, these items are also subject to applicable requirements of the general provisions.

40 CFR 60 Subpart Db — Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

The provisions of this subpart apply to each steam generating unit constructed, reconstructed, or modified after June 9, 1984 that has a maximum design heat input capacity greater than 100 MMBtu/hr. The project will install a steam generating biomass-fired boiler, Source 22-01. Therefore, the boiler will be subject to this Subpart and the general provisions of Subpart A. A detailed regulatory analysis is found in Appendix A.

40 CFR 60 Subpart Kb — Standards of Performance for Volatile Organic Liquid Storage Vessel (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984

This regulation applies to any storage vessel with a capacity greater than or equal to 75 m3 (19,813 gal) that stores a volatile organic liquid (VOL) and that was constructed, reconstructed, or modified after July 23, 1984. Subpart Kb does not apply to a storage vessel with a capacity greater than or equal to 39,900 gallons storing a VOL with a maximum true vapor pressure less than 0.5 psia, nor does it apply to a storage vessel with a capacity greater than or equal to 19,813 gallons but less than 39,900 gallons storing a VOL with a maximum true vapor pressure less than 2.18 psia.

A storage vessel with a design capacity greater than or equal to 39,900 gallons and storing a VOL with a maximum true vapor pressure greater than or equal to 0.75 psia and less than 11.1 psia, or a storage vessel with a design capacity greater than 19,813 gallons and less than 39,900 gallons and storing a VOL with a maximum true vapor pressure greater than or equal to 4.0 psia and less than 11.1 psia is required to be equipped with controls.

LGF facility has a group of Intermediate and Slop tanks that will be controlled by the Thermal Oxidizer, 22-09(a) and a group of naphtha product storage tanks that will be controlled by fixed-roof with internal floating roof tanks. Diesel tanks, inorganic chemical tanks, and smaller vessels will be exempt from Kb.

40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

The provisions of this subpart apply to owners and operators of each stationary compression ignition internal combustion engines that commence construction after July 1, 2005. The two fire water pumps and the two emergency diesel generators are subject to NSPS Subpart IIII, which sets specific emission limitations based on engine's type, fuel, and manufacture date. LGF facility will comply with all applicable requirements of this subpart.

The following NSPS regulations are not applicable, or the sources are exempt per the listed reasons.

40 CFR 60 Subpart Dc — Standards of Performance for Small Industrial — Commercial —Institutional Steam Generating Units

The provisions of this subpart apply to each steam generating unit constructed, reconstructed, or modified after June 9, 1989 that has a maximum design heat input capacity of 100 MMBtu/hr and a minimum design heat input capacity of 10 MMBtu/hr. Most of the LGF Heaters meet the heat capacity rule criteria of Subpart Dc (less than 100 MMBtu/hr but greater than 10 MMBtu/hr), but none of the LGF facility heaters produce steam, heat water or heat any heat transfer medium. Therefore, the LGF facility heaters do not meet the definition of a steam generating unit and will not be subject to any provisions of the rule.

40 CFR 60 Subpart Ja — Standards of Performance for Petroleum Refineries

The provisions of Subpart Ja apply to fluid catalytic cracking units, fluid coking units, delayed coking units, process heaters, and other fuel gas combustion devices, flares and sulfur recovery plants in petroleum refineries. The sulfur recovery plant need not be physically located within the boundaries of a petroleum refinery to be an affected facility, provided it processes gases produced within a petroleum refinery. Except for flares and delayed coking units, the provisions of this subpart apply to affected facilities which either commence construction, modification or reconstruction after May 14, 2007. The provisions of this subpart apply to flares which commence construction, modification or reconstruction after June 24, 2008. The definition of "petroleum refinery" per NSPS Subpart Ja is "any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives". The proposed LGF facility will not meet this definition of petroleum refinery. Therefore, none of the sources proposed to be installed as part of the proposed project will be subject to Subpart Ja.

40 CFR 60 Subpart VVa - Standards of Performance for VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced after November 7, 2006

This rule defines SOCMI as "the industry that produces, as intermediates or final products, one or more of the chemicals listed in 40 CFR 60.489." The LGF facility produces renewable diesel and naphtha. None of these products are listed SOCMI chemicals under 40 CFR 60.489. Therefore, Subpart VVa does not apply to the proposed project.

Subpart CCCC - Standards of Performance for Commercial and Industrial Solid Waste Incineration Units

This subpart establishes new source performance standards for commercial and industrial solid waste incineration units (CISWIs) and air curtain incinerators (ACIs). The Biomass Boiler will be fueled by clean cellulosic biomass that does not meet the 40 CFR part 241 definition of solid waste. Therefore, this subpart does not apply.

40 CFR 60 Subpart NNN — Standard of Performance for VOC Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations

This subpart applies to each affected facility that is part of a process unit that produces any of the chemicals listed in §60.667 as a product, co-product, by-product, or intermediate. Per the rule, "product means any compound or chemical listed in §60.667 that is produced for sale as a final product as that chemical, or for use in the production of other chemicals or compounds. By¬products, co-products, and intermediates are considered to be products."

The facility produces renewable diesel and naphtha which are not listed SOCMI chemicals. With regard to making determinations of whether a facility is a SOCMI facility, EPA has published guidance which states that "if a listed chemical is only part of

a mixed stream exiting a process unit and cannot be sold or used in another process as the listed chemical, then that chemical is not considered to be produced as a product." (55 FR 26936). The individual components in renewable diesel and naphtha are part of a mixed stream that cannot be sold or used in another process as a listed chemical. Therefore, based on the cited EPA guidance, the plant does not produce any of the SOCMI chemicals listed in the rule, and therefore, is not subject to any requirements of Subpart NNN.

40 CFR 60 Subpart QQQ — Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems

NSPS Subpart QQQ applies to affected facilities, including individual drain systems, oil water separators, and aggregate facilities, built after May 4, 1987 and located in a petroleum refinery. The Process Wastewater treatment system (WW-1) will be located in the LGF facility, which does not meet the definition of a petroleum refinery per Subpart QQQ. Therefore, Subpart QQQ does not apply to the facility.

40 CFR 60 Subpart RRR — Standards of Performance for VOC Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes

This subpart applies to each affected facility that is part of a process unit that produces any of the chemicals listed in §60.667 as a product, co-product, by-product, or intermediate. Per the rule, "product means any compound or chemical listed in §60.667 that is produced for sale as a final product as that chemical, or for use in the production of other chemicals or compounds. By¬products, co-products, and intermediates are considered to be products."

As discussed above for Subpart NNN, the facility produces renewable diesel and naphtha. In accordance with the EPA published guidance discussed above, none of the products are considered a SOCMI chemicals and therefore, the facility is not subject to any requirements of Subpart RRR.

40 CFR 60 Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after November 7, 2006

The renewable fuels plant will not use crude oil or any petroleum derived feedstock and will not manufacture or produce any petroleum-based products. Therefore, the facility is not a petroleum refinery as defined in this rule, and Subpart GGGa does not apply to the proposed project.

40 CFR 61 – National Emissions Standards for Hazardous Air Pollutants (NESHAPs)

The proposed facility is not subject to any NESHAP Part 61 standards.

40 CFR 61 Subpart J — National Emissions Standards for Equipment Leaks of Benzene

This regulation applies to fugitive emission sources that operate in benzene service. In this regulation, benzene service is defined to be equipment contacting or containing > 10% benzene. None of the piping proposed to be installed as part of the LGF facility will operate in benzene service. Therefore, the control requirements of this regulation do not apply. The LGF facility will keep a record to demonstrate that no equipment is in volatile hazardous air pollutant (VHAP) service.

40 CFR 61 Subpart M and LAC 33.1I1.5151 — Asbestos

These regulations apply to sources that perform facility demolition and/or renovation of regulated asbestos containing material. The proposed project will be located at a greenfield site and does not contain asbestos or asbestos containing materials. Therefore, these regulations do not apply.

40 CFR 61 Subpart V — National Emission Standards for Equipment Leaks

This regulation applies to fugitive emission sources that operate in volatile hazardous air pollutant (VHAP) service after the date of promulgation of a specific subpart in part 61. In this regulation, VHAP service is defined to be equipment contacting or containing > 10% benzene or vinyl chloride. None of the piping proposed to be installed as part of the facility will operate in VHAP service. Therefore, this regulation does not apply.

40 CFR 61 Subpart FF — Benzene Waste Operations (BWON)

BWON applies to owners and operators of chemical manufacturing plants, coke by-product recovery plants, and petroleum refineries. A chemical manufacturing plant is defined as "any facility engaged in the production of chemicals by chemical, thermal, physical, or biological processes for use as a product, co-product, by-product, or intermediate including but not limited to industrial organic chemicals, organic pesticide products, pharmaceutical preparations, paint and allied products, fertilizers, and agricultural chemicals."

The wastewater streams associated with the proposed project will not contain benzene. As required by 40 CFR 61.357(a), each owner or operator of a facility subject to this subpart that has no benzene onsite in waste, products, by-products, or intermediates shall submit such a report to LDEQ and EPA by the initial startup. Accordingly, the only provision of this regulation that applies is the initial notification that the wastewater from the proposed project does not contain benzene.

40 CFR 63 – National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories

The proposed facility is not a major source of hazardous air pollutants (HAPs) since the facility will have the potential to emit less than 10 tpy of any single HAP and less than 25 tpy of any combination of HAPs. Most NESHAPs are applicable only to Major Sources. However, certain NESHAPs are applicable to Area Sources as outlined below.

40 CFR 63 Subpart A — General Provisions

This subpart contains general performance test, monitoring, notification, record keeping, reporting, and control device requirements that apply to any source subject to any Part 63 NESHAP regulation, unless the applicable Part 63 Subpart specifically exempts the source from provisions of Subpart A.

40 CFR 63 Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

40 CFR 63 Subpart JJJJJJ (6J) provides HAP emission limits and management practices for facilities that own or operate an industrial, commercial, or institutional boiler located at, or is part of, an area source of HAP. The Biomass Boiler, 22-01, meets the applicability criteria for the 6J regulation and will follow all applicable requirements. All other process heaters at the facility do not meet the definition of a boiler as per the Subpart.

40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations. The LGF facility diesel firewater pumps and generators are subject to the requirements of this Subpart. The only applicable requirement per 40 CFR 63.6590(c) is to meet the requirements of 40 CFR 60 Subpart IIII. The facility will meet these requirements.

40 CFR 63 Subpart VVVVVV - National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources

40 CFR 63 Subpart VVVVVV provides HAP emission limits and management practices for facilities that own or operate a chemical manufacturing process unit (CMPU) as defined under 40 CFR 63.11502(b)(8). The rule applies to a CMPU that is located at an area source of emissions and uses feedstocks, generates as by-products, or produces as products any of the HAPs listed in Table 1 of Subpart VVVVVV. The LGF facility does not have any of the listed Table 1 HAPs. Therefore, this rule does not apply to this facility.

Other Federal Regulations

40 CFR 64 — Compliance Assurance Monitoring (CAM)

The CAM rule requires facility operators of major sources with a Part 70 or Part 71 permit to monitor the operation and maintenance of certain control equipment so that the control device performance can be evaluated, and the facility operator can report whether their facility meets established emission standards. Since the proposed LGF facility will be a minor source with regard to all regulated pollutants, the CAM regulation will not apply to any sources proposed with this application.

40 CFR Part 68 — Chemical Accident Prevention Regulation

The accidental release prevention program is mandated by section 112(r) of the Clean Air Act (amended) and is codified in 40 CFR 68. The program was initially finalized on June 20, 1996. Owners and operators of a facility that manufactures, uses, stores, or otherwise handles more than a threshold quantity of a listed regulated substance in a process, must implement a risk management program and submit a single risk management plan (RMP) for all covered processes at the facility. LGF will comply with the applicable provisions of 40 CFR 68 as applicable, which requires the facility to have a chemical accident prevention and minimization program. LGF will submit an RMP as required for the proposed plant.

40 CFR Part 82 — Stratospheric Ozone Protection

Title VI of the Clean Air Act Amendments requires phase out of ozone-depleting chemicals. The stratospheric ozone protection provisions have been codified in 40 CFR 82. LGF shall comply with the applicable requirements of 40 CFR 82.

State of Louisiana Regulatory Analysis

LAC 33:III.Chapter 5 - Permit Procedures

LGF will comply with the applicable Louisiana Air Emission Permit requirements codified under LAC 33:1I1.501, 503, 504, 517 as well as General Conditions codified under LAC 33:1I1.537.

LAC 33:III.Chapter 9 - General Regulations

This section contains general requirements applicable to the facility. LAC 33:I11.905 requires air pollution control facilities be installed whenever practically, economically, and technologically feasible. When control facilities have been installed, they must be maintained in proper working order. LGF will keep all control facilities in proper working order to ensure proper emissions control. The facility will submit an air emissions inventory as required by LAC 33:I1I.918 and 919. Unauthorized discharges will be reported in accordance with LAC 33:II1.927.

LAC 33:III.1101, 1103 & 1107 - Control of Emissions of Smoke

This regulation prohibits open burning and the impairment of visibility on public roads as well as opacity limits for the combustion source stacks. LGF will abide by all requirements for the appropriate sources.

LAC 33:III.1105 - Smoke from Flaring Shall Not Exceed 20 Percent Opacity

The emission of smoke from a flare or other similar device used for burning in connection with pressure valve releases for control over process upsets shall be controlled so that the shade or appearance of the emission does not exceed 20 percent opacity for a combined total of six hours in any 10 consecutive days. If it appears the emergency cannot be controlled in six hours, the Office of Environmental Compliance, Emergency and Radiological Services Division, Single Point of Contact (SPOC), shall be

notified as soon as possible after the start of the upset period. This regulation will apply to the Flare 22-10.

LAC 33:III.1305 - Control of Fugitive Emissions

This rule requires that all reasonable precautions be taken to prevent particulate matter from becoming airborne, including but not limited to:

1. Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts;
2. Installation and use of dust collectors to enclose and vent the handling of dusty materials;
3. Open-bodied trucks transporting materials likely to give rise to airborne dust shall be covered at all times when in motion; and
4. Paving roadways and maintaining the roadways in a clean condition.

LGF will take all appropriate precautions to prevent particulate matter fugitive emissions.

LAC 33:III.1311 - Emission Limits (Particulate Matter)

In accordance with LAC 33:III.1311.B, no person shall cause, suffer, allow or permit the emission of particulate matter to the atmosphere from any process or process equipment in excess of the amount shown in LAC 33:III.1321, Table 3 for the process weight rate allocated to such source. All applicable LGF process sources are controlled such that these requirements are met. Per LAC 33:III.1311.C, particulate matter emissions shall be controlled so that the shade or appearance of the emission is not darker than 20% average opacity, except the emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. All applicable LGF sources will meet this requirement. This section will not apply to emissions from the Cooling Tower, 22-15, where the presence of uncombined water is the only reason for not meeting the 20% opacity requirement.

LAC 33:III.1313 - Particulate Emissions from Fuel Burning Equipment

This regulation prohibits fuel-burning equipment from emitting particulate matter to the atmosphere in excess of 0.6 pounds per MMBTU of heat release. LGF will comply with all applicable provisions of this regulation for the boiler, diesel engines, and the heaters.

LAC 33:III.1503 - Emission Standards for Sulfur Dioxide - Combustion Devices

This regulation is applicable to single point sources that have the potential to emit five tons per year or more of SO2. LAC 33:III.1503 defines the emission limit for SO2 sources (limit = 2000 ppmv based on a 3-hr average) located at facilities other than sulfuric acid plants and sulfur recovery units. Per LAC 33:III.1502.A.3, sources that emit or have the potential to emit less than 5 tpy of SO2 are not subject to any requirements of Chapter 15. All the SO2-emitting sources except for the Biomass Boiler, 22-01, will emit less than 5 tpy SO2 and are not subject to any requirements of this rule. The Biomass Boiler, 22-01, has the potential to emit greater than 5 tpy SO2 but will qualify for an exemption from emission limits because potential SO2 emissions are less than 250 tpy.

LAC 33:III.2103 - Storage of Volatile Organic Compounds

This regulation prohibits the placement, storing, or holding of any volatile organic compound having a true maximum true vapor pressure (TVP) of 1.5 psia or greater in any stationary tank, reservoir, or other container of more than 250 gallons nominal capacity, unless the tank, reservoir, or other container is designed and equipped with controls. Tanks with a capacity between 250 and 40,000 gallons must be equipped with a submerged fill pipe, a vapor loss control system, or be a pressure tank. Tanks greater than 40,000 gallons must be a pressure tank or be equipped with a submerged fill pipe and floating roof or vapor loss control system.

See the NSPS Subpart Kb discussion for sources applicable to this regulation.

LAC 33:III.2107 - Volatile Organic Compounds — Loading

The control requirements of this regulation apply to loading facilities for VOCs having a true vapor pressure at loading conditions of 1.5 psia (10.3 kPa) or greater. For loading facilities constructed after May 20, 1979, if the loading throughput per day equals to or greater than 20,000 gallons (75,700 liters), the loading facility must comply with the requirements of Subsections B-F of this Section when servicing tanks, trucks or trailers which have individual capacities in excess of 200 gallons (760 liters).

The naphtha rail loading will not exceed 20,000 gallons per day and therefore is not subject to this regulation. All loading operations will be subject to the recordkeeping requirements under LAC 33:I1I.2107.D.

LAC 33:III.2115 - Waste Gas Disposal

This regulation applies to waste gas streams that contain VOC located at facilities that have the potential to emit 25 tons per year or more of VOC in the parishes of Ascension, East Baton Rouge, Iberville, Livingston, and West Baton Rouge and that have the potential to emit 100 tons per year or greater of VOC in parishes other than Ascension, East Baton Rouge, Iberville, Livingston, and West Baton Rouge. This facility is located in Caldwell Parish and not applicable.

LAC 33:III.2121 - Fugitive Emission Control

This Section is applicable to each process unit at petroleum refineries, natural gas processing plants, synthetic organic chemical manufacturing industry (SOCMI) facilities, methyl tertiary butyl ether (MTBE) manufacturing facilities, and polymer manufacturing facilities. The proposed plant is not one of the listed affected facilities under this rule. Therefore, this regulation will not apply to any of the sources proposed in this application.

LAC 33:III.2122 - Fugitive Emissions Control for Ozone Nonattainment Areas and Specified Parishes

This regulation applies to equipment in petroleum refineries, natural gas processing plants, SOCMI facilities, MTBE manufacturing facilities, and polymer manufacturing facilities in Ascension, East Baton Rouge, Iberville, Livingston, Pointe Coupee, and West Baton Rouge Parishes. This facility is located in Caldwell Parish and therefore, this regulation will not apply to any of the sources proposed in this application.

LAC 33:III.2153 - Limiting VOC Emissions from Industrial Wastewater

As a facility classified under SIC code 2869, the proposed Plant is potentially subject to this regulation. However, because it is located in the parish of Caldwell it is not applicable.

LAC 33:III.Chapter 22 - Control of Emissions of Nitrogen Oxides (NOx)

This regulation applies to any affected facility in the Baton Rouge area with one or more affected point sources that collectively emit or have the potential to emit 25 tons or more per year of NOx. This facility is located in Caldwell Parish and therefore, this regulation will not apply to any of the sources proposed in this application.

LAC 33:III.Chapter 29 - Odor Regulations

LGF will operate the facility so that off-site odors do not cause a nuisance.

LAC 33:III.Chaper 51 — Toxic Air Pollutants

Chapter 51 regulates Toxic Air Pollutants (TAPs). Under this state-only program, a major source is defined as any stationary source of air pollutants that emits, or has the potential to emit, in the aggregate, 10 tpy or more of any TAP listed in LAC 33:III.5112, Table 51.1 or 25 tpy of all TAPs listed in LAC 33:III.5112, Table 51.1. All federal HAPs are TAPs but not all TAPs are on the federal HAP list. For the LGF facility, Ammonia emissions are estimated to exceed the 10 tpy threshold. Ammonia is a Class III TAP and therefore no additional MACT is required. Ammonia will exceed the Minimum Emission Rate of 1200 lb/yr but is not anticipated to impact the 8 hour ambient air standard.

LAC 33:III.Chaper 56 — Prevention of Air Pollution Emergency Episodes

Chapter 56 regulates preventative efforts that facilities would implement to mitigate excess concentration of air pollutants during periods of high pollution potential. LGF will develop a standby plan for the reduction of emissions during an air pollution alert, air pollution warning, or air pollution emergency. LGF will submit this standby plan to the Administrative Authority when requested in accordance with LAC 33:III.5611.

LAC 33:III.Chapter 59 — Chemical Accident Prevention Program

Chapter 59 incorporates by reference 40 CFR Part 68 provisions. LGF will comply with the applicable provisions of 40 CFR 68, except as specified in LAC 33:11I.5901. The facility will produce, process, handle, and store chemicals in quantities greater than threshold amounts, therefore this regulation applies. LGF will prepare an RMP and comply with all requirements of LAC 33:III.Chapter 59 as well as 40 CFR Part 68. Furthermore, as required by LAC 33:III.5911.A.2, LGF will register any regulated substance that may become present in amount greater than the threshold planning quantity for such substance within 60 days of first storing on site.

1.4 Emission Calculations

Appendix C of this submittal contains emissions calculations and supporting information for emission point sources at the proposed facility.

When available, vendor data and emission factors were used to calculate source air emissions. Otherwise, AP-42 emissions factors for the appropriate source were used. Conservative estimates were used to allow for operational flexibility of each source.

1.5 Listing of Contiguous Sites

In accordance with current LDEQ policy, no contiguous facilities in Louisiana Green Fuels LLC's control were identified within ¼ mile of the Louisiana Green Fuels facility. Figure 1 (Site Location Map) illustrates the location of the proposed facility.

Section 2.0

APPLICATION FOR APPROVAL OF EMISSIONS OF AIR POLLUTANTS FROM MINOR SOURCES

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

PLEASE TYPE OR PRINT

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

Facility Name (if any) Louisiana Green Fuels	
Agency Interest Number (A.I. Number) 234155	**Currently Effective Permit Number(s)** NA
Company - Name of Owner Louisiana Green Fuels LLC	
Company - Name of Operator (if different from Owner)	
Parent Company (if Company – Name of Owner given above is a division) Strategic Biofuels LLC	
Federal Tax-ID 85-4388191	

Ownership:
Check the appropriate box.

☒ corporation, partnership, or sole proprietorship ☐ regulated utility ☐ municipal government

☐ state government ☐ federal government ☐ other, specify

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

What does this facility produce? Add more rows as necessary.
The Louisiana Green Fuels plant will produce biofuels from wood chips and wood residue products.

What modifications/changes are proposed in this application? Add more rows as necessary.
This is a new facility.

Nearest town (in the same parish as the facility): Columbia, Louisiana

Parish(es) where facility is located: Caldwell

Distance To (mi):	105 Texas	57 Arkansas	55 Mississippi	215 Alabama
Latitude of Facility Front Gate:	32 Deg	11 Min	14 Sec	54 Hundredths
Longitude of Facility Front Gate:	-92 Deg	06 Min	06 Sec	04 Hundredths

Add physical address and description of location of the facility below. If the facility has no address, provide driving directions. Add more rows as necessary.
The site is located on Riverton Camp Road approximately 5 miles north of Columbia, LA off of Highway 165.

☒ Map attached (required per LAC 33:III.517.D.1)
☒ Description of processes and products attached (required per LAC 33:III.517.D.2)
☒ Introduction/Description of the proposed project attached (required per LAC 33:III.517.D.5)
☐ Evidence of compliance with local zoning ordinance for proposed location (required per LAC 33:III.513.C.1.a; for Portable Facilities only)

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

Are you requesting confidentiality for any information except air pollutant emission rates? ☐ Yes ☒ No

If "yes," list the sections for which confidentiality is requested below. Add rows as necessary. Confidentiality requests require a submittal that is separate from this application. Information for which confidentiality is requested should not be submitted with this application. Consult instructions.

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

Check all that apply.

☒ Minor Source ☐ Synthetic Minor Source ☐ Small Source ☐ Portable Facility
☐ Minor Source Oil & Gas General Permit (MSOG)* ☐ Minor Source Surface Coating and Fabrication General Permit (SCF)*
☐ Renewal
Select one, if applicable: ☒ Entirely new facility ☐ Modification or expansion of existing facility (may also include reconciliations) ☐ Reconciliation only

*Additional separate submittal required. See instructions for more details.

If "Portable Facility" was selected above, please enter the Make, Model, and Serial Number of each portable combustion emissions source to be permitted. Otherwise, leave blank. Do *NOT* list any motor vehicles. Add rows as necessary.

Make	Model	Serial Number

Does this submittal update or replace an application currently under review? ☐ Yes ☐ No

If yes, provide date that the prior application was submitted: _____

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

☐ Previously Grandfathered (LAC 33:III.501.B.6)
☐ Previously Exempted (e.g., Small Source Exemption; LAC 33:III.501.B.2.d)
☐ Previously Unpermitted

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

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

Industrial Category: Enter the Standard Industrial Classification (SIC) Codes that apply to the facility.

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

Secondary SICC(s): _____

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

FEE CODE	TYPE	EXISTING CAPACITY	INCREMENTAL CAPACITY INCREASE	*SURCHARGES*			
				MULTIPLIER	NSPS	AIR TOXICS	TOTAL AMOUNT
1710	New				☒	☒	$1960
					☐	☐	$
					☐	☐	$
					GRAND TOTAL		$1960

Optional **Fee Explanation:** Use the space provided to give an explanation of the fee determination displayed above. Facility type is not listed for SIC 2869. Negotiated Minor Source New Application fee of $1452 plus $363 NSPS and $145 Toxics = $1960.

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

EFT Transaction Number	Date of Submittal	Total Dollar Amount
OPXJM7PS6F	June 2, 2022	$1,480.31

6. Key Dates

Estimated date construction will commence: September 2023 *Estimated date operation will commence:* August 2026

7. LAC 33:I.1701 Requirements – Answer all below for new sources and permit renewals - ☒ Yes ☐ No

Does the company or owner have federal or state environmental permits identical to, or of a similar nature to, the permit for which you are applying in Louisiana or other states? (This requirement applies to all individuals, partnerships, corporations, or other entities who own a controlling interest of 50% or more in your company, or who participate in the environmental management of the facility for an entity applying for the permit or an ownership interest in the permit.) ☐ **Yes** ☒ **No**

If yes, list States: _____

Do you owe any outstanding fees or final penalties to the Department? ☐ **Yes** ☒ **No**
If yes, explain below. Add rows if necessary.

Is your company a corporation or limited liability company? ☒ **Yes** ☐ **No**
If yes, attach a copy of your company's Certificate of Registration and/or Certificate of Good Standing from the Secretary of State. The appropriate certificate(s) should be attached to the end of this application as an appendix.

8. Certification of Compliance With Applicable Requirements

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

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

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

CERTIFICATION: I certify, under provisions in Louisiana and United States law which provide criminal penalties for false statements, that based on information and belief formed after reasonable inquiry, the statements and information contained in this Application for Approval of Emissions of Air Pollutants from Minor Sources, including all attachments thereto and the compliance statement above, are true, accurate, and complete.

a. Responsible Official		
Name Dr. Paul Schubert		
Title Chief Executive Officer		
Company Louisiana Green Fuels LLC		
Suite, mail drop, or division		
Street or P.O. Box P.O. Box 1269, 303 Wall Street		
City Columbia	State LA	Zip 71418
Business phone 318-502-4053		
Email Address paulschubert@strategicbiofuels.net		

Signature of responsible official (See LAC 33:III.502):
Paul J Schubert
Date: 5/31/22

*Approval of a delegation of authority can be requested by completing a Duly Authorized Representative Designation Form (Form_7218) available on LDEQ's website at http://deq.louisiana.gov/page/air-permit-applications

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

a. Manager of Facility who is located at plant site		
Name Bob Meredith	☒Primary contact	
Title Chief Operating Officer		
Company Louisiana Green Fuels LLC		
Suite, mail drop, or division		
Street or P.O. Box P.O. Box 1269, 303 Wall Street		
City Columbia	**State** LA	**Zip** 71418
Business phone 318-502-4053	**Mobile Phone**	
Email address bobmeredith@strategicbiofuels.net		

b. On-site contact regarding air pollution control		
Name Bob Meredith	☐Primary contact	
Title Chief Operating Officer		
Company Louisiana Green Fuels LLC		
Suite, mail drop, or division		
Street or P.O. Box P.O. Box 1269, 303 Wall Street		
City Columbia	**State** LA	**Zip** 71418
Business phone 318-502-4053	**Mobile Phone**	
Email address bobmeredith@strategicbiofuels.net		

c. Person to contact with written correspondence		
Name Bob Meredith	☐Primary contact	
Title Chief Operating Officer		
Company Louisiana Green Fuels LLC		
Suite, mail drop, or division		
Street or P.O. Box P.O. Box 1269, 303 Wall Street		
City Columbia	**State** LA	**Zip** 71418
Business phone 318-502-4053		
Email address bobmeredith@strategicbiofuels.net		

d. Person who prepared this report		
Name Charles Brumfield	☐Primary contact	
Title Senior Environmental Engineer		
Company Eagle Environmental Services, Inc.		
Suite, mail drop, or division		
Street or P.O. Box 18379 Petroleum Drive		
City Baton Rouge	**State** LA	**Zip** 70809
Business phone 225-757-0870		
Email address Charles.Brumfield@eaglered.com		

e. Person to contact about Annual Maintenance Fees		☒ a ☐ b ☐ c ☐ d ☐ other (specify below)		
Name	☐Primary contact	**Suite, mail drop, or division**		
Title		**Street or P.O. Box**		
Company		**City**	**State**	**Zip**
Business Phone		**Email Address**		

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

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

Pollutant	Proposed Emission Rate (tons/yr)
Particulate Matter (PM10)	80.74
Particulate Matter (PM2.5)	79.56
Sulfur dioxide (SO2)	38.07
Nitrogen oxides (NOx)	75.70
Carbon monoxide (CO)	69.86
Total VOC	91.49
Acetaldehyde	0.01
Benzene	0.04
Benzyl chloride	0.08
Bromoform	0.04
Carbonn disulfide	0.04
Dichloromethane	0.04
Ethylbenzene	0.04
Formaldehyde	0.04
Hexane	1.16
Methanol	0.56
Methyl chloride	0.12
Methyl ethyl ketone	0.04
Methyl isobutyle ketone (MIBK)	0.04
Naphthalene	0.03
Polycyclic Aromatic Hydrocarbon (PAH)	0.03
Styrene	0.48
Toluene	0.08
Xylenes	3.51
Ammonia	28.39
Sulfuric Acid	0.01

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

List each of the following in chronological order:

- The Permit Number and Date Action Issued for each air quality permit that has been issued to this facility or process unit (for process unit-specific permits) within the last ten (10) years.
- All small source exemptions, authorizations to construct, administrative amendments, case-by-case insignificant activities, and changes of tank service that have been approved since the currently effective Title V Operating Permit or State Operating Permit was issued to this facility or process unit (for process unit-specific permits). It is not necessary to list any such activities issued prior to the issuance of the currently effective Title V Operating Permit or State Operating Permit, if one exists.

Permit Number	Date Action Issued

12.a. Enforcement Actions [LAC 33:III.517.D.18]- ☐ Yes ☒ No

If yes, list all federal and state air quality enforcement actions, settlement agreements, and consent decrees received for this facility since the issuance of the currently effective Title V Operating Permit or State Operating Permit. For each action, list the type of action (or its tracking number), the regulatory authority or authorities that issued the action, and the date that the action was issued. Summarize the conditions imposed by the enforcement action, settlement agreement, and consent decree in Section 19, Table 2. It is not necessary to submit a copy of the referenced action. Add rows to table as necessary.

Type of Action or Tracking Number	Issuing Authority	Date Action Issued	Summary of Conditions Included?
			☐ Yes ☐ No
			☐ Yes ☐ No

12.b. Schedule for Compliance [LAC 33:III.517.D.16] ☐ Yes ☒ No

If the facility for which application is being made is not in full compliance with all applicable regulations, give a description of how compliance will be achieved, including a schedule for compliance below. Add rows as necessary. See instructions.

13. Letters of Approval for Alternate Methods of Compliance- ☐ Yes ☒ No

If yes, list all correspondence with LDEQ, EPA, or other regulatory bodies that provides for or supports a request for alternate methods of compliance with any applicable regulations for this facility. List the date of issuance of the letter and the regulation referenced by the letter. **Attach as an appendix a copy of all documents referenced in this table.** Letters that are not included may not be incorporated into a final permit. Add rows to table as necessary.

Date Letter Issued	Issuing Authority	Referenced Regulation(s)	Copy of Letter Attached?
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No

14. Initial Notifications and Performance Tests [LAC 33:III.517.D.18] - ☐ Yes ☒ No

If yes, list any initial notifications that have been submitted or one-time performance tests that have been performed for this facility since the issuance of the currently effective Title V Operating Permit or State Operating Permit in order to satisfy regulatory requirements. Any initial notification or one-time performance test requirements that have not been satisfied should be listed in Section 19, Table 2 of this application. Any notifications or performance tests that recur periodically should also be properly noted in Section 19, Table 2 of this application. Add rows to table as necessary.

Initial Notification or One-time Performance Test?	Regulatory Citation Satisfied	Date Completed/Approved

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

Was Air Quality Dispersion Modeling as required by LAC 33:III performed in support of this permit application? (Air Quality Dispersion Modeling is required when requested by LDEQ.)

☐ **Yes** ☒ **No**

*Has Air Quality Dispersion Modeling completed in accordance with LAC 33:III ever been performed for this facility in support of an air permit application previously submitted for this facility or as required by other regulations **AND** approved by LDEQ?*

☐ **Yes** ☒ **No**

If yes, enter the date the most recent Air Quality Dispersion Modeling results as required by LAC 33:III were submitted:

_____

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

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Toxic Air Pollutant Ambient Air Standard or (National Ambient Air Quality Standard {NAAQS})
none			

16. General Condition XVII Activities [LAC 33:III.537]- ☐ Yes ☒ No

Enter all activities that qualify as Louisiana Air Emissions Permit General Condition XVII Activities.

- Expand this table as necessary to include all such activities.
- See instructions to determine what qualifies as a General Condition XVII Activity.
- Do not include emissions from General Condition XVII Activities in the proposed emissions totals for the permit application.
- The "Schedule" blank for each proposed General Condition XVII Activity is a **required** entry.

		Emission Rates – TPY					
Work Activity	**Schedule**	**PM_{10}**	**SO_2**	**NO_x**	**CO**	**VOC**	**Other**

17. Insignificant Activities [LAC 33:III.501.B.5] - ☒ Yes ☐ No

Enter all activities that qualify as Insignificant Activities.

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

Emission Point ID No.	Description	Physical/Operating Data	Citation
IA-22-01	CPI Waste Oil Tank	< 10,000 gallons	LAC 33:III.501.B.5.A.3

18. Regulatory Applicability for Commonly Applicable Regulations – Answer all below [LAC 33:III.517.D.10]

Does this facility contain asbestos or asbestos containing materials? ☐ **Yes** ☒ **No**
If "yes," the facility or any portion thereof may be subject to 40 CFR 61, Subpart M, LAC 33:III.Chapter 27, and/or LAC 33:III.5151, and this application must address compliance as stated in Section 19 of this application.

Is the facility represented in this permit subject to 40 CFR 68? ☒ **Yes** ☐ **No**
If "yes," the entire facility is subject to 40 CFR 68 and LAC 33:III.Chapter 59, and this application must address compliance as stated in Section 19 of this application.

Is the facility listed in LAC 33:III.5611?

Table 5 ☒ **Yes** ☐ **No**

Table 6 ☒ **Yes** ☐ **No**

Table 7 ☒ **Yes** ☐ **No**

Does the applicant own or operate commercial refrigeration equipment normally containing more than 50 pounds of refrigerant at this facility? ☒ **Yes** ☐ **No**
If "yes," the entire facility is subject to 40 CFR 82, Subpart F, and this application must address compliance as stated in Section 19 of this application.

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

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

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

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

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

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

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

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

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

Regulatory Applicability Tables 1-4 are included as Appendix A.

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

Complete one (1) EIQ for:

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

For each EIQ:

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

The EIQ is in Microsoft Word Excel. Visit the following website to get to the EIQ form.
http://deq.louisiana.gov/page/air-permit-applications

Emissions Inventory Questionnaire (EIQ) Forms are included as Appendix B.

21. Contiguous/Adjacent Facilities [LAC 33:III.502]

List each facility that is contiguous/adjacent to and under common control with the facility represented in this permit application.

If any contiguous facilities exist, complete all fields for each contiguous/adjacent facility. Emission rates should be represented in tons per year. Add rows as necessary. As the last entry, show the total emission rates of each listed pollutant for all listed contiguous/adjacent facilities. If no contiguous facilities exist, enter "N/A."

Guidance regarding contiguous/adjacent determinations is available at http://deq.louisiana.gov/page/-contiguous-or-adjacent-properties-in-the-oil-and-natural-gas-sector.

Emission rates in tons per year

Facility Name	Agency Interest Number	PM_{10}	SO_2	NO_X	CO	VOC	Total HAPs/Total TAPs
N/A							
Total							

STATE OPERATING PERMIT APPLICATION COMPLETENESS CHECKLIST

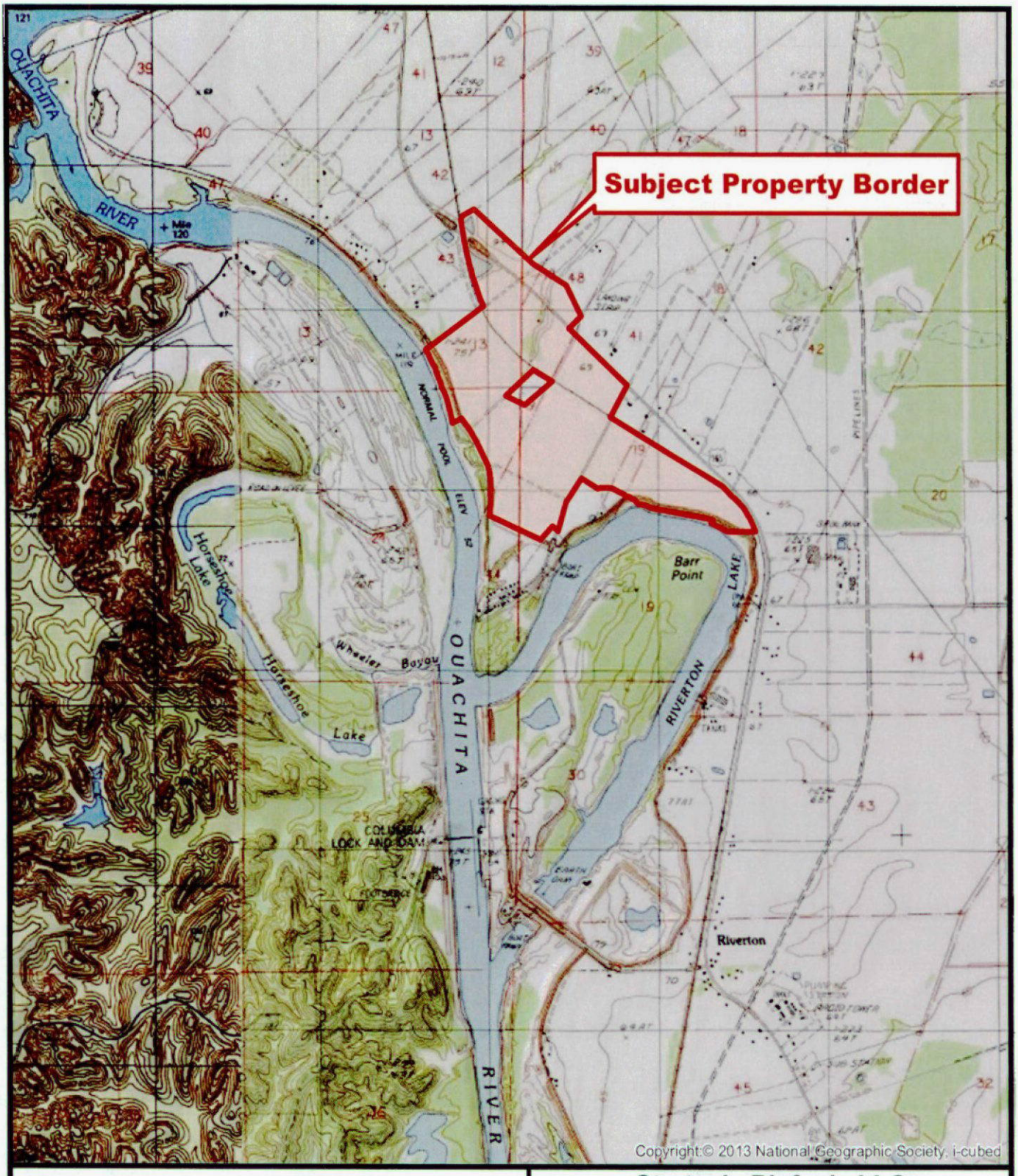
Instructions: Complete this checklist and submit with the completed air permit application.

LAC 33:III.	Completeness Questions Relative to the State Operating Permit Application	Yes	No	NA	Location Within the Permit Application
517.B.1,2 Certification	Does the Application include a Certification by a Responsible Official or Duly Authorized Representative?	X			Section 2
517.D.1 Identifying Information	Does the Application Include:				
	1. Company Name, Physical and Mailing Address of Facility?	X			Section 2
	2. Map showing Location of the Facility?	X			Figure 1
	3. Owner and Operator Names and Agent?	X			Section 2
	4. Name and Telephone Number of Plant Manager or Contact?	X			Section 2
517.D.2 SIC Codes, Source Categories	Does the Application Include a Description of the Source's Processes and Products?	X			Section 1
	Does the Application Include the Source's SIC Code?	X			Section 2
	Does the Application Include EPA Source Category of HAPs if applicable?			X	
517.D.3,6 EIQ Sheets	Has an EIQ Sheet been Completed for each Emission Point whether an Area or Point Source?	X			Appendix B
517.D.4 Monitoring Devices	Does the Application Include Identification and Description of Compliance Monitoring Devices or Activities?			X	
517.D.5 Revisions and Modifications Only	For Revisions or Modifications, Does the Application include a Description of the Proposed Change and any Resulting Change in Emissions?			X	
517.D.7 General Information	Does the Application Include Information Regarding Fuels, Fuel Use, Raw Materials, Production Rates, and Operating Schedules as necessary to substantiate emission rates?	X			Appendix C
517 D.8 Operating Limitations	Has Information Regarding any Limitations on Source Operation or any Applicable Work Practice Standards been Identified?			X	
517.D.9 Calculations	Are Emission Calculations Provided?	X			Appendix C
517.D.10 Regulatory Review	Does the Application Include a Citation and Description of Applicable Louisiana and Federal Air Quality Requirements and Standards?	X			Appendix A
517.D.11 Test Methods	Has a Description of or a Reference to Applicable Test Methods Used to Determine Compliance with Standards been Provided?			X	

LAC 33:III.	Completeness Questions Relative to the State Operating Permit Application	Yes	No	NA	Location Within the Permit Application
517.D.12 Major Sources of TAPs	Does the Application include Information Regarding the Compliance History of Sources Owned or Operated by the Applicant (per LAC 33.III.5111)?	X			Section 2
517.D.13 Major Sources of TAPs	Does the Application include a Demonstration to show that the Source Meets all Applicable MACT and Ambient Air Standard Requirements?	X			Appendix B
517.D.16, 18	Has any Additional Information been Provided?		X		
517.D.17 Fees	Has the Fee Code been Identified?	X			Section 2
	Is the Applicable Fee Included with the Application?		X		Online Payment
517.F Confidentiality	Does the Application Include a Request for Non-Disclosure (Confidentiality)?		X		
525.B. Minor Permit Modifications	Does the Application Include a Listing of New Requirements Resulting for the Change?			X	
	Does the Application Include Certification by the Responsible Official that the Proposed Action Fits the Definition of a Minor Modification as per LAC 33:III.525.A.			X	
	Does the Certification also Request that Minor Modification Procedures be Used?			X	

Figure 1

Site Location Map



Legend

Subject Property

N

0 1,250 2,500 5,000 7,500 Feet

Strategic Biofuels LLC
Columbia, LA

Louisiana Green Fuels Project

Site Location Map

Caldwell Parish

E·A·G·L·E ENVIRONMENTAL SERVICES, INC.

Drawn:	JP
Checked:	JM
Approved:	JM
Date:	5/6/22
Dwg. No.:	398-21-0004-A001

Figure 1

Figure 2

Aerial Photograph

N

Legend

Subject Property Border

0 500 1,000 2,000 3,000 Feet

Strategic Biofuels LLC
Columbia, LA

Louisiana Green Fuels Project

Aerial Photograph

Caldwell Parish

E·A·G·L·E
ENVIRONMENTAL SERVICES, INC.

Drawn:	JP
Checked:	JM
Approved:	JM
Date:	5/6/22
Dwg. No.:	398-21-0004-A002

Figure 2

Figure 3

Block Flow Diagram

Block flow diagram

The block flow diagram of the production process of renewable diesel and naphtha, identifying the emission sources is presented below.

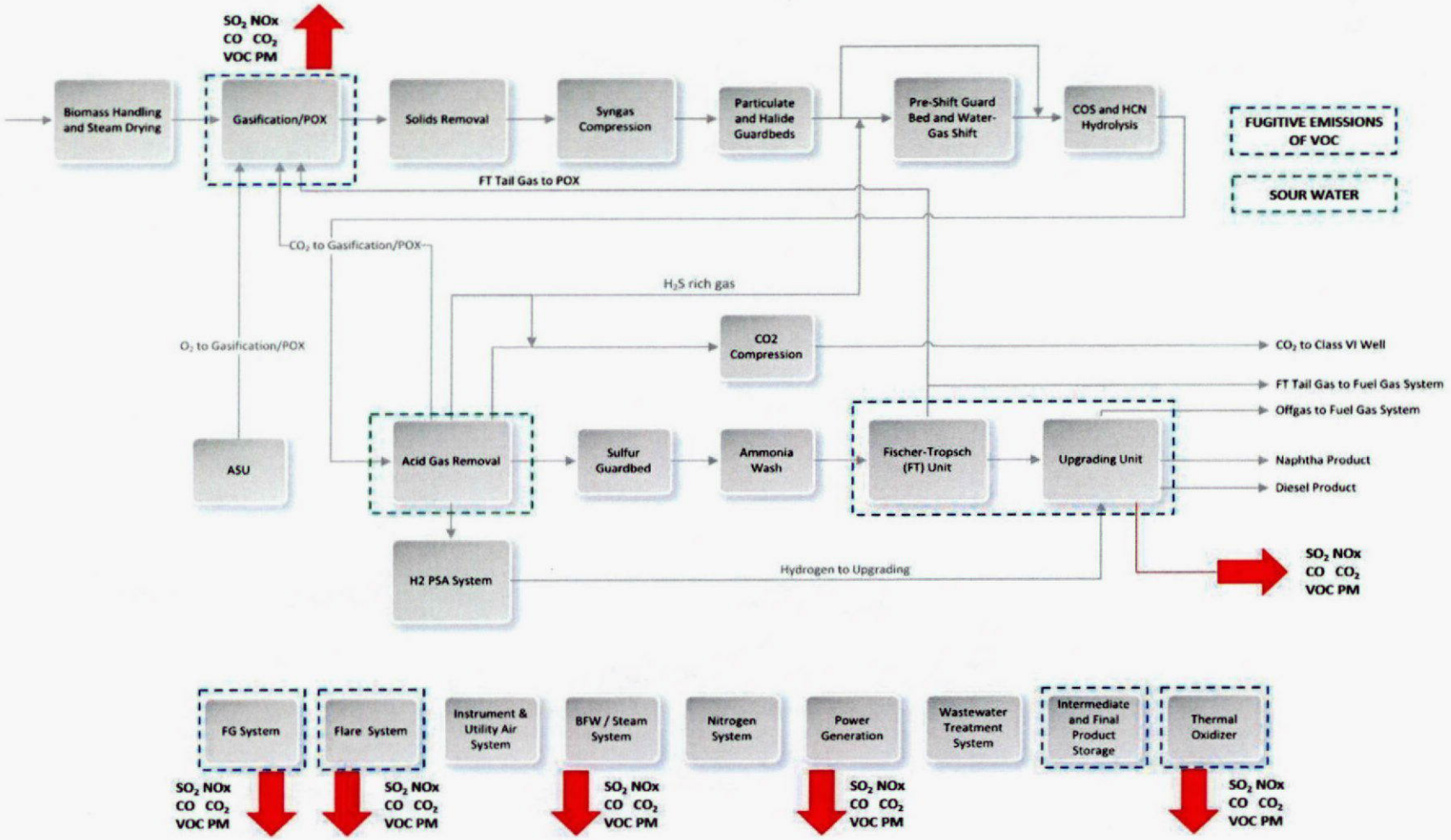


Figure 3: Overall Facility Block Flow Diagram

Appendix A
Regulatory Applicability Tables 1-4

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

Note: This table lists regulations that are commonly applicable to many sources, but is not intended to be an all inclusive list. Alter the headings of this table as necessary in order to address ALL potentially applicable requirements.

Source ID No.:	Descriptive Name of the Source	LAC 33:III								LAC 33:III.Chapter								
		2103	2107	2111	2113	2115	2121	2122	2153	5	9	11	13	15	29	51	56	59
---	Facility Wide			3	1	3	3	3		1	1	1		3	1	1	1	1
---	22-01, Biomass Boiler Stack											1	1	3				
---	22-02, Biomass Handling Baghouse												1					
---	22-02(a), Collector #1, Truck Receiving Area												1					
---	22-02(b), Collector #2, Dryer Island Area												1					
---	22-02(c), Collector #3, Cried Chip Conveying and Storage Area												1					
---	22-02(d), Collector #4, Gasifier Feed/Distribution Systems w/ TRI Feeders												1					
---	22-03, Biomass Dryer #1											3	3	3				
---	22-04, Biomass Dryer #2											3	3	3				
---	22-05, Biomass Dryer #3											3	3	3				
---	22-06, Biomass Dryer #4											3	3	3				
---	22-07, Gasification Heater Common Stack							3				3	1	3				
---	22-08, Reactor Charge Heater							3				3	1	3				
---	22-09, SO2 Scrubber											3	3	3				
---	22-09(a), Thermal Oxidizer											1	1	3				
---	22-09(a)(1), LHC Intermediate and Off spec Tank TNK-0101	1																
---	22-09(a)(2), Wax Intermediate and Off spec Tank TNK-0102	1																
---	22-09(a)(3), Slops Tank #1 TNK-0103	1																
---	22-09(a)(4), Slops Tank #2 TNK-0104	1																
---	22-09(a)(5), Railcar Loading																	
---	22-10, Flare											1	1	3				
---	22-11, Emergency Generator Diesel Engine #1											1	1	3				
---	22-12, Emergency Generator Diesel Engine #2											1	1	3				
---	22-13, Diesel Firewater Pump #1											1	1	3				
---	22-14, Diesel Firewater Pump #2											1	1	3				
---	22-15, Cooling Tower																	
---	22-16, Fractionator Feed Heater							3				3	1					
---	22-17, Naphtha StaorageTank (TNK-0201)	1																
---	22-18, Naphtha Staorage Tank (TNK-0202)	1																
	22-19, Naphtha Sales Tank (TNK-0203)	1																
---	22-20, Diesel Storage Tank (TNK-0204)	3																
---	22-21, Diesel Storage Tank (TNK-0205)	3																
---	22-22, Diesel Sales Tank	3																
---	FUG-01, Fugitive Leak Emissions						3	3										
---	FUG-02, Fugitive Roadway Emissions												1					

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Note: This table lists regulations that are commonly applicable to many sources, but is not intended to be an all inclusive list. Alter the headings of this table as necessary in order to address ALL potentially applicable requirements.

Source ID No.:	Descriptive Name of the Source	LAC 33:III								LAC 33:III.Chapter								
		2103	2107	2111	2113	2115	2121	2122	2153	5	9	11	13	15	29	51	56	59
---	22-23, Sulfuric Acid Storage Tank (TNK-301)	3																
---	22-24, Methanol Storage Tank (TNK-0101)	1																
---	22-25, Diesel Blending Tank	3																
---	WW-1, Wastewater Treatment System		3						3									

KEY TO MATRIX

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

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

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

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

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

Note: This table lists regulations that are commonly applicable to many sources, but is not intended to be an all inclusive list. Alter the headings of this table as necessary in order to address ALL potentially applicable requirements.

Source ID No.:	Descriptive Name of the Source	40 CFR 60 NSPS																40 CFR 61					40 CFR 63 NESHAP						40 CFR		
		A	K	Ka	Kb	D	Da	Db	Dc	Ja	CCCC	GGGa	NNN	RRR	VVa	QQQ	IIII	A	J	M	V	FF	A	Q	5D	6J	6V	ZZZZ	64	68	82
---	Facility Wide	1	3	3		3	3		3	3	3	3	3	3	3	3		3	3	3	3	3	1	3	3		3		3	1	1
---	22-01, Biomass Boiler Stack																									1					
---	22-02, Biomass Handling Baghouse																														
---	22-02(a), Collector #1, Truck Receiving Area																														
---	22-02(b), Collector #2, Dryer Island Area																														
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---	22-02(d), Collector #4, Gasifier Feed/Distribution Systems w/ TRI Feeders																														
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---	22-05, Biomass Dryer #3																														
---	22-06, Biomass Dryer #4																														
---	22-07, Gasification Heater Common Stack					3	3	3																		3					
---	22-08, Reactor Charge Heater					3	3	3																		3					
---	22-09, SO2 Scrubber																														
---	22-09(a), Thermal Oxidizer																														
---	22-09(a)(1), LHC Intermediate and Off spec Tank TNK-0101		3	3	1																										
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---	22-09(a)(5), Railcar Loading																														
---	22-10, Flare																														
---	22-11, Emergency Generator Diesel Engine #1																1											1				
---	22-12, Emergency Generator Diesel Engine #2																1											1				
---	22-13, Diesel Firewater Pump #1																1											1				
---	22-14, Diesel Firewater Pump #2																1											1				
---	22-15, Cooling Tower																							3								
---	22-16, Fractionator Feed Heater					3	3	3																		3					
---	22-17, Naphtha StaorageTank (TNK-0201)		3	3	1																										
---	22-18, Naphtha Staorage Tank (TNK-0202)		3	3	1																										
---	22-19, Naphtha Sales Tank (TNK-0203)		3	3	1																										
---	22-20, Diesel Storage Tank (TNK-0204)		3	3	3																										
---	22-21, Diesel Storage Tank (TNK-0205)		3	3	3																										
---	22-22, Diesel Sales Tank		3	3	3																										
---	FUG-01, Fugitive Leak Emissions																														
---	FUG-02, Fugitive Roadway Emissions																														

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Source ID No.:	Descriptive Name of the Source	40 CFR 60 NSPS																40 CFR 61					40 CFR 63 NESHAP						40 CFR		
		A	K	Ka	Kb	D	Da	Db	Dc	Ja	CCCC	GGGa	NNN	RRR	VVa	QQQ	IIII	A	J	M	V	FF	A	Q	5D	6J	6V	ZZZZ	64	68	82
---	22-23, Sulfuric Acid Storage Tank (TNK-301)																														
---	22-24, Methanol Storage Tank (TNK-0101)				1																										
---	22-25, Diesel Blending Tank				3																										
---	WW-1, Wastewater Treatment System																														

KEY TO MATRIX

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

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

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

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

TABLE 2: STATE AND FEDE... QUALITY REQUIREMENTS

For each Emission Point ID Number:

- List each regulation that applies.
- Arrange the requirements imposed by each regulation according to the headings provided below.
- Repeat this process for each regulation that applies to each source.
- State-only Requirements should be noted as such in the appropriate column.

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	NSPS - General Provisions (40 CFR 60, Subpart A)	**Requirements that limit emissions or operations -**			
		All affected facilities shall comply with all applicable provisions in 40 CFR 60 Subpart A.	40 CFR 60		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	NESHAP - General Provisions (40 CFR 63, Subpart A)	**Requirements that limit emissions or operations -**			
		All affected facilities shall comply with all applicable provisions in 40 CFR 63 Subpart A as delineated in Table 3 of 40 CFR 63 Subpart F.	40 CFR 63		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Protection of Stratospheric Ozone (40 CFR Part 82)	**Requirements that limit emissions or operations -**			
		Owners or operators of comfort cooling appliances normally containing more than 50 pounds of refrigerant must have leaks repaired in accordance with 40 CFR 82.156(i)(9) if the appliance is leaking at a rate such that the loss of refrigerant will exceed 15 percent of the total charge during a 12-month period.	40 CFR 82.156(i)(1)		No
		Repair leaks within 30 days after discovery, or within 30 days after when the leaks should have been discovered if the owners intentionally shielded themselves from information which would have revealed a leak, unless granted additional time pursuant to §82.156(i).	40 CFR 82.156(i)(9)		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep servicing records documenting the date and type of service, as well as the quantity of refrigerant added. The owner/operator must keep records of refrigerant purchased and added to such appliances in cases where owners add their own refrigerant. Such records should indicate the date(s) when refrigerant is added.	40 CFR 82.166(k)		No
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Chemical Accident Provisions (40 CFR 68)	**Requirements that limit emissions or operations -**			
		Comply with all applicable provisions in 40 CFR 68.	40 CFR 68.10		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Protection of Stratospheric Ozone - Recycling and Emissions Reduction (40 CFR 82, Subpart F)	**Requirements that limit emissions or operations -**			
		Comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B.	40 CFR 82, Subpart F		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Permit Procedures (LAC 33:III, Chapter 5)	**Requirements that limit emissions or operations -**			
		Submit permit renewal application at least six months prior to the date of permit expiration, or at such earlier time as may be required by the existing permit or approved by the permitting authority. In no event shall the application for permit renewal be submitted more than 18 months before the date of permit expiration.	LAC 33:III.507.E.4		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

TABLE 2: STATE AND FEDI QUALITY REQUIREMENTS

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Emission Inventory (LAC 33:III, Chapter 9)	**Requirements that limit emissions or operations -**			
		Install air pollution control facilities whenever practically, economically, and technologically feasible. When facilities have been installed on a property, use them and diligently maintain them in proper working order whenever any emissions are being made which can be controlled by the facilities, even though the ambient air quality standards in affected areas are not exceeded.	LAC 33:III.905		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Submit Emissions Inventory by April 30th for the period January 1st to December 31st of previous year.	LAC 33:III.919.D	Annually	No
		Report the unauthorized discharge of any air pollutant into the atmosphere in accordance with LAC 33:I.Chapter 39, Notification Regulations and Procedures for Unauthorized Discharges. Submit written reports to the department pursuant to LAC 33:I.3925. Submit timely and appropriate follow-up reports detailing methods and procedures to be used to prevent similar atmospheric releases.	LAC 33:III.927	Per Event	No
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Control of Emissions of Smoke (LAC 33:III, Chapter 11)	**Requirements that limit emissions or operations -**			
		Emissions of smoke which pass onto or across a public road and create a traffic hazard by impairment of visibility as defined in LAC 33:III.111 or intensifies an existing traffic hazard condition are prohibited.	LAC 33:III.1103		No
		Outdoor burning of waste material or other combustible material is prohibited.	LAC 33:III.1109.B		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Emissions Standards for Particulate Matter (LAC 33:III, Chapter 13)	**Requirements that limit emissions or operations -**			
		Emissions of particulate matter which pass onto or across a public road and create a traffic hazard by impairment of visibility or intensify an existing traffic hazard condition are prohibited.	LAC 33:III.1303.B		No
		All reasonable precautions shall be taken to prevent particulate matter from becoming airborne.	LAC 33:III.1305		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

TABLE 2: STATE AND FEDI : QUALITY REQUIREMENTS

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Control of Emission of Organic Compounds (LAC 33:III, Chapter 21)	**Requirements that limit emissions or operations -**			
		Maintain best practical housekeeping and maintenance practices at the highest possible standards to reduce the quantity of organic compounds emissions. Good housekeeping includes, but is not limited to, the practices listed in LAC 33:III.2113.A.1 through A.5.	LAC 33:III.2113.A		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Develop a written plan for housekeeping and maintenance that emphasizes the prevention or reduction of VOC emissions from the facility. A copy shall be kept at the facility, or at an alternate site approved by the department.	LAC 33:III.2113.A.4		No
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Odor Regulations (LAC 33:III.Chapter 29)	**Requirements that limit emissions or operations -**			
		Facility shall not discharge an odorous substance with an intensity of 6 or greater as determined by Method 41.	LAC 33:III.2901.D		No
		Samples shall be taken and transported in a manner which minimizes contamination or loss of material. All samples shall be evaluated as soon after collection as possible.	LAC 33:III.2901.F		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Comprehensive Toxic Air Pollutant Emission Control Program (LAC 33:III Chapter 51)	**Requirements that limit emissions or operations -**			
		Determine the status of compliance, beyond the property line, with applicable ambient air standards listed in LAC 33:III.5112, Table 51.2.	LAC 33:III.5109.B		Yes
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Submit Emissions Report, by the 30th of April unless otherwise directed by DEQ, to the Office of Environmental Services in a format specified by DEQ. Identify the quantity of emissions in the previous calendar year for any toxic air pollutant listed in Table 51.1 or Table 51.3.	LAC 33:III.5107.A	Annually	Yes
		Include a certification statement with the annual emission report and revisions to any emission report that attests that the information contained in the emission report is true, accurate, and complete, and that is signed by a responsible official, as defined in LAC 33:III.502. Include the full name of the responsible official, title, signature, date of signature, and phone number of the responsible official.	LAC 33:III.5107.A.2		Yes
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Prevention of Air Pollution Emergency Episodes (LAC 33:III, Chapter 56)	**Requirements that limit emissions or operations -**			
		Prepare standby plans for the reduction of emissions during periods of Air Pollution Alert, Warning, and Emergency. Design standby plans to reduce or eliminate emissions in accordance with the objectives as set forth in LAC 33:III.5611.Tables 5, 6, and 7.	LAC 33:III.5609.A		No
		Activate the preplanned abatement strategy listed in LAC 33:III.5611.Table 5 when DEQ declares an Air Pollution Alert.	LAC 33:III.5609.A.1.b		No
		Activate the preplanned strategy listed in LAC 33:III.5611.Table 6 when DEQ declares an Air Pollution Warning.	LAC 33:III.5609.A.2.b		No
		Activate the preplanned abatement strategy listed in LAC 33:III.5611.Table 7 when DEQ declares an Air Pollution Emergency.	LAC 33:III.5609.A.3.b		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Make available the standby plan on site to the Administrative Authority upon request.	LAC 33:III.5611.B.1		No
		Requirements that specify reports to be submitted -			
		Submit the standby plan to the Administrative Authority within 30 days upon request.	LAC 33:III.5611.A&B		No
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	Chemical Accident Prevention and Minimization of Consequences (LAC 33:III, Chapter 59)	**Requirements that limit emissions or operations -**			
		Comply with the provisions in 40 CFR 68, except as specified in LAC 33:III.5901.	LAC 33:III.5901.A		Yes
		Identify hazards that may result from accidental releases of the substances listed in 40 CFR 68.130, Table 59.0 of LAC 33:III.5907, or Table 59.1of LAC 33:III.5913 using appropriate hazard assessment techniques, design and maintain a safe facility, and minimize the off-site consequences of accidental releases of such substances that do occur.	LAC 33:III.5907		Yes
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Submit amended registration to the Office of Environmental Compliance after the information in the submitted registration is no longer accurate.	LAC 33:III.5911.C	Within 60 days	Yes
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-07, Gasification Heater Common Stack; 22-08, Reactor Charge Heater; 22-16, Fractionator Feed Heater	Emission Standards for Particulate Matter (LAC 33:III.Chapter 13)	**Requirements that limit emissions or operations -**			
		Emissions of particulate matter from any fuel burning equipment shall not be > 0.6 lbs/MMBtu of heat input.	LAC 33:III.1313.C		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
FUG-02, Fugitive Roadway Emissions	Emission Standards for Particulate Matter (LAC 33:III.Chapter 13)	**Requirements that specify records to be kept and requirements that specify record retention time -**			
		A.All reasonable precautions shall be taken to prevent particulate matter from becoming airborne. These precautions shall include but shall not be limited to the following: 1.use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land; 2.application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts; 4.open-bodied trucks transporting materials likely to give rise to airborne dust shall be covered at all times when in motion; 6.paving roadways and maintaining the roadways in a clean condition; 7.the prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or other means.	LAC 33:III.1305		No
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-02, Biomass Handling Baghouse (22-02(a), Collector #1, Truck Receiving Area), 22-02(b), Collector #2, Dryer Island Area, 22-02(c), Collector #3, Cried Chip Conveying and Storage Area, 22-02(d), Collector #4, Gasifier Feed/Distribution Systems w/ TRI Feeders)	Emissions Standards for Particulate Matter (LAC 33:III, Chapter 13)	**Requirements that limit emissions or operations -**			
		A.All reasonable precautions shall be taken to prevent particulate matter from becoming airborne. These precautions shall include but shall not be limited to the following: 3.installation and use of dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations; 4.open-bodied trucks transporting materials likely to give rise to airborne dust shall be covered at all times when in motion	LAC 33:III.1305		No
		Impairment of Visibility. The emissions which pass onto or across a public road and create a traffic hazard by impairment of visibility or intensify an existing traffic hazard condition are prohibited.	LAC 33:III.1303.B		No
		Opacity <= 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes.	LAC 33:III.1311.C		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-09(a), Thermal Oxidizer	Control of Emissions of Smoke (LAC 33:III.1101.B)	**Requirements that specify records to be kept and requirements that specify record retention time -**			
		Emissions of smoke from any combustion unit (other than a flare) shall be controlled so that the shade or appearance of the emission is not darker than 20% average opacity except during the cleaning of a fire box or building of a new fire, soot blowing or lancing, charging of an incinerator, equipment changes, ash removal and rapping of precipitators which may have an opacity in excess of 20% for not more than one six-minute period in any 60 consecutive minutes.	LAC 33:III.1101.B		No
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-09(a), Thermal Oxidizer	Emissions Standards for Particulate Matter (LAC 33:III, Chapter 13)	**Requirements that limit emissions or operations -**			
		Opacity <= 20 percent; except emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes.	LAC 33:III.1311.C	six-minute average	No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-09(a)(1)-(4), Thermal Oxidizer Tanks Group	Storage of Volatile Compounds (LAC 33:III.Chapter 21)	**Requirements that limit emissions or operations -**			
		For a tank with a capacity > 40,000 gals (tank capacity is 67,000 gals), equip with a submerged-fill pipe and vent emissions to a vapor loss collection system capable of collecting the VOC vapors and a vapor disposal system capable of processing such organic vapors. The vapor loss control system shall reduce inlet total VOC emissions by ≥ 95%. The limitation does not apply during periods of planned routine maintenance which may not exceed 240 hrs/yr.	LAC 33:III.2103.B & LAC 33:III.2103.E.1 & 3	six-minute average	No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable.	LAC 33:III.2103.I		No
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-09(a)(1)-(4), Thermal Oxidizer Tanks Group	Storage of Volatile Organic Liquids (NSPS Subpart Kb)	**Requirements that limit emissions or operations -**			
		For a storage tank with a capacity greater than 40,000 gals storing a VOL with a max true vapor pressure ≥ 0.75 psia but < 11.1 psia, vent emissions through a closed vent system to a control device that reduces VOC emissions by ≥ 95%.	40 CFR 60.112b(a)(3)		No
		The owner or operator of each source that is equipped with a closed vent system and control device as required in § 60.112b (a)(3) or (b)(2) (other than a flare) is exempt from § 60.8 of the General Provisions and shall meet the following requirements. (1) Submit for approval by the Administrator as an attachment to the notification required by § 60.7(a)(1) or, if the facility is exempt from § 60.7(a)(1), as an attachment to the notification required by § 60.7(a)(2), an operating plan containing the information listed below. (i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph. (ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters). (2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.	40 CFR 60.113b(c)		No

TABLE 2: STATE AND FEDE QUALITY REQUIREMENTS

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-09(a)(1)-(4), Thermal Oxidizer Tanks Group	Storage of Volatile Organic Liquids (NSPS Subpart Kb)	**Requirements that specify monitoring -**			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		After installing control equipment in accordance with § 60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records. (1) A copy of the operating plan. (2) A record of the measured values of the parameters monitored in accordance with § 60.113b(c)(2).	40 CFR 60.115b©		No
		Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel for the life of the source.	40 CFR 60.116b(b)		No
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-10 Flare	Control of Emissions of Smoke (LAC 33:III, Chapter 11)	**Requirements that limit emissions or operations -**			
		Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.	LAC 33:III.1105		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Submit notification: Due to SPOC as soon as possible after the start of burning of pressure valve releases for control over process upsets. Notify in accordance with LAC 33:I.3923. Notification is required only if the upset cannot be controlled in six hours.	LAC 33:III.1105		No
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-10 Flare	Emissions Standards for Particulate Matter (LAC 33:III, Chapter 13)	**Requirements that limit emissions or operations -**			
		Opacity <= 20 percent; except emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes.	LAC 33:III.1311.C	six-minute average	No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-11, Emergency Generator Diesel Engine #1; 22-12, Emergency Generator Diesel Engine #2	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII)	**Requirements that limit emissions or operations -**			
		Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section. (2) For engines with a rated power greater than or equal to 37 KW (50 HP), the Tier 2 or Tier 3 emission standards for new nonroad CI engines for the same rated power as described in 40 CFR part 1039, appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105 beginning in model year 2007.	40 CFR 60.4202(a)(2)		No
		Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in § 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.	40 CFR 60.4205(b)		No
		Operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4204 and 40 CFR 60.4205 over the entire life of the engine.	40 CFR 60.4206		No
		Use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.	40 CFR 60.4207(b)		No
		Operating time monitored by hour/time monitor continuously during operation. If the emergency engine meets the standards applicable to emergency engines, install a non-resettable hour meter prior to startup of the engine.	40 CFR 60.4209(a)		No
		Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions, except as permitted in 40 CFR 60.4211(g).	40 CFR 60.4211(a)(1)		No
		Change only those emission-related settings that are permitted by the manufacturer, except as permitted in 40 CFR 60.4211(g).	40 CFR 60.4211(a)(2)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-11, Emergency Generator Diesel Engine #1; 22-12, Emergency Generator Diesel Engine #2	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII)	Meet the requirements of 40 CFR 89, 94 and/or 1068, as applicable, except as permitted in 40 CFR 60.4211(g).	40 CFR 60.4211(a)(3)		No
		Ensure engine is certified to the emission standards in 40 CFR 60.4204(b), or 40 CFR 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. Install and configure according to the manufacturer's emissions-related specifications, except as permitted in 40 CFR 60.4211(g).	40 CFR 60.4211(c)		No
		There is no time limit on the use of emergency stationary ICE in emergency situations.	40 CFR 60.4211(f)(1)		No
		Operate for maintenance checks and readiness testing for a maximum of 100 hours per calendar year, provided that the tests are recommended by the federal, state or local government; the manufacturer; the vendor; the regional transmission organization or equivalent balancing authority and transmission operator; or the insurance company associated with the engine. LDEQ may be petitioned for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if records are maintained indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.	40 CFR 60.4211(f)(2)(i)		No
		Operate for up to 50 hours per calendar year in non-emergency situations. Count the 50 hours of operation in non-emergency situations as part of the 100 hours per calendar year for maintenance and testing provided in 40 CFR 60.4211(f)(2)(i). Do not use the 50 hours per calendar year for non-emergency situations for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity, except as provided in 40 CFR 60.4211(f)(3)(i).	40 CFR 60.4211(f)(3)		No
		Operate according to the requirements in 40 CFR 60.4211(f)(1), (f)(2)(i), and (f)(3). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60 Subpart IIII, any operation other than as described in 40 CFR 60.4211(f)(1), (f)(2)(i), and (f)(3) is prohibited. If the engine is not operated according to these requirements, the engine will not be considered an emergency engine under 40 CFR 60 Subpart IIII and must meet all requirements for non-emergency engines.	40 CFR 60.4211(f)		No
		Maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.	40 CFR 60.4211(g)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-11, Emergency Generator Diesel Engine #1; 22-12, Emergency Generator Diesel Engine #2	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII)	**Requirements that specify records to be kept and requirements that specify record retention time -**			
		Keep a maintenance plan and records of conducted maintenance.	40 CFR 60.4211(g)		No
		Operating time recordkeeping by electronic or hard copy upon occurrence of event. If the emergency engine meets the standards applicable to emergency engines in the applicable model year, keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. Record the time of operation of the engine and the reason the engine was in operation during that time.	40 CFR 60.4214(b)		No
		Requirements that specify performance testing -			
		Conduct a performance test to demonstrate initial compliance with emission standards according to the requirements specified in 40 CFR 60.4212 or 40 CFR 60.4213, as appropriate, within 60 days after commencing operation after a modification or reconstruction.	40 CFR 60.4211(e)(2)		No
		Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year after the engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions (can include within 1 year of startup), or within 1 year after the emission-related settings are changed in a way that is not permitted by the manufacturer. Conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance, if the engine is greater than 500 HP.	40 CFR 60.4211(g)		No
		Conduct performance tests according to 40 CFR 60.4212(a) through (e).	40 CFR 60.4212		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-11, Emergency Generator Diesel Engine #1; 22-12, Emergency Generator Diesel Engine #2	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ)	**Requirements that limit emissions or operations -**			
		Meet the requirements of 40 CFR 60 Subpart IIII for compression ignition engines.	40 CFR 63.6590(c)		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-11, Emergency Generator Diesel Engine #1; 22-12, Emergency Generator Diesel Engine #2 22-13, Diesel Firewater Pump #1; 22-14, Diesel Firewater Pump #2	Control of Emissions of Smoke (LAC 33:III, Chapter 11)	**Requirements that limit emissions or operations -**			
		Opacity <= 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60	LAC 33:III.1101.B	six-minute average	No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

TABLE 2: STATE AND FEDE QUALITY REQUIREMENTS

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-11, Emergency Generator Diesel Engine #1; 22-12, Emergency Generator Diesel Engine #2 22-13, Diesel Firewater Pump #1; 22-14, Diesel Firewater Pump #2	Emissions Standards for Particulate Matter (LAC 33:III, Chapter 13)	**Requirements that limit emissions or operations -**			
		Opacity <= 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes.	LAC 33:III.1311.C	six-minute average	No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-13, Diesel Firewater Pump #1; 22-14, Diesel Firewater Pump #2	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII)	**Requirements that limit emissions or operations -**			
		Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.	40 CFR 60.4202(d)		No
		Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.	40 CFR 60.4205(c)		No
		Operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4204 and 40 CFR 60.4205 over the entire life of the engine.	40 CFR 60.4206		No
		Use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.	40 CFR 60.4207(b)		No
		Operating time monitored by hour/time monitor continuously during operation. If the emergency engine meets the standards applicable to emergency engines, install a non-resettable hour meter prior to startup of the engine.	40 CFR 60.4209(a)		No
		Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions, except as permitted in 40 CFR 60.4211(g).	40 CFR 60.4211(a)(1)		No
		Change only those emission-related settings that are permitted by the manufacturer, except as permitted in 40 CFR 60.4211(g).	40 CFR 60.4211(a)(2)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-13, Diesel Firewater Pump #1; 22-14, Diesel Firewater Pump #2	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII)	Meet the requirements of 40 CFR 89, 94 and/or 1068, as applicable, except as permitted in 40 CFR 60.4211(g).	40 CFR 60.4211(a)(3)		No
		Ensure engine is certified to the emission standards in 40 CFR 60.4204(b), or 40 CFR 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. Install and configure according to the manufacturer's emissions-related specifications, except as permitted in 40 CFR 60.4211(g).	40 CFR 60.4211(c)		No
		There is no time limit on the use of emergency stationary ICE in emergency situations.	40 CFR 60.4211(f)(1)		No
		Operate for maintenance checks and readiness testing for a maximum of 100 hours per calendar year, provided that the tests are recommended by the federal, state or local government; the manufacturer; the vendor; the regional transmission organization or equivalent balancing authority and transmission operator; or the insurance company associated with the engine. LDEQ may be petitioned for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if records are maintained indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.	40 CFR 60.4211(f)(2)(i)		No
		Operate for up to 50 hours per calendar year in non-emergency situations. Count the 50 hours of operation in non-emergency situations as part of the 100 hours per calendar year for maintenance and testing provided in 40 CFR 60.4211(f)(2)(i). Do not use the 50 hours per calendar year for non-emergency situations for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity, except as provided in 40 CFR 60.4211(f)(3)(i).	40 CFR 60.4211(f)(3)		No
		Operate according to the requirements in 40 CFR 60.4211(f)(1), (f)(2)(i), and (f)(3). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60 Subpart IIII, any operation other than as described in 40 CFR 60.4211(f)(1), (f)(2)(i), and (f)(3) is prohibited. If the engine is not operated according to these requirements, the engine will not be considered an emergency engine under 40 CFR 60 Subpart IIII and must meet all requirements for non-emergency engines.	40 CFR 60.4211(f)		No
		Maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.	40 CFR 60.4211(g)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-13, Diesel Firewater Pump #1; 22-14, Diesel Firewater Pump #2	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII)	**Requirements that specify monitoring -**			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Keep a maintenance plan and records of conducted maintenance.	40 CFR 60.4211(g)		No
		Operating time recordkeeping by electronic or hard copy upon occurrence of event. If the emergency engine meets the standards applicable to emergency engines in the applicable model year, keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. Record the time of operation of the engine and the reason the engine was in operation during that time.	40 CFR 60.4214(b)		No
		Requirements that specify performance testing -			
		Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year after the engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions (can include within 1 year of startup), or within 1 year after the emission-related settings are changed in a way that is not permitted by the manufacturer. Conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance, if the engine is greater than 500 HP.	40 CFR 60.4211(g)		No
		Conduct performance tests according to 40 CFR 60.4212(a) through (e).	40 CFR 60.4212		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-11, Emergency Generator Diesel Engine #1; 22-12, Emergency Generator Diesel Engine #2 22-13, Diesel Firewater Pump #1; 22-14, Diesel Firewater Pump #2	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ)	**Requirements that limit emissions or operations -**			
		Meet the requirements of 40 CFR 60 Subpart IIII for compression ignition engines.	40 CFR 63.6590(c)		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (NSPS Subpart Db)	**Requirements that limit emissions or operations -**			
		Opacity <= 20 percent, except for one 6-minute period per hour of not more than 27% opacity. The opacity standards apply at all times, except during periods of startup, shutdown, or malfunction.	40 CFR 60.43b(f)		No
		Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other fuels with a potential SO2 emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO2 emissions limit in paragraph (k)(1) of this section. The boiler will only fire pipeline quality natural gas at start-up and clean biomass fuel for normal operations.	40 CFR 60.42b(k)(2)		No
		Except as provided in paragraphs (h)(2), (h)(3), (h)(4), (h)(5), and (h)(6) of this section, on and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input.	40 CFR 60.43b(h)(1)		No
		On and after the date on which the initial performance test is completed or is required to be completed under 60.8, whichever date is first, no owner or operator of an affected facility that commenced construction after July 9, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain NOx (expressed as NO2) in excess of the following limits: (1) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts coal, oil, or natural gas (or any combination of the three), alone or with any other fuels.	40 CFR 60.44b(l)(1)		No
		Requirements that specify monitoring -			
		The owner or operator of an affected facility seeking to demonstrate compliance in §§ 60.42b(d)(4), 60.42b(j), 60.42b(k)(2), and 60.42b(k)(3) (when not burning coal) shall follow the applicable procedures in § 60.49b(r).	40 CFR 60.45b(k)		No
		The owner or operator of an affected facility that combusts very low sulfur oil or is demonstrating compliance under § 60.45b(k) is not subject to the emission monitoring requirements under paragraph (a) of this section if the owner or operator maintains fuel records as described in § 60.49b(r).	40 CFR 60.47b(f)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (NSPS Subpart Db)	**Requirements that specify records to be kept and requirements that specify record retention time -**			
		The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain an insignificant amount of sulfur in § 60.42b(j) or § 60.42b(k) shall obtain and maintain at the affected facility fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in § 60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period	40 CFR 60.49b(r)(1)		No
		The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.	40 CFR 60.49b(d)		No
		Requirements that specify reports to be submitted -			
		The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by § 60.7. This notification shall include: (1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility; (3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.	40 CFR 60.49b(a)(1) and (3)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (NSPS Subpart Db)	**Requirements that specify performance testing -** To determine compliance with the PM emission limits and opacity limits under § 60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under § 60.8, and shall conduct subsequent performance tests as requested by the Administrator, using the following procedures and reference methods: (1) Method 3A or 3B of appendix A-2 of this part is used for gas analysis when applying Method 5 of appendix A-3 of this part or Method 17 of appendix A-6 of this part. (2) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows: (i) Method 5 of appendix A of this part shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and (ii) Method 17 of appendix A-6 of this part may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of sections 8.1 and 11.1 of Method 5B of appendix A-3 of this part may be used in Method 17 of appendix A-6 of this part only if it is used after a wet FGD system. Do not use Method 17 of appendix A-6 of this part after wet FGD systems if the effluent is saturated or laden with water droplets. (iii) Method 5B of appendix A of this part is to be used only after wet FGD systems. (3) Method 1 of appendix A of this part is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors. (4) For Method 5 of appendix A of this part, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160±14 °C (320±25 °F). (5) For determination of PM emissions, the oxygen (O2) or CO2 sample is obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location. (6) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rate expressed in ng/J heat input is determined using: (i) The O2 or CO2 measurements and PM measurements obtained under this section; (ii) The dry basis F factor; and (iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part. (7) Method 9 of appendix A of this part is used for determining the opacity of stack emissions.	40 CFR 60.46b(b)	Initial/As Required	No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (NSPS Subpart Db)	To determine compliance with the PM emission limits and opacity limits under § 60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under § 60.8, and shall conduct subsequent performance tests as requested by the Administrator, using the following procedures and reference methods: (1) Method 3A or 3B of appendix A-2 of this part is used for gas analysis when applying Method 5 of appendix A-3 of this part or Method 17 of appendix A-6 of this part. (2) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows: (i) Method 5 of appendix A of this part shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and (ii) Method 17 of appendix A-6 of this part may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of sections 8.1 and 11.1 of Method 5B of appendix A-3 of this part may be used in Method 17 of appendix A-6 of this part only if it is used after a wet FGD system. Do not use Method 17 of appendix A-6 of this part after wet FGD systems if the effluent is saturated or laden with water droplets. (iii) Method 5B of appendix A of this part is to be used only after wet FGD systems. (3) Method 1 of appendix A of this part is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors. (4) For Method 5 of appendix A of this part, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160±14 °C (320±25 °F). (5) For determination of PM emissions, the oxygen (O2) or CO2 sample is obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location. (6) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rate expressed in ng/J heat input is determined using: (i) The O2 or CO2 measurements and PM measurements obtained under this section; (ii) The dry basis F factor; and (iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part. (7) Method 9 of appendix A of this part is used for determining the opacity of stack emissions.	40 CFR 60.46b(d)(1)-(7)		

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (NSPS Subpart Db)	To determine compliance with the emission limits for NOX required under § 60.44b, the owner or operator of an affected facility shall conduct the performance test as required under § 60.8 using the continuous system for monitoring NOX under § 60.48(b). (1) For the initial compliance test, NOX from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NOX emission standards under § 60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. (3) Following the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity greater than 73 MW (250 MMBtu/hr) and that combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the NOX standards under § 60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NOX emission data for the preceding 30 steam generating unit operating days.	40 CFR 60.46b(e)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	National Emissions Standards for Hazardous Air Pollutants for Industrial-Commercial-Institutional Steam Generating Units (NESHAP Subpart JJJJJJ)	**Requirements that limit emissions or operations -**			
		If you start up a new affected source after May 20, 2011, you must achieve compliance with the provisions of this subpart upon startup of your affected source.	40 CFR 63.11196(c)		No
		(a) You must comply with each emission limit specified in Table 1 to this subpart that applies to your boiler. (b) You must comply with each work practice standard, emission reduction measure, and management practice specified in Table 2 to this subpart that applies to your boiler. An energy assessment completed on or after January 1, 2008 that meets or is amended to meet the energy assessment requirements in Table 2 to this subpart satisfies the energy assessment requirement. A facility that operates under an energy management program established through energy management systems compatible with ISO 50001, that includes the affected units, also satisfies the energy assessment requirement. (c) You must comply with each operating limit specified in Table 3 to this subpart that applies to your boiler. (d) These standards apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in § 63.11237, during which time you must comply only with Table 2 to this subpart.	40 CFR 63.11201(a)-(d)		No
		(a) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (b) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or a continuous monitoring system (CMS), including a continuous emission monitoring system (CEMS), a continuous opacity monitoring system (COMS), or a continuous parameter monitoring system (CPMS), where applicable. You may demonstrate compliance with the applicable mercury emission limit using fuel analysis if the emission rate calculated according to § 63.11211(c) is less than the applicable emission limit. Otherwise, you must demonstrate compliance using stack testing. (c) If you demonstrate compliance with any applicable emission limit through performance stack testing and subsequent compliance with operating limits (including the use of CPMS), with a CEMS, or with a COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (c)(1) through (3) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f). (1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses paragraphs (c)(1)(i) through (vi) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site-specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of § 63.11224. (i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device); (ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and (iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations). (iv) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii); (v) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and (vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c) (as applicable in Table 8 to this subpart), (e)(1), and (e)(2)(i). (2) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan. (3) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.	40 CFR 63.11201(a)-(d)		No
		You must demonstrate initial compliance with each emission limit specified in Table 1 to this subpart that applies to you by either conducting performance (stack) tests, as applicable, according to § 63.11212 and Table 4 to this subpart or, for mercury, conducting fuel analyses, as applicable, according to § 63.11213 and Table 5 to this subpart.	40 CFR 63.11210(a)		No
		For new or reconstructed affected boilers that have applicable emission limits, you must demonstrate initial compliance with the applicable emission limits no later than 180 days after March 21, 2011 or within 180 days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).	40 CFR 63.11210(d)		No
		For new or reconstructed affected boilers that have applicable work practice standards or management practices, you are not required to complete an initial performance tune-up, but you are required to complete the applicable biennial or 5-year tune-up as specified in § 63.11223 no later than 25 months or 61 months, respectively, after the initial startup of the new or reconstructed affected source.	40 CFR 63.11210(g)		No
		For affected boilers that demonstrate compliance with any of the emission limits of this subpart through performance (stack) testing, your initial compliance requirements include conducting performance tests according to § 63.11212 and Table 4 to this subpart, conducting a fuel analysis for each type of fuel burned in your boiler according to § 63.11213 and Table 5 to this subpart, establishing operating limits according to § 63.11222, Table 6 to this subpart and paragraph (b) of this section, as applicable, and conducting CMS performance evaluations according to § 63.11224. For affected boilers that burn a single type of fuel, you are exempted from the compliance requirements of conducting a fuel analysis for each type of fuel burned in your boiler. For purposes of this subpart, boilers that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as affected boilers that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under § 63.11213 and Table 5 to this subpart.	40 CFR 63.11211(a)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	National Emissions Standards for Hazardous Air Pollutants for Industrial-Commercial-Institutional Steam Generating Units (NESHAP Subpart JJJJJJ)	The operating limit for boilers with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in § 63.11224, and that each fabric filter must be operated such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period.	40 CFR 63.11211(b)(4)		No
		If you own or operate a boiler subject to emission limits in Table 1 of this subpart, you must minimize the boiler's startup and shutdown periods following the manufacturer's recommended procedures, if available. If manufacturer's recommended procedures are not available, you must follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. You must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available.	40 CFR 63.11214(d)		No
		(a) For affected sources subject to the work practice standard or the management practices of a tune-up, you must conduct a performance tune-up according to paragraph (b) of this section and keep records as required in § 63.11225(c) to demonstrate continuous compliance. You must conduct the tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up. (b) Except as specified in paragraphs (c) through (f) of this section, you must conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in paragraphs (b)(1) through (7) of this section. Each biennial tune-up must be conducted no more than 25 months after the previous tune-up. For a new or reconstructed boiler, the first biennial tune-up must be no later than 25 months after the initial startup of the new or reconstructed boiler. (1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. (4) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject. (5) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. (6) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (b)(6)(i) through (iii) of this section. (i) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler. (ii) A description of any corrective actions taken as a part of the tune-up of the boiler. (iii) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. (7) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup. (c) Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up must conduct a tune-up of the boiler every 5 years as specified in paragraphs (b)(1) through (7) of this section. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed boiler with an oxygen trim system, the first 5-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection specified in paragraph (b)(1) of this section and inspection of the system controlling the air-to-fuel ratio specified in paragraph (b)(3) of this section until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up. (d) Seasonal boilers must conduct a tune-up every 5 years as specified in paragraphs (b)(1) through (7) of this section. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed seasonal boiler, the first 5-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection specified in paragraph (b)(1) of this section and inspection of the system controlling the air-to-fuel ratio specified in paragraph (b)(3) of this section until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months. Seasonal boilers are not subject to the emission limits in Table 1 to this subpart or the operating limits in Table 3 to this subpart. (e) Oil-fired boilers with a heat input capacity of equal to or less than 5 million Btu per hour must conduct a tune-up every 5 years as specified in paragraphs (b)(1) through (7) of this section. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed oil-fired boiler with a heat input capacity of equal to or less than 5 million Btu per hour, the first 5-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection specified in paragraph (b)(1) of this section and inspection of the system controlling the air-to-fuel ratio specified in paragraph (b)(3) of this section until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months.	40 CFR 63.11223		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	National Emissions Standards for Hazardous Air Pollutants for Industrial-Commercial-Institutional Steam Generating Units (NESHAP Subpart JJJJJJ)	**Requirements that specify monitoring -** (a) You must monitor and collect data according to this section and the site-specific monitoring plan required by § 63.11205(c). (b) You must operate the monitoring system and collect data at all required intervals at all times the affected source is operating and compliance is required, except for periods of monitoring system malfunctions or out-of-control periods (see § 63.8(c)(7) of this part), repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable. (c) You may not use data collected during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or quality control activities in calculations used to report emissions or operating levels. Any such periods must be reported according to the requirements in § 63.11225. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system. (d) Except for periods of monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan), failure to collect required data is a deviation of the monitoring requirements.	40 CFR 63.11221	When Operating	No
		(b) If you are using a control device to comply with the emission limits specified in Table 1 to this subpart, you must maintain each operating limit in Table 3 to this subpart that applies to your boiler as specified in Table 7 to this subpart. If you use a control device not covered in Table 3 to this subpart, or you wish to establish and monitor an alternative operating limit and alternative monitoring parameters, you must apply to the United States Environmental Protection Agency (EPA) Administrator for approval of alternative monitoring under § 63.8(f). (c) If you demonstrate compliance with any applicable emission limit through stack testing and subsequent compliance with operating limits, you must develop a site-specific monitoring plan according to the requirements in paragraphs (c)(1) through (4) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f). (1) For each CMS required in this section, you must develop, and submit to the EPA Administrator for approval upon request, a site-specific monitoring plan that addresses paragraphs (c)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan (if requested) at least 60 days before your initial performance evaluation of your CMS. (i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device). (ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems. (iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations). (2) In your site-specific monitoring plan, you must also address paragraphs (c)(2)(i) through (iii) of this section. (i) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1), (3), and (4)(ii). (ii) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d). (iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c), (e)(1), and (e)(2)(i). (3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan. (4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan. (d) If you have an operating limit that requires the use of a CMS, you must install, operate, and maintain each CPMS according to the procedures in paragraphs (d)(1) through (4) of this section. (1) The CPMS must complete a minimum of one cycle of operation every 15 minutes. You must have data values from a minimum of four successive cycles of operation representing each of the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed, to have a valid hour of data. (2) You must calculate hourly arithmetic averages from each hour of CPMS data in units of the operating limit and determine the 30-day rolling average of all recorded readings, except as provided in § 63.11221(c). Calculate a 30-day rolling average from all of the hourly averages collected for the 30-day operating period using Equation 3 of this section.	40 CFR 63.11224		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	National Emissions Standards for Hazardous Air Pollutants for Industrial-Commercial-Institutional Steam Generating Units (NESHAP Subpart JJJJJJ)	(e) If you have an applicable opacity operating limit under this rule, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (e)(1) through (8) of this section by the compliance date specified in § 63.11196. (1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 of 40 CFR part 60, appendix B. (2) You must conduct a performance evaluation of each COMS according to the requirements in § 63.8 and according to Performance Specification 1 of 40 CFR part 60, appendix B. (3) As specified in § 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. (4) The COMS data must be reduced as specified in § 63.8(g)(2). (5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in § 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS. (6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of § 63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. (7) You must calculate and record 6-minute averages from the opacity monitoring data and determine and record the daily block average of recorded readings, except as provided in § 63.11221(c). (8) For purposes of collecting opacity data, you must operate the COMS as specified in § 63.11221(b). For purposes of calculating data averages, you must use all the data collected during all periods in assessing compliance, except that you must exclude certain data as specified in § 63.11221(c). Periods when COMS data are unavailable may constitute monitoring deviations as specified in § 63.11221(d). (f) If you use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (f)(1) through (8) of this section. (1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter. (2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations and in accordance with EPA-454/R-98-015 (incorporated by reference, see § 63.14). (3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less. (4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings. (5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. (6) The bag leak detection system must be equipped with an audible or visual alarm system that will activate automatically when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is easily heard or seen by plant operating personnel. (7) For positive pressure fabric filter systems that do not duct all compartments or cells to a common stack, a bag leak detection system must be installed in each baghouse compartment or cell. (8) Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors.	40 CFR 63.11224		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	National Emissions Standards for Hazardous Air Pollutants for Industrial-Commercial-Institutional Steam Generating Units (NESHAP Subpart JJJJJJ)	**Requirements that specify records to be kept and requirements that specify record retention time -** You must maintain the records specified in paragraphs (c)(1) through (7) of this section. (6) You must keep the records of all inspection and monitoring data required by §§ 63.11221 and 63.11222, and the information identified in paragraphs (c)(6)(i) through (vi) of this section for each required inspection or monitoring. (i) The date, place, and time of the monitoring event. (ii) Person conducting the monitoring. (iii) Technique or method used. (iv) Operating conditions during the activity. (v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation. (vi) Maintenance or corrective action taken (if applicable). (7) If you use a bag leak detection system, you must keep the records specified in paragraphs (c)(7)(i) through (iii) of this section. (i) Records of the bag leak detection system output. (ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings. (1) As required in § 63.10(b)(2)(xiv), you must keep a copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted. (2) You must keep records to document conformance with the work practices, emission reduction measures, and management practices required by § 63.11214 and § 63.11223 as specified in paragraphs (c)(2)(i) through (vi) of this section. (i) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned. (ii) For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to § 241.3(b)(1) of this chapter, you must keep a record which documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1). If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfies the definition of processing in § 241.2 and each of the legitimacy criteria in § 241.3(d)(1) of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under § 241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4, you must keep records documenting that the material is a listed non-waste under § 241.4(a). (iii) For each boiler required to conduct an energy assessment, you must keep a copy of the energy assessment report. (iv) For each boiler subject to an emission limit in Table 1 to this subpart, you must keep records of monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used. For each new oil-fired boiler that meets the requirements of § 63.11210(e) or (f), you must keep records, on a monthly basis, of the type of fuel combusted. (v) For each boiler that meets the definition of seasonal boiler, you must keep records of days of operation per year.	40 CFR 63.11225(c)		No
		(vi) For each boiler that meets the definition of limited-use boiler, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and records of fuel use for the days the boiler is operating. (3) For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation that were done to demonstrate compliance with the mercury emission limits. Supporting documentation should include results of any fuel analyses. You can use the results from one fuel analysis for multiple boilers provided they are all burning the same fuel type. (4) Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment. (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in § 63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. (6) You must keep the records of all inspection and monitoring data required by §§ 63.11221 and 63.11222, and the information identified in paragraphs (c)(6)(i) through (vi) of this section for each required inspection or monitoring. (i) The date, place, and time of the monitoring event. (ii) Person conducting the monitoring. (iii) Technique or method used. (iv) Operating conditions during the activity. (v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation. (vi) Maintenance or corrective action taken (if applicable). (7) If you use a bag leak detection system, you must keep the records specified in paragraphs (c)(7)(i) through (iii) of this section. (i) Records of the bag leak detection system output. (ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings. (iii) The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed. (iii) The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.			No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	National Emissions Standards for Hazardous Air Pollutants for Industrial-Commercial-Institutional Steam Generating Units (NESHAP Subpart JJJJJJ)	Your records must be in a form suitable and readily available for expeditious review. You must keep each record for 5 years following the date of each recorded action. You must keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. You may keep the records off site for the remaining 3 years.	40 CFR 63.11225(d)		No
		Requirements that specify reports to be submitted -			
		(a) You must submit the notifications specified in paragraphs (a)(1) through (5) of this section to the administrator. (1) You must submit all of the notifications in §§ 63.7(b); 63.8(e) and (f); and 63.9(b) through (e), (g), and (h) that apply to you by the dates specified in those sections except as specified in paragraphs (a)(2) and (4) of this section. (2) An Initial Notification must be submitted no later than January 20, 2014 or within 120 days after the source becomes subject to the standard. (3) If you are required to conduct a performance stack test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance stack test is scheduled to begin. (4) You must submit the Notification of Compliance Status no later than 120 days after the applicable compliance date specified in § 63.11196 unless you own or operate a new boiler subject only to a requirement to conduct a biennial or 5-year tune-up or you must conduct a performance stack test. If you own or operate a new boiler subject to a requirement to conduct a tune-up, you are not required to prepare and submit a Notification of Compliance Status for the tune-up. If you must conduct a performance stack test, you must submit the Notification of Compliance Status within 60 days of completing the performance stack test. You must submit the Notification of Compliance Status in accordance with paragraphs (a)(4)(i) and (vi) of this section. The Notification of Compliance Status must include the information and certification(s) of compliance in paragraphs (a)(4)(i) through (v) of this section, as applicable, and signed by a responsible official. (i) You must submit the information required in § 63.9(h)(2), except the information listed in § 63.9(h)(2)(i)(B), (D), (E), and (F). If you conduct any performance tests or CMS performance evaluations, you must submit that data as specified in paragraph (e) of this section. If you conduct any opacity or visible emission observations, or other monitoring procedures or methods, you must submit that data to the Administrator at the appropriate address listed in § 63.13. (ii) "This facility complies with the requirements in § 63.11214 to conduct an initial tune-up of the boiler." (iii) "This facility has had an energy assessment performed according to § 63.11214(c)." (iv) For units that install bag leak detection systems: "This facility complies with the requirements in § 63.11224(f)." (v) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit." (vi) The notification must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written Notification of Compliance Status must be submitted to the Administrator at the appropriate address listed in § 63.13. (5) If you are using data from a previously conducted emission test to serve as documentation of conformance with the emission standards and operating limits of this subpart, you must include in the Notification of Compliance Status the date of the test and a summary of the results, not a complete test report, relative to this subpart.	40 CFR 63.11225(a)		No
		(b) You must prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the information specified in paragraphs (b)(1) through (4) of this section. You must submit the report by March 15 if you had any instance described by paragraph (b)(3) of this section. For boilers that are subject only to the energy assessment requirement and/or a requirement to conduct a biennial or 5-year tune-up according to § 63.11223(a) and not subject to emission limits or operating limits, you may prepare only a biennial or 5-year compliance report as specified in paragraphs (b)(1) and (2) of this section. (1) Company name and address. (2) Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart. Your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official: (i) "This facility complies with the requirements in § 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler." (ii) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit." (iii) "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available." (3) If the source experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken. (4) The total fuel use by each affected boiler subject to an emission limit, for each calendar month within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by you or EPA through a petition process to be a non-waste under § 241.3(c), whether the fuel(s) were processed from discarded non-hazardous secondary materials within the meaning of § 241.3, and the total fuel usage amount with units of measure.	40 CFR 63.11225(b)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	National Emissions Standards for Hazardous Air Pollutants for Industrial-Commercial-Institutional Steam Generating Units (NESHAP Subpart JJJJJJ)	(g) If you have switched fuels or made a physical change to the boiler and the fuel switch or change resulted in the applicability of a different subcategory within this subpart, in the boiler becoming subject to this subpart, or in the boiler switching out of this subpart due to a fuel change that results in the boiler meeting the definition of gas-fired boiler, as defined in § 63.11237, or you have taken a permit limit that resulted in you becoming subject to this subpart or no longer being subject to this subpart, you must provide notice of the date upon which you switched fuels, made the physical change, or took a permit limit within 30 days of the change. The notification must identify: (1) The name of the owner or operator of the affected source, the location of the source, the boiler(s) that have switched fuels, were physically changed, or took a permit limit, and the date of the notice. (2) The date upon which the fuel switch, physical change, or permit limit occurred.	40 CFR 63.11225(g)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-01, Biomass Boiler Stack	National Emissions Standards for Hazardous Air Pollutants for Industrial-Commercial-Institutional Steam Generating Units (NESHAP Subpart JJJJJJ)	**Requirements that specify performance testing -** If you demonstrate compliance with any applicable emission limit through performance stack testing and subsequent compliance with operating limits (including the use of CPMS), with a CEMS, or with a COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (c)(1) through (3) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f). (1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses paragraphs (c)(1)(i) through (vi) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site-specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of § 63.11224. (i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device); (ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and (iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations). (iv) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii); (v) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and (vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c) (as applicable in Table 8 to this subpart), (e)(1), and (e)(2)(i). (2) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan. (3) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.	40 CFR 63.11205(e)		No
		You must conduct all performance tests according to § 63.7(c), (d), (f), and (h). You must also develop a site-specific test plan according to the requirements in § 63.7(c). (b) You must conduct each stack test according to the requirements in Table 4 to this subpart. Boilers that use a CEMS for carbon monoxide (CO) are exempt from the initial CO performance testing in Table 4 to this subpart and the oxygen concentration operating limit requirement specified in Table 3 to this subpart. (c) You must conduct performance stack tests at the representative operating load conditions while burning the type of fuel or mixture of fuels that have the highest emissions potential for each regulated pollutant, and you must demonstrate initial compliance and establish your operating limits based on these performance stack tests. For subcategories with more than one emission limit, these requirements could result in the need to conduct more than one performance stack test. Following each performance stack test and until the next performance stack test, you must comply with the operating limit for operating load conditions specified in Table 3 to this subpart. (d) You must conduct a minimum of three separate test runs for each performance stack test required in this section, as specified in § 63.7(e)(3) and in accordance with the provisions in Table 4 to this subpart. (e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 of appendix A-7 to part 60 of this chapter to convert the measured PM concentrations and the measured mercury concentrations that result from the performance test to pounds per million Btu heat input emission rates.	40 CFR 63.11212(a)-€		No
		For new or reconstructed boilers that commenced construction or reconstruction after September 14, 2016, when demonstrating initial compliance with the PM emission limit, if your boiler's performance test results show that your PM emissions are equal to or less than half of the PM emission limit, you may choose to conduct performance tests for PM every fifth year, but must continue to comply with all applicable operating limits and monitoring requirements and must comply with the provisions as specified in paragraphs (c)(1) through (3) of this section. (1) Each such performance test must be conducted no more than 61 months after the previous performance test. (2) If you intend to burn a new type of fuel other than ultra-low-sulfur liquid fuel or gaseous fuels as defined in § 63.11237, you must conduct a performance test within 60 days of burning the new fuel type. (3) If your performance test results show that your PM emissions are greater than half of the PM emission limit, you must conduct subsequent performance tests on a triennial basis as specified in paragraph (a) of this section.	40 CFR 63.11220(c)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-17, Naphtha Storage Tank (TNK-0201); 22-18, Naphtha Storage Tank (TNK-0202); 22-19, Naphtha Sales Tank (TNK-0203); 22-24, Methanol Storage Tank (TNK-0101)	Storage of Volatile Compounds (LAC 33:III Chapter 21)	**Requirements that limit emissions or operations -**			
		Equip with an internal floating roof consisting of a pontoon type roof, double deck roof, or internal floating cover which rests or floats on the surface of the liquid contents and is equipped with a closure seal to close the space between the roof edge and tank wall. Ensure that all tank gauging and sampling devices are gas-tight except when gauging or sampling is taking place. (C)(1)(c)Equip internal floating roof with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but ensure that both are continuous.	LAC 33:III.2103.C.1.c		No
		Requirements that specify monitoring -			
		Requirements that specify records to be kept and requirements that specify record retention time -			
		Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable.	LAC 33:III.2103.I		No
		Requirements that specify reports to be submitted -			
		Requirements that specify performance testing -			

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-17, Naphtha Storage Tank (TNK-0201); 22-18, Naphtha Storage Tank (TNK-0202); 22-19, Naphtha Sales Tank (TNK-0203); 22-24, Methanol Storage Tank (TNK-0101)	Storage of Volatile Organic Liquids (NSPS Subpart Kb)	**Requirements that limit emissions or operations -**			
		The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m3 but less than 151 m3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following: (1) A fixed roof in combination with an internal floating roof meeting the following specifications: (i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof: (A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank. (B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous. (iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. (iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. (v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. (vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. (vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening. (viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. (ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.	40 CFR 60.112b(a)(1)(i),(iii)-(ix)		No
		Requirements that specify monitoring -			
		The owner or operator of each storage vessel as specified in § 60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of § 60.112b. (a) After installing the control equipment required to meet § 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall: (1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel. (3) For vessels equipped with a double-seal system as specified in § 60.112b(a)(1)(ii)(B): (i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or (ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section. (4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.	40 CFR 60.113b(a)(1),(3),(4)		No
		(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m3 storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m3 but less than 151 m3 storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.	40 CFR 60.115b(c)		No
		Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below. (1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.	40 CFR 60.116b(e)		No
		Requirements that specify records to be kept and requirements that specify record retention time -			
		(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source. (b) The owner or operator of each storage vessel as specified in § 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.	40 CFR 60.113b(a)-(b)		No

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
22-17, Naphtha Storage Tank (TNK-0201); 22-18, Naphtha Storage Tank (TNK-0202); 22-19, Naphtha Sales Tank (TNK-0203); 22-24, Methanol Storage Tank (TNK-0101)	Storage of Volatile Organic Liquids (NSPS Subpart Kb)	**Requirements that specify reports to be submitted -**			
		(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.	40 CFR 60.113b(a)(5)		No
		The owner or operator of each storage vessel as specified in § 60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of § 60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment. (a) After installing control equipment in accordance with § 60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements. (1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(1) and § 60.113b(a)(1). This report shall be an attachment to the notification required by § 60.7(a)(3).	40 CFR 60.115b(a)(1)		No
		(4) After each inspection required by § 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in § 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of § 60.112b(a)(1) or § 60.113b(a)(3) and list each repair made.	40 CFR 60.115b(a)(4)		No
		Requirements that specify performance testing -			

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

Emission Point ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
Facility Wide	40 CFR 64 – Compliance Assurance Monitoring (CAM)	Does Not Apply	Emissions sources do not meet the applicability criteria of 40 CFR 64.2(a)(1).	40 CFR 64.2(b)(1)(i)
	Emission Standards for Sulfur Dioxide-Emission Limitations (LAC 33:III.1503)	Exempt	Source emits < 250 TPY of sulfur compounds.	LAC 33:III.1503
	Emission Standards for Sulfur Dioxide-Continuous Emission Monitoring (LAC 33:III.1511)	Does Not Apply	Source emits <100 TPY of SO2.	LAC 33:III.1511
	Emissions Standard for Asbestos (LAC 33:III Chapter 51)	Does Not Apply	The LGF Plant does not contain asbestos.	LAC 33:III.5151
	40 CFR 61 Subpart M- National Emissions Standards for Asbestos	Does Not Apply	The LGF Plant does not contain asbestos.	40 CFR 61
	NSPS Subpart Ja- Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007	Does Not Apply	Facility is not a Petroleum Refinery. Petroleum refinery means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives. (b) Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.	40 CFR 60.101a
	NSPS Subpart VVa- Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006	Does Not Apply	Synthetic Organic Chemicals Manufacturing Industry means the industry that produces, as intermediates or final products, one or more of the chemicals listed in § 60.489. The Columbia Plant does not produce any of the chemicals listed.	40 CFR 60.481a
	NSPS Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006	Does Not Apply	Facility is not a Petroleum Refinery. Petroleum refinery means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives. (b) Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.	40 CFR 60.591a

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

Emission Point ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
Facility Wide (Cont.)	NSPS Subpart CCCC- Standards of Performance for Commercial and Industrial Solid Waste Incineration Units	Does Not Apply	Commercial and industrial solid waste incineration unit (CISWI) means any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR part 241. The Columbia Plant does not burn Solid Waste as defined in 40 CFR Part 241.	40 CFR 60.2265
	NESHAP Subpart FF- NESHAP for Benzene Waste Operations	Does Not Apply	The facility does not produce Benzene as a waste.	40 CFR 61.341
	NESHAP Subpart DDDDD- NESHAPs for Institutional, Commercial, and Industrial Boilers and Process Heaters	Does Not Apply	The facility is not a major source of HAPs.	40 CFR 63.7480
	NESHAP Subpart VVVVVV- NESHAPs for Chemical Manufacturing Area Source	Does Not Apply	The facility does not operate a chemical manufacturing process unit (CMPU) that meets the conditions specified in paragraphs (a)(1) and (2) of this section.	40 CFR 63.11494(a)(2)
22-03 to 22-06, Biomass Dryers #1 to #4	Waste Gas Disposal (LAC 33:III Chapter 2115)	Does Not Apply	The facility does not emit greater than 100 tpy VOCs.	LAC 33:III.2115.A
22-09(a)(5), Railcar Loading	VOC Loading (LAC 33:III.2107)	Does Not Apply	The facility does not load materials with a vapor pressure of greater than 1.5 psia in quantities greater than 20,000 gallons per day.	LAC 33:III.2107.A
22-07, Gasification Heater Common Stack; 22-08, Reactor Charge Heater; 22-16, Fractionator Feed Heater	Emission Standards for Control of Emissions of Smoke (LAC 33:III Chapter 11)	Does Not Apply	These sources burn natural gas equivalent fuel.	LAC 33:III.1107

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

Emission Point ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
22-07, Gasification Heater Common Stack; 22-08, Reactor Charge	Emission Standards for Sulfur Dioxide (LAC 33:III Chapter 15)	Does Not Apply	This chapter does not apply to single point sources that emit less than 5 tons per year of sulfur dioxide to the atmosphere.	LAC 33:III.1502.A.3
	Control of Emissions of Nitrogen Oxides (NO_X) (LAC 33:III Chapter 22)	Does Not Apply	This facility is in Caldwell Parish, which is not in the Baton Rouge Nonattainment Area or the Region of Influence.	LAC 33:III.2201.A.1
	NSPS Subpart A- General Provisions	Does Not Apply	No other NSPS Subparts apply to preheaters.	40 CFR 60.1-19
	NSPS Subpart D- Fossil-Fuel-Fired Steam Generators	Does Not Apply	Each source is not an affected facility per 40 CFR 60.40.a.1	40 CFR 60.40.a.1
	NSPS Subpart Dc- Small Industrial-Commercial-Institutional Steam Generating Units	Does Not Apply	Each source is not an affected source per 40 CFR 60.41c (definition of steam generating unit).	40 CFR 60.41c
	NESHAP Subpart JJJJJJ- Industrial, Commercial, and Institutional Boilers Area Source	Does Not Apply	Each source is not an affected source per 40 CFR 63.11237 (definition of boiler).	40 CFR 63.11193
22-10, Flare	Emission Standards for Sulfur Dioxide (LAC 33:III Chapter 15)	Does Not Apply	This Chapter does not apply to single point sources that emit less than 5 tons per year of sulfur dioxide to the atmosphere.	LAC 33:III.1502.A.3
22-15, Cooling Tower	NESHAP Subpart Q -Industrial Process Cooling Towers	Does Not Apply	No chromium-based water treatment chemicals are used and the facility is not a Major Source for HAPs.	40 CFR 63.1420

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

Emission Point ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
22-09, SO2 Scrubber	Emission Standards for Particulate Matter, Emissions from Fuel Burning Equipment (LAC 33:III.1313)	Does Not Apply	Source does not meet the definition of "fuel burning equipment".	LAC 33:III.1313.B
	Emission Standards for Sulfur Dioxide-Emission Limitations (LAC 33:III.1503)	Exempt	Source emits < 250 TPY of sulfur compounds.	LAC 33:III.1503
	Emission Standards for Sulfur Dioxide-Continuous Emission Monitoring (LAC 33:III.1511)	Does Not Apply	Source emits <100 TPY of SO_2.	LAC 33:III.1511
	Control of Emissions of Carbon Monoxide (New Sources) (LAC 33:III.Chapter 17)	Does Not Apply	Not a listed facility or operation in Chapter 17 of the Louisiana Administrative Code.	LAC 33:III.Chapter 17
	Control of Emissions of Nitrogen Oxides (NOx) (LAC 33:III.Chapter 22)	Does Not Apply	This facility is in Caldwell Parish, which is not in the Baton Rouge Nonattainment Area or the Region of Influence.	LAC 33:III.2201.A
22-20, Diesel Storage Tank (TNK-0204);22-21, Diesel Storage Tank (TNK-0205); 22-22, Diesel Sales Tank; 22-25, Diesel Blending Tank	Storage of Volatile Organic Compounds (LAC 33:III Chapter 2103)	Does Not Apply	Vapor pressure of the stored liquids is <1.5 psia.	LAC 33:III.2103

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

Emission Point ID No:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
22-20, Diesel Storage Tank (TNK-0204);22-21, Diesel Storage Tank (TNK-0205); 22-22, Diesel Sales Tank; 22-25, Diesel Blending Tank	40 CFR 60 Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced after May 18, 1978 and Prior to July 23, 1984	Does Not Apply	Constructed after the applicable date.	40 CFR 60.110a(a)
	40 CFR 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984	Does Not Apply	Vapor pressure of the stored liquids is <0.5 psia.	40 CFR 60.110b(a)
FUG-01, Fugitive Leak Emissions	Fugitive Emission Control (LAC 33:III Chapter 2121)	Does Not Apply	The facility is not one of the listed types of facilities. It is not a Petroleum Refinery or a SOCMI facility by definition.	LAC 33:III.2121.A
	Fugitive Emission Control for Ozone Nonattainment Areas and Specified Parishes (LAC 33:III Chapter 2122)	Does Not Apply	This facility is in Caldwell Parish, which is not in the Baton Rouge Nonattainment Area or the Region of Influence.	LAC 33:III.2122.A.6
	Louisiana MACT Determination for Non-HON Sources (LAC 33:III Chapter 5109)	Does Not Apply	The Columbia Plant does not have any equipment in VOTAP service (5% Class I & II TAPs).	LAC 33:III.5109
WW-1, Wastewater Treatment System	LAC 33:III Chapter 2153 - Limiting Volatile Organic Compound (VOC) Emissions from Industrial Wastewater	Does Not Apply	This facility is in Caldwell Parish, which is not one of the affected Parishes listed.	LAC 33:III.2153.A

The above table provides explanation for either the exemption status or non-applicability of a source cited by 2 or 3 in the matrix presented in Table 1 of this application.

TABLE 4: EQUIPMENT LIST

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

Emission Point ID No:	Description	Construction Date	Routes to:	Operating Rate/Volume	Applicable Requirement(s)?	
22-02(a)	22-02(a), Collector #1, Truck Receiving Area	N/A	22-02, Biomass Handling Baghouse		x Yes	No
22-02(b)	22-02(b), Collector #2, Dryer Island Area	N/A	22-02, Biomass Handling Baghouse		x Yes	No
22-02(c)	22-02(c), Collector #3, Cried Chip Conveying and Storage Area	N/A	22-02, Biomass Handling Baghouse		x Yes	No
22-02(d)	22-02(d), Collector #4, Gasifier Feed/Distribution Systems w/ TRI Feeders	N/A	22-02, Biomass Handling Baghouse		x Yes	No
22-07(a-x)	22-07 (a-x) Gasification Heaters	N/A	22-07, Gasification Heater Common Stack		x Yes	No
22-09(a)	22-09(a), Thermal Oxidizer	N/A	22-09, SO2 Scrubber		x Yes	No
22-09(a)(1)	22-09(a)(1), LHC Intermediate and Off spec Tank TNK-0101	N/A	22-09, SO2 Scrubber	170,518	x Yes	No
22-09(a)(2)	22-09(a)(2), Wax Intermediate and Off spec Tank TNK-0102	N/A	22-09, SO2 Scrubber	89,041	x Yes	No
22-09(a)(3)	22-09(a)(3), Slops Tank #1 TNK-0103	N/A	22-09, SO2 Scrubber	475,903	x Yes	No
22-09(a)(4)	22-09(a)(4), Slops Tank #2 TNK-0104	N/A	22-09, SO2 Scrubber	475,903	x Yes	No
22-09(a)(5)	22-09(a)(5), Railcar Loading	N/A	22-09, SO2 Scrubber		x Yes	No

Appendix B
Emissions Inventory Questionnaires (EIQs)

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-01	Biomass Boiler Stack	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584001.54 mE Vertical: 3561874.15 mN
TBD		Latitude: 32 ° 11 ' 24 " 98 hundredths
		Longitude: -92 ° 6 ' 31 " 84 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	3 ft 7.07 ft^2	200 ft	665.74 ft/sec	282,350 ft^3/min	186 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel		Type of Fuel Used and Heat Input (see instructions)	
		Type of Fuel	Heat Input (MMBTU/hr)
	a	Biomass	1168
	b		
	c		

Notes

Operating Parameters (include units)	Parameter	Description
Normal Operating Rate/Throughput	1,168	MMBtu/hr
Maximum Operating Rate/Throughput	1,168	MMBtu/hr
Design Capacity/Volume/Cylinder Displacement	1,168	MMBtu/hr
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered			Engine Model Year	
Date Engine Was Built by Manufacturer				

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-01	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})	008	90%		14.543	17.452	63.70	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	008	90%		14.543	17.452	63.70	---	A		gr/std ft^3
Sulfur dioxide	013	80%		7.479	8.975	32.76	---	A		ppm by vol
Nitrogen oxides	032	85%		13.139	15.767	57.55	---	A		ppm by vol
Carbon monoxide	019	85%		12.970	15.564	56.81	---	A		ppm by vol
Total VOC (including those listed below)	000			8.178	9.814	35.82	---	A		ppm by vol
Ammonia	000		07664-41-7	5.251	6.301	23.00	---	A		ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-02	Biomass Handling Baghouse	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584368.1 mE Vertical: 3561484.42 mN
TBD		Latitude: 32 ° 11 ' 12 " 22 hundredths
		Longitude: -92 ° 6 ' 17 " 97 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	5 ft 19.63 ft^2	25 ft	292.00 ft/sec	344,000 ft^3/min	100 °F	8760 hr/yr	2022	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	344,000	SCFM
Maximum Operating Rate/Throughput	412,800	SCFM
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-02	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})	017	99%		0.295	0.354	1.29	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	017	99%		0.295	0.354	1.29	---	A		gr/std ft^3
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-03	Biomass Dryer No. 1	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.: TBD		UTM Zone: 15 Horizontal: 584289.46 mE Vertical: 3561474.67 mN
		Latitude: 32 ° 11 ' 11 " 93 hundredths
		Longitude: -92 ° 6 ' 20 " 97 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	1.5 ft 1.77 ft^2	25 ft	282.94 ft/sec	30,000 ft^3/min	190 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)		
	Parameter	Description
Normal Operating Rate/Throughput	15.9	tons/hr
Maximum Operating Rate/Throughput	19.0	tons/hr
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered			Engine Model Year	
Date Engine Was Built by Manufacturer				

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-03 Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Total VOC (including those listed below)	000			2.426	2.912	10.63	---	A		ppm by vol
Benzyl chloride	000		00100-44-7	0.004	0.005	0.02	---	A		ppm by vol
Bromoform	000		00075-25-2	0.003	0.003	0.01	---	A		ppm by vol
Carbon disulfide	000		00075-15-0	0.001	0.001	< 0.01	---	A		ppm by vol
Dichloromethane	000		00075-09-2	0.001	0.001	< 0.01	---	A		ppm by vol
Ethyl benzene	000		00100-41-4	0.002	0.003	0.01	---	A		ppm by vol
n-Hexane	000		00110-54-3	0.013	0.015	0.06	---	A		ppm by vol
Methyl chloride	000		00074-87-3	0.007	0.008	0.03	---	A		ppm by vol
Methyl ethyl ketone	000		00078-93-3	0.001	0.002	0.01	---	A		ppm by vol
Methyl isobutyl ketone	000		00108-10-1	< 0.001	< 0.001	< 0.01	---	A		ppm by vol

Emission Point ID No. (Designation) 22-03 Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Styrene	000		00100-42-5	0.028	0.034	0.12	---	A		ppm by vol
Toluene	000		00108-88-3	0.001	0.002	0.01	---	A		ppm by vol
Xylene (mixed isomers)	000		#N/A	0.198	0.237	0.87	---	A		ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-04	Biomass Dryer No. 2	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.: TBD		UTM Zone: 15 Horizontal: 584289.46 mE Vertical: 3561474.67 mN
		Latitude: 32 ° 11 ' 11 " 93 hundredths
		Longitude: -92 ° 6 ' 20 " 97 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	1.5 ft 1.77 ft^2	25 ft	282.94 ft/sec	30,000 ft^3/min	190 °F	8760 hr/yr	2022	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	15.9	tons/hr
Maximum Operating Rate/Throughput	19.0	tons/hr
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-04	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Total VOC (including those listed below)	000			2.426	2.912	10.63	---	A		ppm by vol
Benzyl chloride	000		00100-44-7	0.004	0.005	0.02	---	A		ppm by vol
Bromoform	000		00075-25-2	0.003	0.003	0.01	---	A		ppm by vol
Carbon disulfide	000		00075-15-0	0.001	0.001	< 0.01	---	A		ppm by vol
Dichloromethane	000		00075-09-2	0.001	0.001	< 0.01	---	A		ppm by vol
Ethyl benzene	000		00100-41-4	0.002	0.003	0.01	---	A		ppm by vol
n-Hexane	000		00110-54-3	0.013	0.015	0.06	---	A		ppm by vol
Methyl chloride	000		00074-87-3	0.007	0.008	0.03	---	A		ppm by vol
Methyl ethyl ketone	000		00078-93-3	0.001	0.002	0.01	---	A		ppm by vol
Methyl isobutyl ketone	000		00108-10-1	< 0.001	< 0.001	< 0.01	---	A		ppm by vol

Emission Point ID No. (Designation) 22-04 Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Styrene	000		00100-42-5	0.028	0.034	0.12	---	A		ppm by vol
Toluene	000		00108-88-3	0.001	0.002	0.01	---	A		ppm by vol
Xylene (mixed isomers)	000		#N/A	0.198	0.237	0.87	---	A		ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)
22-05	Biomass Dryer No. 3
Tempo Subject Item ID No.	
TBD	

Approximate Location of Stack or Vent (see instructions)

Method: 20,"Interpolation - Satellite" Datum: WGS84

UTM Zone: 15 Horizontal: 584289.46 mE Vertical: 3561474.67 mN

Latitude: 32 ° 11 ' 11 " 93 hundredths

Longitude: -92 ° 6 ' 20 " 97 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	1.5 ft 1.77 ft^2	25 ft	282.94 ft/sec	30,000 ft^3/min	190 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	15.9	tons/hr
Maximum Operating Rate/Throughput	19.0	tons/hr
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-05	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Total VOC (including those listed below)	000			2.426	2.912	10.63	---	A		ppm by vol
Benzyl chloride	000		00100-44-7	0.004	0.005	0.02	---	A		ppm by vol
Bromoform	000		00075-25-2	0.003	0.003	0.01	---	A		ppm by vol
Carbon disulfide	000		00075-15-0	0.001	0.001	< 0.01	---	A		ppm by vol
Dichloromethane	000		00075-09-2	0.001	0.001	< 0.01	---	A		ppm by vol
Ethyl benzene	000		00100-41-4	0.002	0.003	0.01	---	A		ppm by vol
n-Hexane	000		00110-54-3	0.013	0.015	0.06	---	A		ppm by vol
Methyl chloride	000		00074-87-3	0.007	0.008	0.03	---	A		ppm by vol
Methyl ethyl ketone	000		00078-93-3	0.001	0.002	0.01	---	A		ppm by vol
Methyl isobutyl ketone	000		00108-10-1	< 0.001	< 0.001	< 0.01	---	A		ppm by vol

Emission Point ID No. (Designation) 22-05 Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Styrene	000		00100-42-5	0.028	0.034	0.12	---	A		ppm by vol
Toluene	000		00108-88-3	0.001	0.002	0.01	---	A		ppm by vol
Xylene (mixed isomers)	000		#N/A	0.198	0.237	0.87	---	A		ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-06	Biomass Dryer No. 4	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.: TBD		UTM Zone: 15 Horizontal: 584289.46 mE Vertical: 3561474.67 mN
		Latitude: 32 ° 11 ' 11 " 93 hundredths
		Longitude: -92 ° 6 ' 20 " 97 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point
yes	1.5 ft 1.77 ft^2	25 ft	282.94 ft/sec	30,000 ft^3/min	190 °F	8760 hr/yr	2022	Jan-Mar 25%; Apr-Jun 25%; Jul-Sep 25%; Oct-Dec 25%

Fuel	Type of Fuel Used and Heat Input (see instructions)	
	Type of Fuel	Heat Input (MMBTU/hr)
a	N/A	N/A
b		
c		

Notes

Operating Parameters (include units)	Parameter	Description
Normal Operating Rate/Throughput	15.9	tons/hr
Maximum Operating Rate/Throughput	19.0	tons/hr
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-06	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Total VOC (including those listed below)	000			2.426	2.912	10.63	---	A		ppm by vol
Benzyl chloride	000		00100-44-7	0.004	0.005	0.02	---	A		ppm by vol
Bromoform	000		00075-25-2	0.003	0.003	0.01	---	A		ppm by vol
Carbon disulfide	000		00075-15-0	0.001	0.001	< 0.01	---	A		ppm by vol
Dichloromethane	000		00075-09-2	0.001	0.001	< 0.01	---	A		ppm by vol
Ethyl benzene	000		00100-41-4	0.002	0.003	0.01	---	A		ppm by vol
n-Hexane	000		00110-54-3	0.013	0.015	0.06	---	A		ppm by vol
Methyl chloride	000		00074-87-3	0.007	0.008	0.03	---	A		ppm by vol
Methyl ethyl ketone	000		00078-93-3	0.001	0.002	0.01	---	A		ppm by vol
Methyl isobutyl ketone	000		00108-10-1	< 0.001	< 0.001	< 0.01	---	A		ppm by vol

Emission Point ID No. (Designation) 22-06 Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Styrene	000		00100-42-5	0.028	0.034	0.12	---	A		ppm by vol
Toluene	000		00108-88-3	0.001	0.002	0.01	---	A		ppm by vol
Xylene (mixed isomers)	000		#N/A	0.198	0.237	0.87	---	A		ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-07	Gasification Heater Common Stack	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584383.67 mE Vertical: 3561516.58 mN
TBD		Latitude: 32 ° 11 ' 13 " 26 hundredths
		Longitude: -92 ° 6 ' 17 " 36 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.5 ft 0.20 ft^2	30 ft	9,309.25 ft/sec	109,672 ft^3/min	785 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a	Fuel Gas/Natural Gas	188.3
	b		
	c		

Notes

Operating Parameters (include units)	Parameter	Description
Normal Operating Rate/Throughput	188.3	MMBtu/hr
Maximum Operating Rate/Throughput	226.0	MMBtu/hr
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-07	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})	000			1.412	1.695	6.19	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	000			1.412	1.695	6.19	---	A		gr/std ft^3
Sulfur dioxide	000			0.480	0.576	2.10	---	A		ppm by vol
Nitrogen oxides	032	90%		1.210	1.452	5.30	---	A		ppm by vol
Carbon monoxide	019	90%		0.405	0.486	1.77	---	A		ppm by vol
Total VOC (including those listed below)	000			1.017	1.220	4.45	---	A		ppm by vol
Ammonia	000		07664-41-7	1.229	1.475	5.38	---	A		ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-08	Reactor Charge Heater	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584522.09 mE Vertical: 3561513.64 mN
TBD		Latitude: 32 ° 11 ' 13 " 13 hundredths
		Longitude: -92 ° 6 ' 12 " 8 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.3 ft 0.07 ft^2	20 ft	4.95 ft/sec	21 ft^3/min	785 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a	Fuel Gas/Natural Gas	15.6
	b		
	c		

Notes

Operating Parameters (include units)	Parameter	Description
Normal Operating Rate/Throughput	15.6	MMBtu/hr
Maximum Operating Rate/Throughput	18.7	MMBtu/hr
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered			Engine Model Year	
Date Engine Was Built by Manufacturer				

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-08	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})	000			0.117	0.140	0.51	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	000			0.117	0.140	0.51	---	A		gr/std ft^3
Sulfur dioxide	000			0.268	0.322	1.17	---	A		ppm by vol
Nitrogen oxides	000			0.764	0.917	3.35	---	A		ppm by vol
Carbon monoxide	000			1.285	1.543	5.63	---	A		ppm by vol
Total VOC (including those listed below)	000			0.084	0.101	0.37	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-09	SO_2 Scrubber	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584471.57 mE Vertical: 3561388.28 mN
TBD		Latitude: 32 ° 11 ' 9 " 7 hundredths
		Longitude: -92 ° 6 ' 14 " 5 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.5 ft 0.20 ft^2	30 ft	405.31 ft/sec	4,775 ft^3/min	785 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a		
	b		
	c		

Notes

Operating Parameters (include units)	Parameter	Description
Normal Operating Rate/Throughput		
Maximum Operating Rate/Throughput		
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered			Engine Model Year	
Date Engine Was Built by Manufacturer				

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-09	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})	000			1.231	1.477	5.39	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	000			1.231	1.477	5.39	---	A		gr/std ft^3
Sulfur dioxide	002	95%		0.070	0.085	0.31	---	A		ppm by vol
Nitrogen oxides	000			0.914	1.096	4.00	---	A		ppm by vol
Carbon monoxide	000			0.231	0.277	1.01	---	A		ppm by vol
Total VOC (including those listed below)	000			0.015	0.018	0.07	---	A		ppm by vol
Ammonia	000		07664-41-7	0.001	0.001	< 0.01	---	A		ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-10	Flare	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.: TBD		UTM Zone: 15 Horizontal: 584374.16 mE Vertical: 3561685.01 mN
		Latitude: 32 ° 11 ' 18 " 73 hundredths
		Longitude: -92 ° 6 ' 17 " 67 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	4 ft 12.57 ft^2	270 ft	0.01 ft/sec	10 ft^3/min	785 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a	Fuel Gas/Natural Gas	6.7
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	6.7	MMBtu/hr
Maximum Operating Rate/Throughput	8.0	MMBtu/hr
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-10	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})	000			0.050	0.060	0.22	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	000			0.050	0.060	0.22	---	A		gr/std ft^3
Sulfur dioxide	000			0.115	0.138	0.50	---	A		ppm by vol
Nitrogen oxides	000			0.328	0.394	1.44	---	A		ppm by vol
Carbon monoxide	000			0.552	0.662	2.42	---	A		ppm by vol
Total VOC (including those listed below)	000			0.036	0.043	0.16	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-11	Emergency Generator Diesel Engine No. 1	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584382.93 mE Vertical: 3561435.43 mN
TBD		Latitude: 32 ° 11 ' 10 " 63 hundredths
		Longitude: -92 ° 6 ' 17 " 42 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.67 ft 0.35 ft^2	10 ft	284.96 ft/sec	6,028 ft^3/min	847 °F	100 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a	Diesel	7.04
	b		
	c		

Notes

Operating Parameters (include units)		
	Parameter	Description
Normal Operating Rate/Throughput	7.04	MMBtu/hr
Maximum Operating Rate/Throughput	8.45	MMBtu/hr
Design Capacity/Volume/Cylinder Displacement	18.13	L
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered		Engine Model Year	2022
Date Engine Was Built by Manufacturer			2022

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-11	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})	000			0.704	0.845	0.04	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	000			0.704	0.845	0.04	---	A		gr/std ft^3
Sulfur dioxide	000			7.112	8.535	0.36	---	A		ppm by vol
Nitrogen oxides	000			22.534	27.041	1.13	---	A		ppm by vol
Carbon monoxide	000			5.986	7.183	0.30	---	A		ppm by vol
Total VOC (including those listed below)	000			0.634	0.761	0.03	---	A		ppm by vol
Benzene	000		00071-43-2	0.005	0.007	< 0.01	---	A		ppm by vol
Formaldehyde	000		00050-00-0	0.001	0.001	< 0.01	---	A		ppm by vol
Naphthalene	000		00091-20-3	0.001	0.001	< 0.01	---	A		ppm by vol

Emission Point ID No. (Designation) 22-11 Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Polynuclear Aromatic Hydrocarbons	000		0	0.001	0.002	< 0.01	---	A		ppm by vol
Toluene	000		00108-88-3	0.002	0.002	< 0.01	---	A		ppm by vol
Xylene (mixed isomers)	000		#N/A	0.001	0.002	< 0.01	---	A		ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-12	Emergency Generator Diesel Engine No. 2	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584431.28 mE Vertical: 3561494.59 mN
TBD		Latitude: 32 ° 11 ' 12 " 53 hundredths
		Longitude: -92 ° 6 ' 15 " 55 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.3 ft 0.07 ft^2	10 ft	259.84 ft/sec	1,102 ft^3/min	825 °F	100 hr/yr	2022	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a	Diesel	1.41
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	1.41	MMBtu/hr
Maximum Operating Rate/Throughput	1.69	MMBtu/hr
Design Capacity/Volume/Cylinder Displacement	7.01	L
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered			Engine Model Year	2022
Date Engine Was Built by Manufacturer				2022

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-12	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})	000			0.436	0.523	0.02	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	000			0.436	0.523	0.02	---	A		gr/std ft^3
Sulfur dioxide	000			0.408	0.490	0.02	---	A		ppm by vol
Nitrogen oxides	000			6.205	7.446	0.31	---	A		ppm by vol
Carbon monoxide	000			1.337	1.604	0.07	---	A		ppm by vol
Total VOC (including those listed below)	000			0.127	0.152	0.01	---	A		ppm by vol
Acetaldehyde	000		00075-07-0	0.001	0.001	< 0.01	---	A		ppm by vol
Benzene	000		00071-43-2	0.001	0.002	< 0.01	---	A		ppm by vol
Formaldehyde	000		00050-00-0	0.002	0.002	< 0.01	---	A		ppm by vol

Emission Point ID No. (Designation) 22-12 Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Toluene	000		00108-88-3	0.001	0.001	< 0.01	---	A		ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-13	Diesel Fire Water Pump No. 1	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584533.62 mE Vertical: 3561657.07 mN
TBD		Latitude: 32 ° 11 ' 17 " 78 hundredths
		Longitude: -92 ° 6 ' 11 " 59 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.67 ft 0.35 ft^2	10 ft	284.96 ft/sec	6,028 ft^3/min	847 °F	100 hr/yr	2022	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a	Diesel	5.60
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	5.60	MMBtu/hr
Maximum Operating Rate/Throughput	6.72	MMBtu/hr
Design Capacity/Volume/Cylinder Displacement	800	bhp
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered		Engine Model Year	2022
Date Engine Was Built by Manufacturer			2022

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-13	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})	000			0.560	0.672	0.03	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	000			0.560	0.672	0.03	---	A		gr/std ft^3
Sulfur dioxide	000			5.656	6.787	0.28	---	A		ppm by vol
Nitrogen oxides	000			17.920	21.504	0.90	---	A		ppm by vol
Carbon monoxide	000			4.760	5.712	0.24	---	A		ppm by vol
Total VOC (including those listed below)	000			0.504	0.605	0.03	---	A		ppm by vol
Benzene	000		00071-43-2	0.004	0.005	< 0.01	---	A		ppm by vol
Formaldehyde	000		00050-00-0	< 0.001	0.001	< 0.01	---	A		ppm by vol
Naphthalene	000		00091-20-3	0.001	0.001	< 0.01	---	A		ppm by vol

Emission Point ID No. (Designation) 22-13 Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Polynuclear Aromatic Hydrocarbons	000		0	0.001	0.001	< 0.01	---	A		ppm by vol
Toluene	000		00108-88-3	0.002	0.002	< 0.01	---	A		ppm by vol
Xylene (mixed isomers)	000		#N/A	0.001	0.001	< 0.01	---	A		ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-14	Diesel Fire Water Pump No. 2	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.: TBD		UTM Zone: 15 Horizontal: 584533.62 mE Vertical: 3561657.07 mN
		Latitude: 32 ° 11 ' 17 " 78 hundredths
		Longitude: -92 ° 6 ' 11 " 59 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.67 ft 0.35 ft^2	10 ft	284.96 ft/sec	6,028 ft^3/min	847 °F	100 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a	Diesel	5.60
	b		
	c		

Notes

Operating Parameters (include units)		
	Parameter	Description
Normal Operating Rate/Throughput	5.60	MMBtu/hr
Maximum Operating Rate/Throughput	6.72	MMBtu/hr
Design Capacity/Volume/Cylinder Displacement	800	bhp
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered		Engine Model Year	2022
Date Engine Was Built by Manufacturer			2022

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-14	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})	000			0.560	0.672	0.03	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	000			0.560	0.672	0.03	---	A		gr/std ft^3
Sulfur dioxide	000			5.656	6.787	0.28	---	A		ppm by vol
Nitrogen oxides	000			17.920	21.504	0.90	---	A		ppm by vol
Carbon monoxide	000			4.760	5.712	0.24	---	A		ppm by vol
Total VOC (including those listed below)	000			0.504	0.605	0.03	---	A		ppm by vol
Benzene	000		00071-43-2	0.004	0.005	< 0.01	---	A		ppm by vol
Formaldehyde	000		00050-00-0	< 0.001	0.001	< 0.01	---	A		ppm by vol
Naphthalene	000		00091-20-3	0.001	0.001	< 0.01	---	A		ppm by vol

Emission Point ID No. (Designation) 22-14 Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Polynuclear Aromatic Hydrocarbons	000		0	0.001	0.001	< 0.01	---	A		ppm by vol
Toluene	000		00108-88-3	0.002	0.002	< 0.01	---	A		ppm by vol
Xylene (mixed isomers)	000		#N/A	0.001	0.001	< 0.01	---	A		ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-15	Cooling Tower	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.: TBD		UTM Zone: 15 Horizontal: 584346.07 mE Vertical: 3561583.12 mN
		Latitude: 32 ° 11 ' 15 " 43 hundredths
		Longitude: -92 ° 6 ' 18 " 78 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	ft / ft^2	ft	ft/sec	ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)	Parameter	Description
Normal Operating Rate/Throughput	30,000	gpm
Maximum Operating Rate/Throughput	30,000	gpm
Design Capacity/Volume/Cylinder Displacement	30,000	gpm
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered			Engine Model Year	
Date Engine Was Built by Manufacturer				

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-15	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})	000			0.376	0.751	1.64	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	000			0.376	0.751	1.64	---	A		gr/std ft^3
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-16	Fractionator Feed Heater	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584522.09 mE Vertical: 3561513.64 mN
TBD		Latitude: 32 ° 11 ' 13 " 13 hundredths
		Longitude: -92 ° 6 ' 12 " 8 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.3 ft 0.07 ft^2	20 ft	4.95 ft/sec	21 ft^3/min	785 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel — Type of Fuel Used and Heat Input (see instructions)

	Type of Fuel	Heat Input (MMBTU/hr)
a	Fuel Gas/Natural Gas	3.8
b		
c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	3.8	MMBtu/hr
Maximum Operating Rate/Throughput	4.6	MMBtu/hr
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered			Engine Model Year	
Date Engine Was Built by Manufacturer				

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-16 Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates: Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Permitted Emission Rate (Current) Annual (tons/yr)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Particulate matter (PM_{10})	000			0.029	0.034	0.12	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)	000			0.029	0.034	0.12	---	A		gr/std ft^3
Sulfur dioxide	000			0.065	0.078	0.29	---	A		ppm by vol
Nitrogen oxides	000			0.186	0.223	0.82	---	A		ppm by vol
Carbon monoxide	000			0.313	0.376	1.37	---	A		ppm by vol
Total VOC (including those listed below)	000			0.021	0.025	0.09	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)
22-17	2072-TNK-0201 - Naphtha Storage Tank
Tempo Subject Item ID No.	
TBD	

Approximate Location of Stack or Vent (see instructions)

Method: 20,"Interpolation - Satellite" Datum: WGS84

UTM Zone: 15 Horizontal: 584672.28 mE Vertical: 3561444.38 mN

Latitude: 32 ° 11 ' 10 " 84 hundredths

Longitude: -92 ° 6 ' 6 " 36 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.33 ft 0.09 ft^2	35 ft	0.19 ft/sec	1 ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	65,700	bbl/yr
Maximum Operating Rate/Throughput	65,700	bbl/yr
Design Capacity/Volume/Cylinder Displacement	117,500	gallons
Shell Height (ft)	32	ft
Tank Diameter (ft)	25	ft

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☑ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-17	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Total VOC (including those listed below)	000			0.150	0.150	0.66	---	A		ppm by vol
n-Hexane	000		00110-54-3	0.045	0.045	0.20	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-18	2072-TNK-0202 - Naphtha Storage Tank	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584672.28 mE Vertical: 3561444.38 mN
TBD		Latitude: 32 ° 11 ' 10 " 84 hundredths
		Longitude: -92 ° 6 ' 6 " 36 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.33 ft 0.09 ft^2	35 ft	0.19 ft/sec	1 ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	65,700	bbl/yr
Maximum Operating Rate/Throughput	65,700	bbl/yr
Design Capacity/Volume/Cylinder Displacement	117,500	gallons
Shell Height (ft)	32	ft
Tank Diameter (ft)	25	ft

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☑ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-18	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Total VOC (including those listed below)	000			0.150	0.150	0.66	---	A		ppm by vol
n-Hexane	000		00110-54-3	0.045	0.045	0.20	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-19	2072-TNK-0203 - Naphtha Sales Tank	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.: TBD		UTM Zone: 15 Horizontal: 584691.43 mE Vertical: 3561488 mN
		Latitude: 32 ° 11 ' 12 " 25 hundredths
		Longitude: -92 ° 6 ' 5 " 62 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.33 ft 0.09 ft^2	43 ft	0.19 ft/sec	1 ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	131,400	bbl/yr
Maximum Operating Rate/Throughput	131,400	bbl/yr
Design Capacity/Volume/Cylinder Displacement	287,900	gallons
Shell Height (ft)	40	ft
Tank Diameter (ft)	35	ft

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☑ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-19	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Total VOC (including those listed below)	000			0.202	0.202	0.89	---	A		ppm by vol
n-Hexane	000		00110-54-3	0.061	0.061	0.27	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-20	2072-TNK-0204 - Diesel Storage Tank	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584672.28 mE Vertical: 3561444.38 mN
TBD		Latitude: 32 ° 11 ' 10 " 84 hundredths
		Longitude: -92 ° 6 ' 6 " 36 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.33 ft 0.09 ft^2	51 ft	0.19 ft/sec	1 ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	365,000	bbl/yr
Maximum Operating Rate/Throughput	365,000	bbl/yr
Design Capacity/Volume/Cylinder Displacement	571,100	gallons
Shell Height (ft)	48	ft
Tank Diameter (ft)	45	ft

Tanks: ☑ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-20	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Total VOC (including those listed below)	000			0.063	0.063	0.28	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-21	2072-TNK-0205 - Diesel Storage Tank	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584672.28 mE Vertical: 3561444.38 mN
TBD		Latitude: 32 ° 11 ' 10 " 84 hundredths
		Longitude: -92 ° 6 ' 6 " 36 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.33 ft 0.09 ft^2	51 ft	0.19 ft/sec	1 ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	365,000	bbl/yr
Maximum Operating Rate/Throughput	365,000	bbl/yr
Design Capacity/Volume/Cylinder Displacement	571,100	gallons
Shell Height (ft)	48	ft
Tank Diameter (ft)	45	ft

Tanks: ☑ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation) 22-21 / Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates: Average (lb/hr)	Proposed Emission Rates: Maximum (lbs/hr)	Proposed Emission Rates: Annual (tons/yr)	Permitted Emission Rate (Current) Annual (tons/yr)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Total VOC (including those listed below)	000			0.063	0.063	0.28	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-22	2072-TNK-0206 - Diesel Sales Tank	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584691.43 mE Vertical: 3561488 mN
TBD		Latitude: 32 ° 11 ' 12 " 25 hundredths
		Longitude: -92 ° 6 ' 5 " 62 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.33 ft 0.09 ft^2	45 ft	0.19 ft/sec	1 ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)	
	Type of Fuel	Heat Input (MMBTU/hr)
a	N/A	N/A
b		
c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	730,000	bbl/yr
Maximum Operating Rate/Throughput	730,000	bbl/yr
Design Capacity/Volume/Cylinder Displacement	1,209,100	gallons
Shell Height (ft)	42	ft
Tank Diameter (ft)	70	ft

Tanks: ☑ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation)	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
22-22				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Pollutant										
Total VOC (including those listed below)	000			0.131	0.131	0.57	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-23	2043-TNK-0301 - Sulfuric Acid Storage Tank	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584359.42 mE Vertical: 3561485.45 mN
TBD		Latitude: 32 ° 11 ' 12 " 26 hundredths
		Longitude: -92 ° 6 ' 18 " 30 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.33 ft 0.09 ft^2	22 ft	0.19 ft/sec	1 ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)		
	Parameter	Description
Normal Operating Rate/Throughput	280,000	gal/yr
Maximum Operating Rate/Throughput	280,000	gal/yr
Design Capacity/Volume/Cylinder Displacement	11,200	gallons
Shell Height (ft)	19	ft
Tank Diameter (ft)	10	ft

Tanks: ☑ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): 22-23	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Sulfuric Acid	000		07664-93-9	0.001	0.001	< 0.01	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-24	1041-TNK-0101 - Methanol Storage Tank	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584469.32 mE Vertical: 3561397.35 mN
TBD		Latitude: 32 ° 11 ' 9 " 37 hundredths
		Longitude: -92 ° 6 ' 14 " 13 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.33 ft 0.09 ft^2	29 ft	0.19 ft/sec	1 ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	36,000	gal/yr
Maximum Operating Rate/Throughput	36,000	gal/yr
Design Capacity/Volume/Cylinder Displacement	106,300	gallons
Shell Height (ft)	26.25	ft
Tank Diameter (ft)	26.25	ft

Tanks: ☑ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation)	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
22-24				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Pollutant										
Total VOC (including those listed below)	000			0.007	0.007	0.03	---	A		ppm by vol
Methanol	000		00067-56-1	0.007	0.007	0.03	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
22-25	2072-TNK-0207 - Diesel Blending Tank	Method: 20,"Interpolation - Satellite" Datum: WGS84 UTM Zone: 15 Horizontal: 584613.4 mE Vertical: 3561395 mN Latitude: 32 ° 11 ' 9 " 25 hundredths Longitude: -92 ° 6 ' 8 " 63 hundredths
Tempo Subject Item ID No. TBD		

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.33 ft 0.09 ft^2	18 ft	0.19 ft/sec	1 ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel — Type of Fuel Used and Heat Input (see instructions)

	Type of Fuel	Heat Input (MMBTU/hr)
a	N/A	N/A
b		
c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	1,190	bbl/yr
Maximum Operating Rate/Throughput	1,190	bbl/yr
Design Capacity/Volume/Cylinder Displacement	12,700	gallons
Shell Height (ft)	15	ft
Tank Diameter (ft)	12	ft

Tanks: ☑ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation) / Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates: Average (lb/hr)	Proposed Emission Rates: Maximum (lbs/hr)	Proposed Emission Rates: Annual (tons/yr)	Permitted Emission Rate (Current) Annual (tons/yr)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
22-25										
Total VOC (including those listed below)	000			0.001	0.001	< 0.01	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
WW-01	Wastewater Treatment System	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584469.32 mE Vertical: 3561397.35 mN
TBD		Latitude: 32 ° 11 ' 9 " 37 hundredths
		Longitude: -92 ° 6 ' 14 " 13 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	ft / ft^2	ft	ft/sec	ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a	N/A	N/A
	b		
	c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	26,000	gal/day
Maximum Operating Rate/Throughput	26,000	gal/day
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation) / Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates: Average (lb/hr)	Proposed Emission Rates: Maximum (lbs/hr)	Proposed Emission Rates: Annual (tons/yr)	Permitted Emission Rate (Current) Annual (tons/yr)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
WW-01										
Total VOC (including those listed below)	000			0.477	0.573	2.09	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
FUG-01	Fugitive Leak Emissions	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584466.37 mE Vertical: 3561389.34 mN
TBD		Latitude: 32 ° 11 ' 9 " 11 hundredths
		Longitude: -92 ° 6 ' 14 " 24 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	ft / ft^2	ft	ft/sec	ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel — Type of Fuel Used and Heat Input (see instructions)

	Type of Fuel	Heat Input (MMBTU/hr)
a	N/A	N/A
b		
c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	N/A	
Maximum Operating Rate/Throughput	N/A	
Design Capacity/Volume/Cylinder Displacement	N/A	
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): FUG-01 / Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates: Average (lb/hr)	Proposed Emission Rates: Maximum (lbs/hr)	Proposed Emission Rates: Annual (tons/yr)	Permitted Emission Rate (Current): Annual (tons/yr)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Total VOC (including those listed below)	000			0.557	---	2.44	---	A		ppm by vol
n-Hexane	000		00110-54-3	0.057	---	0.25	---	A		ppm by vol
Methanol	000		00067-56-1	0.122	---	0.53	---	A		ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

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

Date of submittal: Jun | 2022

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
FUG-02	Fugitive Roadway Emissions	Method: 20,"Interpolation - Satellite" Datum: WGS84
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 584464.41 mE Vertical: 3561625.46 mN
TBD		Latitude: 32 ° 11 ' 16 " 77 hundredths
		Longitude: -92 ° 6 ' 31 " 49 hundredths

Stack and Discharge, Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	ft / ft^2	ft	ft/sec	ft^3/min	77 °F	8760 hr/yr	2022	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)	
	Type of Fuel	Heat Input (MMBTU/hr)
a	N/A	N/A
b		
c		

Notes

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	272	VMT/day
Maximum Operating Rate/Throughput	272	VMT/day
Design Capacity/Volume/Cylinder Displacement	N/A	
Shell Height (ft)	N/A	
Tank Diameter (ft)	N/A	

Tanks: ☐ Fixed Roof ☐ Floating Roof ☐ External ☐ Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: ☐ Rich Burn ☐ Lean Burn ☐ 2 Stroke ☐ 4 Stroke

Emission Point ID No. (Designation): FUG-02	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})				0.834	---	1.56	---	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)				0.205	---	0.38	---	A		gr/std ft^3
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol
										ppm by vol

Appendix C
Air Emission Calculations

Strategic Biofuels LLC
Louisiana Green Fuels Project
Initial Minor Source Air Permit

Facility Summary
Criteria Pollutant Emissions

Criteria Pollutant Emissions Summary (TPY)							
Source ID	**Source Description**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_x**	**CO**	**VOC**
22-01	Biomass Boiler	63.7	63.7	32.76	57.55	56.81	35.82
22-02	Biomass Handling Baghouse	1.29	1.29	---	---	---	---
22-03	Biomass Dryer No. 1	---	---	---	---	---	10.63
22-04	Biomass Dryer No. 2	---	---	---	---	---	10.63
22-05	Biomass Dryer No. 3	---	---	---	---	---	10.63
22-06	Biomass Dryer No. 4	---	---	---	---	---	10.63
22-07	Gasification Heater Common Stack	6.19	6.19	2.1	5.3	1.77	4.45
22-08	Reactor Charge Heater	0.51	0.51	1.17	3.35	5.63	0.37
22-09	SO_2 Scrubber	5.39	5.39	0.31	4	1.01	0.07
22-10	Flare	0.22	0.22	0.5	1.44	2.42	0.16
22-11	Emergency Generator Diesel Engine No. 1	0.04	0.04	0.36	1.13	0.3	0.03
22-12	Emergency Generator Diesel Engine No. 2	0.02	0.02	0.02	0.31	0.07	0.01
22-13	Diesel Fire Water Pump No. 1	0.03	0.03	0.28	0.9	0.24	0.03
22-14	Diesel Fire Water Pump No. 2	0.03	0.03	0.28	0.9	0.24	0.03
22-15	Cooling Tower	1.64	1.64	---	---	---	---
22-16	Fractionator Feed Heater	0.12	0.12	0.29	0.82	1.37	0.09
22-17	2072-TNK-0201 - Naphtha Storage Tank	---	---	---	---	---	0.66
22-18	2072-TNK-0202 - Naphtha Storage Tank	---	---	---	---	---	0.66
22-19	2072-TNK-0203 - Naphtha Sales Tank	---	---	---	---	---	0.89
22-20	2072-TNK-0204 - Diesel Storage Tank	---	---	---	---	---	0.28
22-21	2072-TNK-0205 - Diesel Storage Tank	---	---	---	---	---	0.28
22-22	2072-TNK-0206 - Diesel Sales Tank	---	---	---	---	---	0.57
22-23	2043-TNK-0301 - Sulfuric Acid Storage Tank	---	---	---	---	---	---
22-24	1041-TNK-0101 - Methanol Storage Tank	---	---	---	---	---	0.03
22-25	2072-TNK-0207 - Diesel Blending Tank	---	---	---	---	---	< 0.01
WW-01	Wastewater Treatment System	---	---	---	---	---	2.09
FUG-01	Fugitive Leak Emissions	---	---	---	---	---	2.44
FUG-02	Fugitive Roadway Emissions	1.56	0.38	---	---	---	---
UNF-01	**Total Facility Emissions**	**80.74**	**79.56**	**38.07**	**75.70**	**69.86**	**91.49**

VOC TAP Emissions Summary (TPY)																					
Source ID	Source Description	Total VOC	Acetaldehyde	Benzene	Benzyl chloride	Bromoform	Carbon disulfide	Dichloromethane	Ethylbenzene	Formaldehyde	Hexane	Methanol	Methyl chloride	Methyl ethyl ketone	Methyl isobutyl ketone (MIBK)	Naphthalene	Polycyclic Aromatic Hydrocarbon (PAH)	Styrene	Toluene	Xylenes
22-01	Biomass Boiler	35.82	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-02	Biomass Handling Baghouse	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-03	Biomass Dryer No. 1	10.63	---	---	0.02	0.01	< 0.01	< 0.01	0.01	---	0.06	---	0.03	0.01	< 0.01	---	---	0.12	0.01	0.87
22-04	Biomass Dryer No. 2	10.63	---	---	0.02	0.01	< 0.01	< 0.01	0.01	---	0.06	---	0.03	0.01	< 0.01	---	---	0.12	0.01	0.87
22-05	Biomass Dryer No. 3	10.63	---	---	0.02	0.01	< 0.01	< 0.01	0.01	---	0.06	---	0.03	0.01	< 0.01	---	---	0.12	0.01	0.87
22-06	Biomass Dryer No. 4	10.63	---	---	0.02	0.01	< 0.01	< 0.01	0.01	---	0.06	---	0.03	0.01	< 0.01	---	---	0.12	0.01	0.87
22-07	Gasification Heater Common Stack	4.45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-08	Reactor Charge Heater	0.37	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-09	SO_2 Scrubber	0.07	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-10	Flare	0.16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-11	Emergency Generator Diesel Engine No. 1	0.03	---	< 0.01	---	---	---	---	---	< 0.01	---	---	---	---	---	< 0.01	< 0.01	---	< 0.01	< 0.01
22-12	Emergency Generator Diesel Engine No. 2	0.01	< 0.01	< 0.01	---	---	---	---	---	< 0.01	---	---	---	---	---	---	---	---	< 0.01	---
22-13	Diesel Fire Water Pump No. 1	0.03	---	< 0.01	---	---	---	---	---	< 0.01	---	---	---	---	---	< 0.01	< 0.01	---	< 0.01	< 0.01
22-14	Diesel Fire Water Pump No. 2	0.03	---	< 0.01	---	---	---	---	---	< 0.01	---	---	---	---	---	< 0.01	< 0.01	---	< 0.01	< 0.01
22-15	Cooling Tower	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-16	Fractionator Feed Heater	0.09	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-17	2072-TNK-0201 - Naphtha Storage Tank	0.66	---	---	---	---	---	---	---	---	0.2	---	---	---	---	---	---	---	---	---
22-18	2072-TNK-0202 - Naphtha Storage Tank	0.66	---	---	---	---	---	---	---	---	0.2	---	---	---	---	---	---	---	---	---
22-19	2072-TNK-0203 - Naphtha Sales Tank	0.89	---	---	---	---	---	---	---	---	0.27	---	---	---	---	---	---	---	---	---
22-20	2072-TNK-0204 - Diesel Storage Tank	0.28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-21	2072-TNK-0205 - Diesel Storage Tank	0.28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-22	2072-TNK-0206 - Diesel Sales Tank	0.57	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-23	2043-TNK-0301 - Sulfuric Acid Storage Tank	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22-24	1041-TNK-0101 - Methanol Storage Tank	0.03	---	---	---	---	---	---	---	---	---	0.03	---	---	---	---	---	---	---	---
22-25	2072-TNK-0207 - Diesel Blending Tank	< 0.01	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WW-01	Wastewater Treatment System	2.09	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FUG-01	Fugitive Leak Emissions	2.44	---	---	---	---	---	---	---	---	0.25	0.53	---	---	---	---	---	---	---	---
FUG-02	Fugitive Roadway Emissions	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
UNF-01	**Total Facility Emissions**	**91.49**	**0.01**	**0.04**	**0.08**	**0.04**	**0.04**	**0.04**	**0.04**	**0.04**	**1.16**	**0.56**	**0.12**	**0.04**	**0.04**	**0.03**	**0.03**	**0.48**	**0.08**	**3.51**

Non-VOC TAP Emissions Summary (TPY)			
Source ID	**Source Description**	**Ammonia**	**Sulfuric Acid**
22-01	Biomass Boiler	23.00	---
22-02	Biomass Handling Baghouse	---	---
22-03	Biomass Dryer No. 1	---	---
22-04	Biomass Dryer No. 2	---	---
22-05	Biomass Dryer No. 3	---	---
22-06	Biomass Dryer No. 4	---	---
22-07	Gasification Heater Common Stack	5.38	---
22-08	Reactor Charge Heater	---	---
22-09	SO_2 Scrubber	< 0.01	---
22-10	Flare	---	---
22-11	Emergency Generator Diesel Engine No. 1	---	---
22-12	Emergency Generator Diesel Engine No. 2	---	---
22-13	Diesel Fire Water Pump No. 1	---	---
22-14	Diesel Fire Water Pump No. 2	---	---
22-15	Cooling Tower	---	---
22-16	Fractionator Feed Heater	---	---
22-17	2072-TNK-0201 - Naphtha Storage Tank	---	---
22-18	2072-TNK-0202 - Naphtha Storage Tank	---	---
22-19	2072-TNK-0203 - Naphtha Sales Tank	---	---
22-20	2072-TNK-0204 - Diesel Storage Tank	---	---
22-21	2072-TNK-0205 - Diesel Storage Tank	---	---
22-22	2072-TNK-0206 - Diesel Sales Tank	---	---
22-23	2043-TNK-0301 - Sulfuric Acid Storage Tank	---	< 0.01
22-24	1041-TNK-0101 - Methanol Storage Tank	---	---
22-25	2072-TNK-0207 - Diesel Blending Tank	---	---
WW-01	Wastewater Treatment System	---	---
FUG-01	Fugitive Leak Emissions	---	---
FUG-02	Fugitive Roadway Emissions	---	---
UNF-01	**Total Facility Emissions**	**28.39**	**0.01**

Description of Source

A 85.54 MW biomass boiler generates the power required by the facility. Nox emissions are controlled by an SNCR and SCR system. CO emissions are controlled by CO catalyst. SO_2 and Condensable PM are controlled by a circulating dry scrubber. Filterable PM Emissions are controlled by a mechanical collector. Approximately 90% of CO_2e emissions are recovered and injected via the facility's onsite CO_2 sequestration well.

Annual Operation:	8,760 hrs/yr
Total Fuel Usage:	1,168.0 MMBtu/hr

Summary of Emissions

Pollutant	Emission Factor[1] (lbs/hr)	Emission Factor[1] (lbs/MMBtu)	Control Efficiency	Emissions		
				Average[2] (lbs/hr)	Maximum[3] (lbs/hr)	Annual[4] (tons/yr)
Particulate Matter (PM_{10})	---	0.1245	90%	14.543	17.452	63.70
Particulate Matter ($PM_{2.5}$)	---	0.1245	90%	14.543	17.452	63.70
Sulfur dioxide (SO_2)	---	0.0320	80%	7.479	8.975	32.76
Nitrogen oxides (NO_x)	---	0.0750	85%	13.139	15.767	57.55
Carbon monoxide (CO)	---	0.0740	85%	12.970	15.564	56.81
Total VOC	---	0.0070	---	8.178	9.814	35.82
Ammonia	5.251	---	---	5.251	6.301	23.00

(1) Emission factors are derived from vendor emissions specifications. Ammonia emissions are based off of 10 ppm Ammonia slip.
(2) Calculated as: Emission Factor (lbs/MMBtu) **X** Total Fuel Usage (MMBtu/hr) **X** (1- Control Efficiency)
(3) Calculated as: Average (lbs/hr) **X** 1.2
(4) Calculated as: Average hourly emissions (lbs/hr) **X** Annual Operation (hrs/yr) ÷ (2,000 lbs/ton)

Description of Source

Biomass handling includes Biomass delivered by trucks and then stacked, prepared, and conveyed to the process area. Airflow is directed to a Baghouse to filter PM emissions.

Annual Operation:	8,760 hrs/yr
22-02(a) - Collector No. 1 - Truck Receiving Area	44,000 SCFM
22-02(b) - Collector No. 2 - Dryer Island Area	120,000 SCFM
22-02(c) - Collector No. 3 - Dried Chip Conveying and Storage Silos Area	72,000 SCFM
22-02(d) - Collector No. 4 - Gasifier Feed/Distribution Systems	108,000 SCFM
Total Air Flow:	344,000 SCFM

Summary of Emissions

Pollutant	Emission Factor[1] (lbs/SCFM)	Emissions		
		Average[2] (lbs/hr)	Maximum[3] (lbs/hr)	Annual[4] (tons/yr)
Particulate Matter (PM_{10})	1.43E-08	0.295	0.354	1.29
Particulate Matter ($PM_{2.5}$)	1.43E-08	0.295	0.354	1.29

(1) Emission factors derived from vendor emissions specifications of 0.0001 grains/dscf.

(2) Calculated as: Emission Factor (lbs/SCFM) **X** Average Operating Rate (SCFM) X 60 (minutes/hour)

(3) Calculated as: Average (lbs/hr) **X** 1.2

(4) Calculated as: Average hourly emissions (lbs/hr) **X** Annual Operation (hrs/yr) ÷ (2,000 lbs/ton)

Description of Source

Four rotary steam dryers are used to dry feedstock woody biomass to meet moisture content requirements of downstream processing. All heat required by the dryers is provided by saturated steam at 230 psia and 294.4 °F.

Annual Operation:	8,760 hrs/yr
Average Operating Rate Dry Biomass Tons:	15.9 tons/hr
Maximum Operating Rate Dry Biomass Tons:	19.0 tons/hr

Summary of Emissions

Pollutant	Emission Factor[1] (lbs/ton)	Emissions		
		Average[2] (lbs/hr)	Maximum[3] (lbs/hr)	Annual[4] (tons/yr)
Total VOC	1.53E-01	2.426	2.912	10.63
Benzyl chloride	2.71E-04	0.004	0.005	0.02
Bromoform	1.67E-04	0.003	0.003	0.01
Carbon disulfide	6.46E-05	0.001	0.001	0.00
Dichloromethane	4.29E-05	0.001	0.001	0.00
Ethylbenzene	1.54E-04	0.002	0.003	0.01
Hexane	8.13E-04	0.013	0.015	0.06
Methyl chloride	4.20E-04	0.007	0.008	0.03
Methyl ethyl ketone	9.37E-05	0.001	0.002	0.01
Methyl isobutyl ketone (MIBK)	5.73E-06	0.000	0.000	0.00
Styrene	1.78E-03	0.028	0.034	0.12
Toluene	8.63E-05	0.001	0.002	0.01
o-Xylene	1.25E-02	0.198	0.237	0.87

(1) Emission factors derived from 10/25/21 Laboratory Test Results.

(2) Calculated as: Emission Factor (lbs/ton) **X** Average Operating Rate (tons/hr)

(3) Calculated as: Emission Factor (lbs/ton) **X** Maximum Operating Rate (tons/hr)

(4) Calculated as: Average hourly emissions (lbs/hr) **X** Annual Operation (hrs/yr) ÷ 2,000 lbs/ton.

Description of Source

Fuel-gas-fired gasification heaters provide heat to the facility's syngas generation unit. Fuel gas consists of fuel gas recovered from onsite processes and supplemental natural gas.

Annual Operation:	8,760 hrs/yr
Total Fuel Gas Usage:	188.3 MMBtu/hr

Summary of Emissions

Pollutant	Emission Factor[1] (lbs/hr)	Emission Factor[1] (lbs/MMBtu)	Control Efficiency[2]	Emissions		
				Average[3] (lbs/hr)	Maximum[4] (lbs/hr)	Annual[5] (tons/yr)
Particulate Matter (PM_{10})	---	0.0075	---	1.412	1.695	6.19
Particulate Matter ($PM_{2.5}$)	---	0.0075	---	1.412	1.695	6.19
Sulfur dioxide (SO_2)	0.48	---	---	0.480	0.576	2.10
Nitrogen oxides (NO_x)	12.10	---	90%	1.210	1.452	5.30
Carbon monoxide (CO)	4.05	---	90%	0.405	0.486	1.77
Total VOC	---	0.0054	---	1.017	1.220	4.45
Ammonia	1.229	---	---	1.229	1.475	5.38

(1) Emission factors for SO_2, NO_x, and CO are derived from vendor emissions specifications.
Emission factors for PM10, PM2.5, and Total VOC are from AP42 Table 1.4-2.
Emission factor for Ammonia derived from 10 ppmv slip from control device vendor specifications.

(2) Control Efficiency is based on vendor specifications.

(3) Calculated as: Emission Factor (lbs/MMBtu) **X** Total Fuel Gas Usage (MMBtu/hr) **X** (1- Control Efficiency)
or Emission Factor (lbs/hr) **X** (1- Control Efficiency)

(4) Calculated as: Average (lbs/hr) **X** 1.2

(5) Calculated as: Average hourly emissions (lbs/hr) **X** Annual Operation (hrs/yr) ÷ (2,000 lbs/ton)

Description of Source

A process-fired heater provides heat for the facility's liquid upgrading unit. The heater utilizes the facility's fuel gas.

Annual Operation:	8,760 hrs/yr
Total Fuel Gas Usage:	15.6 MMBtu/hr

Summary of Emissions

Pollutant	Emission Factor[1] (lbs/hr)	Emission Factor[1] (lbs/MMBtu)	Control Efficiency	Emissions		
				Average[2] (lbs/hr)	Maximum[3] (lbs/hr)	Annual[4] (tons/yr)
Particulate Matter (PM_{10})	---	0.0075	---	0.117	0.140	0.51
Particulate Matter ($PM_{2.5}$)	---	0.0075	---	0.117	0.140	0.51
Sulfur dioxide (SO_2)	---	0.0172	---	0.268	0.322	1.17
Nitrogen oxides (NO_x)	---	0.0490	---	0.764	0.917	3.35
Carbon monoxide (CO)	---	0.0824	---	1.285	1.543	5.63
Total VOC	---	0.0054	---	0.084	0.101	0.37

(1) Emission factors for PM_{10}, $PM_{2.5}$, NO_x, CO, and Total VOC are from AP42 Table 1.4-2.
Emission factor for SO_2 assumes total fuel gas sulfur content is combusted to SO_2.

(2) Calculated as: Emission Factor (lbs/MMBtu) **X** Total Fuel Gas Usage (MMBtu/hr) **X** (1- Control Efficiency)

(3) Calculated as: Average (lbs/hr) **X** 1.2

(4) Calculated as: Average hourly emissions (lbs/hr) **X** Annual Operation (hrs/yr) ÷ (2,000 lbs/ton)

Description of Source

A thermal oxidizer receives tank farm outbreathing, sour water degasser off-gas, filtration off-gas, vapors recovered from railcar loading activities, and CO_2 streams in case of well injection upsets. A lock hopper vent stream from Gasification area is directed to the Thermal Oxidizer as it will contain trace amounts of syngas. This stream also contains ash. The ash content is assumed to contribute to PM_{10} and $PM_{2.5}$ emissions. The effluent gases from the Thermal Oxidizer are sent to SO_2 Scrubber before being emitted to atmosphere.

Summary of Emissions

Pollutant	Emission Factor[1] (lbs/hr)	Emission Factor[1] (lbs/MMBtu)	Control Efficiency[2]	Emissions		
				Average[3] (lbs/hr)	Maximum[4] (lbs/hr)	Annual[5] (tons/yr)
Particulate Matter (PM_{10})	1.231	---	---	1.231	1.477	5.39
Particulate Matter ($PM_{2.5}$)	1.231	---	---	1.231	1.477	5.39
Sulfur dioxide (SO_2)	1.409	---	95%	0.070	0.085	0.31
Nitrogen oxides (NO_x)	0.914	---	---	0.914	1.096	4.00
Carbon monoxide (CO)	0.231	---	---	0.231	0.277	1.01
Total VOC	0.015	---	---	0.015	0.018	0.07
Ammonia	0.001	---	---	0.001	0.001	0.003

(1) Emission factors are the sum of Fuel Gas Combustion Emissions, Lock Hopper Vent PM Emissions, and Sour Water Degasser Off-Gas NO_x Emissions.

(2) Control Efficiency is based on vendor specifications.

(3) Calculated as: Emission Factor (lbs/hr) **X** (1- Control Efficiency)

(4) Calculated as: Average (lbs/hr) **X** 1.2

(5) Calculated as: Average hourly emissions (lbs/hr) **X** Annual Operation (hrs/yr) ÷ (2,000 lbs/ton)

Annual Operation: 8,760 hrs/yr
Total Fuel Gas Usage: 2.8 MMBtu/hr

Fuel Gas Combustion Emissions

Pollutant	Emission Factor[1] (lbs/hr)	Emission Factor[1] (lbs/MMBtu)	Control Efficiency	Emissions Average[2] (lbs/hr)	Emissions Maximum[3] (lbs/hr)	Emissions Annual[4] (tons/yr)
Particulate Matter (PM_{10})	---	0.0075	---	0.021	0.025	0.09
Particulate Matter ($PM_{2.5}$)	---	0.0075	---	0.021	0.025	0.09
Sulfur dioxide (SO_2)	1.409	---	---	1.409	1.691	6.17
Nitrogen oxides (NO_x)	---	0.0490	---	0.137	0.165	0.60
Carbon monoxide (CO)	---	0.0824	---	0.231	0.277	1.01
Total VOC	---	0.0054	---	0.015	0.018	0.07

(1) Emission factors for PM_{10}, $PM_{2.5}$, NO_x, CO, and Total VOC are from AP42 Table 1.4-2.
Emission factor for SO_2 is based on vendor specifications.
(2) Calculated as: Emission Factor (lbs/MMBtu) **X** Total Fuel Gas Usage (MMBtu/hr) **X** (1- Control Efficiency)
or Emission Factor (lbs/hr) **X** (1- Control Efficiency)
3) Calculated as: Average (lbs/hr) **X** 1.2
(4) Calculated as: Average hourly emissions (lbs/hr) **X** Annual Operation (hrs/yr) ÷ (2,000 lbs/ton)

Lock Hopper Vent PM Emissions

Pollutant	Emission Factor[1] (lbs/hr)	Emission Factor[1] (lbs/MMBtu)	Control Efficiency	Emissions Average[2] (lbs/hr)	Emissions Maximum[3] (lbs/hr)	Emissions Annual[4] (tons/yr)
Particulate Matter (PM_{10})	1.210	---	---	1.210	1.452	5.30
Particulate Matter ($PM_{2.5}$)	1.210	---	---	1.210	1.452	5.30

(1) Emission factors for PM_{10} and $PM_{2.5}$ are based off of stream ash content. 100% of ash content is assumed as $PM_{2.5}$.
(2) Calculated as: Emission Factor (lbs/hr) **X** (1- Control Efficiency)
3) Calculated as: Average (lbs/hr) **X** 1.2
(4) Calculated as: Average hourly emissions (lbs/hr) **X** Annual Operation (hrs/yr) ÷ (2,000 lbs/ton)

Sour Water Degasser Off-Gas NO_x Emissions

Pollutant	Emission Factor[1] (lbs/hr)	Emission Factor[1] (lbs/MMBtu)	Control Efficiency	Emissions Average[2] (lbs/hr)	Emissions Maximum[3] (lbs/hr)	Emissions Annual[4] (tons/yr)
Nitrogen oxides (NO_x)	0.776	---	---	0.776	0.932	3.40
Ammonia	0.001	---	---	0.001	0.001	0.003

(1) Emission factor for NO_x and Ammonia are derived from Sour Water Degasser Off-Gas ammonia content.
99.9% conversion of Ammonia to NO_x is assumed.
(2) Calculated as: Emission Factor (lbs/hr) **X** (1- Control Efficiency)
3) Calculated as: Average (lbs/hr) **X** 1.2
(4) Calculated as: Average hourly emissions (lbs/hr) **X** Annual Operation (hrs/yr) ÷ (2,000 lbs/ton)

Description of Source

The design of the project has allowed for a facility that avoicds continuous flaring. During emergencies or upset conditions, however, flaring will be required for certain process streams for safety purposes. A continuoius flow of fuel gas is required for certain process streams for the flare pilots and purge gas.

Annual Operation: 8,760 hrs/yr
Total Fuel Gas Usage: 6.7 MMBtu/hr

Summary of Emissions

Pollutant	Emission Factor[1] (lbs/hr)	Emission Factor[1] (lbs/MMBtu)	Control Efficiency	Emissions		
				Average[2] (lbs/hr)	Maximum[3] (lbs/hr)	Annual[4] (tons/yr)
Particulate Matter (PM_{10})	---	0.0075	---	0.050	0.060	0.22
Particulate Matter ($PM_{2.5}$)	---	0.0075	---	0.050	0.060	0.22
Sulfur dioxide (SO_2)	---	0.0172	---	0.115	0.138	0.50
Nitrogen oxides (NO_x)	---	0.0490	---	0.328	0.394	1.44
Carbon monoxide (CO)	---	0.0824	---	0.552	0.662	2.42
Total VOC	---	0.0054	---	0.036	0.043	0.16

(1) Emission factors for PM_{10}, $PM_{2.5}$, NO_x, CO, and Total VOC are from AP42 Table 1.4-2.
Emission factor for SO_2 assumes total fuel gas sulfur content is combusted to SO_2.

(2) Calculated as: Emission Factor (lbs/MMBtu) **X** Total Fuel Gas Usage (MMBtu/hr) **X** (1- Control Efficiency)

(3) Calculated as: Average (lbs/hr) **X** 1.2

(4) Calculated as: Average hourly emissions (lbs/hr) **X** Annual Operation (hrs/yr) ÷ (2,000 lbs/ton)

Description of Source

A 750kW diesel generator is maintained to provide power to the facility in the event of emergency power loss.

Diesel Rate:	7.04 MMBtu/hr
Fuel Consumption[1]:	7,000 Btu/hp-hr
Operating Rate:	100 hrs/yr
Max. Power Rating:	1,006 bhp
Fuel Usage:	5,103 gal/yr

Pollutant	Emission Factor[(1),(2)]	Average Emissions (lbs/hr)	Maximum Emissions[(3)] (lbs/hr)	Annual Emissions (tpy)
Particulate Matter (PM_{10})	1.00E-01 lb/MMBtu	0.704	0.845	0.04
Particulate Matter ($PM_{2.5}$)	1.00E-01 lb/MMBtu	0.704	0.845	0.04
Sulfur dioxide (SO_2)	1.01E+00 lb/MMBtu	7.112	8.535	0.36
Nitrogen oxides (NO_x)	3.20E+00 lb/MMBtu	22.534	27.041	1.13
Carbon monoxide (CO)	8.50E-01 lb/MMBtu	5.986	7.183	0.30
Total VOC	9.00E-02 lb/MMBtu	0.634	0.761	0.03
Acenaphthylene	9.23E-06 lb/MMBtu	0.000	0.000	0.000
Acenaphthene	4.98E-06 lb/MMBtu	0.000	0.000	0.000
Fluorene	1.28E-05 lb/MMBtu	0.000	0.000	0.000
Phenanthrene	4.08E-05 lb/MMBtu	0.000	0.000	0.000
Anthracene	1.23E-06 lb/MMBtu	0.000	0.000	0.000
Fluoranthene	4.03E-06 lb/MMBtu	0.000	0.000	0.000
Acetaldehyde	2.52E-05 lb/MMBtu	0.000	0.000	0.000
Acrolein	7.88E-06 lb/MMBtu	0.000	0.000	0.000
Benzene	7.76E-04 lb/MMBtu	0.005	0.007	0.000
Pyrene	3.71E-06 lb/MMBtu	0.000	0.000	0.000
Benzo(a)anthracene	6.22E-07 lb/MMBtu	0.000	0.000	0.000
Chrysene	1.53E-06 lb/MMBtu	0.000	0.000	0.000
Benzo(b)fluoranthene	1.11E-06 lb/MMBtu	0.000	0.000	0.000
Benzo(k)fluoranthene	2.18E-07 lb/MMBtu	0.000	0.000	0.000
Benzo(a)pyrene	2.57E-07 lb/MMBtu	0.000	0.000	0.000
Formaldehyde	7.89E-05 lb/MMBtu	0.001	0.001	0.000
Indeno(1,2,3-dc)pyrene	4.14E-07 lb/MMBtu	0.000	0.000	0.000
Dibenz(a,h)anthracene	3.46E-07 lb/MMBtu	0.000	0.000	0.000
Naphthalene	1.30E-04 lb/MMBtu	0.001	0.001	0.000
PAH	2.12E-04 lb/MMBtu	0.001	0.002	0.000
Propylene	2.79E-03 lb/MMBtu	0.020	0.024	0.001
Benzo(g,h,I)perylene	5.56E-07 lb/MMBtu	0.000	0.000	0.000
Toluene	2.81E-04 lb/MMBtu	0.002	0.002	0.000
Xylenes	1.93E-04 lb/MMBtu	0.001	0.002	0.000

(1) Brake-specific fuel consumption from AP-42 for diesel engines (Section 3.4, rev. 10/96).

(2) Emission factors from AP-42 for large diesel engines (Tables 3.4-1, 3.4-2, 3.4-3 and 3.4-4 rev. 10/96). SO2 assumes 1% Sulfur in the fuel.

(3) Maximum hourly emissions assumed to be 1.2 times average hourly emissions.

Description of Source

A 150kW diesel generator is maintained to provide power to the facility in the event of emergency power loss.

Diesel Rate:	1.41	MMBtu/hr
Fuel Consumption[1]:	7,000	Btu/hp-hr
Operating Rate:	100	hrs/yr
Max. Power Rating:	201	bhp
Fuel Usage:	1,020	gal/yr

Pollutant	Emission Factor[(1),(2)]		Average Emissions (lbs/hr)	Maximum Emissions[(3)] (lbs/hr)	Annual Emissions (tpy)
Particulate Matter (PM_{10})	3.10E-01	lb/MMBtu	0.436	0.523	0.02
Particulate Matter ($PM_{2.5}$)	3.10E-01	lb/MMBtu	0.436	0.523	0.02
Sulfur dioxide (SO_2)	2.90E-01	lb/MMBtu	0.408	0.490	0.02
Nitrogen oxides (NO_x)	4.41E+00	lb/MMBtu	6.205	7.446	0.31
Carbon monoxide (CO)	9.50E-01	lb/MMBtu	1.337	1.604	0.07
Total VOC	9.00E-02	lb/MMBtu	0.127	0.152	0.01
Benzene	9.33E-04	lb/MMBtu	0.001	0.002	0.000
Toluene	4.09E-04	lb/MMBtu	0.001	0.001	0.000
Xylenes	2.85E-04	lb/MMBtu	0.000	0.000	0.000
Propylene	2.58E-03	lb/MMBtu	0.004	0.004	0.000
1,3-Butadiene	3.91E-05	lb/MMBtu	0.000	0.000	0.000
Formaldehyde	1.18E-03	lb/MMBtu	0.002	0.002	0.000
Acetaldehyde	7.67E-04	lb/MMBtu	0.001	0.001	0.000
Acrolein	9.25E-05	lb/MMBtu	0.000	0.000	0.000
Total PAH	1.68E-04	lb/MMBtu	0.000	0.000	0.000

(1) Brake-specific fuel consumption from AP-42 for diesel engines (Section 3.3, rev. 10/96).
(2) Emission factors from AP-42 for diesel industrial engines (Tables 3.3-1 and 3.3-2 rev. 10/96).
(3) Maximum hourly emissions assumed to be 1.2 times average hourly emissions.

Description of Source

Two electric driven pumps serve as the facility's primary fire water pumps. Two identical 800 hp diesel pumps serve as backup fire water pumps.

Diesel Rate:	5.60	MMBtu/hr
Fuel Consumption[1]:	7,000	Btu/hp-hr
Operating Rate:	100	hrs/yr
Max. Power Rating:	800	bhp
Fuel Usage:	4,058	gal/yr

Pollutant	Emission Factor[(1),(2)]		Average Emissions (lbs/hr)	Maximum Emissions[(3)] (lbs/hr)	Annual Emissions (tpy)
Particulate Matter (PM_{10})	1.00E-01	lb/MMBtu	0.560	0.672	0.03
Particulate Matter ($PM_{2.5}$)	1.00E-01	lb/MMBtu	0.560	0.672	0.03
Sulfur dioxide (SO_2)	1.01E+00	lb/MMBtu	5.656	6.787	0.28
Nitrogen oxides (NO_x)	3.20E+00	lb/MMBtu	17.920	21.504	0.90
Carbon monoxide (CO)	8.50E-01	lb/MMBtu	4.760	5.712	0.24
Total VOC	9.00E-02	lb/MMBtu	0.504	0.605	0.03
Acenaphthylene	9.23E-06	lb/MMBtu	0.000	0.000	0.000
Acenaphthene	4.98E-06	lb/MMBtu	0.000	0.000	0.000
Fluorene	1.28E-05	lb/MMBtu	0.000	0.000	0.000
Phenanthrene	4.08E-05	lb/MMBtu	0.000	0.000	0.000
Anthracene	1.23E-06	lb/MMBtu	0.000	0.000	0.000
Fluoranthene	4.03E-06	lb/MMBtu	0.000	0.000	0.000
Acetaldehyde	2.52E-05	lb/MMBtu	0.000	0.000	0.000
Acrolein	7.88E-06	lb/MMBtu	0.000	0.000	0.000
Benzene	7.76E-04	lb/MMBtu	0.004	0.005	0.000
Pyrene	3.71E-06	lb/MMBtu	0.000	0.000	0.000
Benzo(a)anthracene	6.22E-07	lb/MMBtu	0.000	0.000	0.000
Chrysene	1.53E-06	lb/MMBtu	0.000	0.000	0.000
Benzo(b)fluoranthene	1.11E-06	lb/MMBtu	0.000	0.000	0.000
Benzo(k)fluoranthene	2.18E-07	lb/MMBtu	0.000	0.000	0.000
Benzo(a)pyrene	2.57E-07	lb/MMBtu	0.000	0.000	0.000
Formaldehyde	7.89E-05	lb/MMBtu	0.000	0.001	0.000
Indeno(1,2,3-dc)pyrene	4.14E-07	lb/MMBtu	0.000	0.000	0.000
Dibenz(a,h)anthracene	3.46E-07	lb/MMBtu	0.000	0.000	0.000
Naphthalene	1.30E-04	lb/MMBtu	0.001	0.001	0.000
PAH	2.12E-04	lb/MMBtu	0.001	0.001	0.000
Propylene	2.79E-03	lb/MMBtu	0.016	0.019	0.001
Benzo(g,h,I)perylene	5.56E-07	lb/MMBtu	0.000	0.000	0.000
Toluene	2.81E-04	lb/MMBtu	0.002	0.002	0.000
Xylenes	1.93E-04	lb/MMBtu	0.001	0.001	0.000

(1) Brake-specific fuel consumption from AP-42 for diesel engines (Section 3.4, rev. 10/96).

(2) Emission factors from AP-42 for large diesel engines (Tables 3.4-1, 3.4-2, 3.4-3 and 3.4-4 rev. 10/96). SO2 assumes 1% Sulfur in the fuel.

(3) Maximum hourly emissions assumed to be 1.2 times average hourly emissions.

Description of Source

Two electric driven pumps serve as the facility's primary fire water pumps. Two identical 800 hp diesel pumps serve as backup fire water pumps.

Diesel Rate:	5.60	MMBtu/hr
Fuel Consumption[1]:	7,000	Btu/hp-hr
Operating Rate:	100	hrs/yr
Max. Power Rating:	800	bhp
Fuel Usage:	4,058	gal/yr

Pollutant	Emission Factor[1],[2]		Average Emissions (lbs/hr)	Maximum Emissions[3] (lbs/hr)	Annual Emissions (tpy)
Particulate Matter (PM_{10})	1.00E-01	lb/MMBtu	0.560	0.672	0.03
Particulate Matter ($PM_{2.5}$)	1.00E-01	lb/MMBtu	0.560	0.672	0.03
Sulfur dioxide (SO_2)	1.01E+00	lb/MMBtu	5.656	6.787	0.28
Nitrogen oxides (NO_x)	3.20E+00	lb/MMBtu	17.920	21.504	0.90
Carbon monoxide (CO)	8.50E-01	lb/MMBtu	4.760	5.712	0.24
Total VOC	9.00E-02	lb/MMBtu	0.504	0.605	0.03
Acenaphthylene	9.23E-06	lb/MMBtu	0.000	0.000	0.000
Acenaphthene	4.98E-06	lb/MMBtu	0.000	0.000	0.000
Fluorene	1.28E-05	lb/MMBtu	0.000	0.000	0.000
Phenanthrene	4.08E-05	lb/MMBtu	0.000	0.000	0.000
Anthracene	1.23E-06	lb/MMBtu	0.000	0.000	0.000
Fluoranthene	4.03E-06	lb/MMBtu	0.000	0.000	0.000
Acetaldehyde	2.52E-05	lb/MMBtu	0.000	0.000	0.000
Acrolein	7.88E-06	lb/MMBtu	0.000	0.000	0.000
Benzene	7.76E-04	lb/MMBtu	0.004	0.005	0.000
Pyrene	3.71E-06	lb/MMBtu	0.000	0.000	0.000
Benzo(a)anthracene	6.22E-07	lb/MMBtu	0.000	0.000	0.000
Chrysene	1.53E-06	lb/MMBtu	0.000	0.000	0.000
Benzo(b)fluoranthene	1.11E-06	lb/MMBtu	0.000	0.000	0.000
Benzo(k)fluoranthene	2.18E-07	lb/MMBtu	0.000	0.000	0.000
Benzo(a)pyrene	2.57E-07	lb/MMBtu	0.000	0.000	0.000
Formaldehyde	7.89E-05	lb/MMBtu	0.000	0.001	0.000
Indeno(1,2,3-dc)pyrene	4.14E-07	lb/MMBtu	0.000	0.000	0.000
Dibenz(a,h)anthracene	3.46E-07	lb/MMBtu	0.000	0.000	0.000
Naphthalene	1.30E-04	lb/MMBtu	0.001	0.001	0.000
PAH	2.12E-04	lb/MMBtu	0.001	0.001	0.000
Propylene	2.79E-03	lb/MMBtu	0.016	0.019	0.001
Benzo(g,h,I)perylene	5.56E-07	lb/MMBtu	0.000	0.000	0.000
Toluene	2.81E-04	lb/MMBtu	0.002	0.002	0.000
Xylenes	1.93E-04	lb/MMBtu	0.001	0.001	0.000

(1) Brake-specific fuel consumption from AP-42 for diesel engines (Section 3.4, rev. 10/96).

(2) Emission factors from AP-42 for large diesel engines (Tables 3.4-1, 3.4-2, 3.4-3 and 3.4-4 rev. 10/96). SO2 assumes 1% Sulfur in the fuel.

(3) Maximum hourly emissions assumed to be 1.2 times average hourly emissions.

Description of Source

A cooling tower provides cooling water for the facility.

Hours of Operation:	8,760 hrs
Circulating Water:	30,000 gpm
Circulating Water:	1,800,000 gph
Dissolved Solids[1]:	0.042 lb/gal
Drift Emission Factor[2]:	0.0005%

Pollutant	Emission Rates[3]		
	Avg (lb/hr)	Max (lb/hr)	Annual (tons/yr)
Particulate Matter (PM_{10})	0.376	0.751	1.64
Particulate Matter ($PM_{2.5}$)	0.376	0.751	1.64

(1) TDS is derived from Water System Design basis of < 5,000 mg/L.

(2) Drift Emission Factor is based on vendor specifications.

(3) Calculated per methodology from AP-42 13.4, Wet Cooling Towers.

Description of Source

A process-fired heater provides heat for the facility's liquid upgrading unit. The heater utilizes the facility's fuel gas.

Annual Operation:	8,760 hrs/yr
Total Fuel Gas Usage:	3.8 MMBtu/hr

Summary of Emissions

Pollutant	Emission Factor[1] (lbs/hr)	Emission Factor[1] (lbs/MMBtu)	Control Efficiency	Emissions		
				Average[2] (lbs/hr)	Maximum[3] (lbs/hr)	Annual[4] (tons/yr)
Particulate Matter (PM_{10})	---	0.0075	---	0.029	0.034	0.12
Particulate Matter ($PM_{2.5}$)	---	0.0075	---	0.029	0.034	0.12
Sulfur dioxide (SO_2)	---	0.0172	---	0.065	0.078	0.29
Nitrogen oxides (NO_x)	---	0.0490	---	0.186	0.223	0.82
Carbon monoxide (CO)	---	0.0824	---	0.313	0.376	1.37
Total VOC	---	0.0054	---	0.021	0.025	0.09

(1) Emission factors for PM_{10}, $PM_{2.5}$, NO_x, CO, and Total VOC are from AP42 Table 1.4-2.
Emission factor for SO_2 assumes total fuel gas sulfur content is combusted to SO_2.

(2) Calculated as: Emission Factor (lbs/MMBtu) **X** Total Fuel Gas Usage (MMBtu/hr) **X** (1- Control Efficiency)

(3) Calculated as: Average (lbs/hr) **X** 1.2

(4) Calculated as: Average hourly emissions (lbs/hr) **X** Annual Operation (hrs/yr) ÷ (2,000 lbs/ton)

Tank Information		
Type	Internal Floating Roof	
Shell Diameter	25	ft
Shell Height	32	ft
Throughput	2759400	gallons/year
Nearest City	Shreveport	
Insulation	Uninsulated	

Tank Paint	
Roof Color	Gray (Light)
Roof Condition	New
Shell Color	Gray (Light)
Shell Condition	New
Internal Shell Condition	Light Rust

Tank Construction		
Tank Construction:	Welded	
Rim-Seal System:	Mechanical-shoe seal: Shoe-mounted secondary	
Seal Fit:	Average-Fitting	
Deck Construction:	Welded	
Deck Seam Length:	25	ft
Number of Support Columns		
Effective Column Diameter		ft

Contents	
Tank Contents	Naphtha
Crude Oil	No

Constants			
Ideal Gas Constant	R	10.731	psia * ft^3/(lb-mole * °R)
Paint Solar Absorptance	α_R	0.54	
Paint Solar Absorptance	α_S	0.54	
Solar Insolation	I	1424.00	Btu/(ft^2 * day)

Deck Fittings		
Fitting Type	Number of Fittings N_{Fi}	Fitting Loss Factor $N_{Fi}K_{Fi}$
Access hatch: Bolted cover, gasketed	1	1.6
Gauge-float well (automatic gauge): Bolted cover, gasketed	1	2.8
Gauge-hatch/sample port: Weighted mechanical actuation, gasketed	1	0.47
Rim vent: Weighted mechanical actuation, gasketed	1	0.71

Emissions Summary			
Total VOC Losses	L_t	1310.84	lb/yr
Total VOC Losses	L_t	0.150	lb/hr
Total VOC Losses	L_t	0.66	ton/yr
n-Hexane Losses	L_t	393.25	lb/yr
n-Hexane Losses	L_t	0.045	lb/hr
n-Hexane Losses	L_t	0.20	ton/yr

Standing Losses	L_s	1286.97	lb/yr
Rim Seal Loss	L_R	1129.42	lb/yr
Deck Fitting Loss	L_F	157.55	lb/yr
Deck Seam Loss	L_D	0.00	lb/yr
Zero Wind Speed Rim Seal Loss Factor	K_{Ra}	1.60	lb-mole/(ft * yr)
Wind Speed Dependent Rim Seal Loss Factor	K_{Rb}	0.30	lb-mole/(mph^n * ft * yr)
Average Ambient Wind Speed	v	0.00	mph
Seal Wind Speed Exponent	n	1.60	
Vapor Pressure Function	P*	0.282	
Product Factor	K_C	1.00	
Deck Seam Loss Factor	K_D	0.00	lb-mole/ft-yr
Deck Seam Length Factor	S_D	0.05	ft/ft^2
Min Daily Ambient Temp.	T_{AN}	515.77	°R
Max Daily Ambient Temp.	T_{AX}	535.67	°R
Avg. Daily Ambient Temp.	T_{AA}	525.72	°R
Liquid Bulk Temp.	T_B	528.80	°R
Avg. Daily Liq. Surface Temp.	T_{LA}	530.95	°R
Atmospheric Pressure	P_A	14.56	psia
Vapor Pressure at T_{LA}	P_{VA}	10.000	psia
Total Deck Fitting Losss Factor	F_F	5.58	lb-mole/yr
Vapor Molecular Weight	M_V	100.00	lb/lb-mole

Working Losses	L_w	23.87	lb/yr
Annual Net Throughput	Q	65700.00	bbl/yr
Shell Clingage Factor	C_S	0.0015	bbl/1000 ft^2
Average Organic Liquid Density	W_L	6.42	lb/gal
Number of Support Columns	N_C	0	
Effective Column Diameter	F_C	0	ft

Notes:

[1] *AP-42 Chapter 7.1 (11/19): Section 7.1.3.2 - Routine Losses From Floating Roof Tanks*

[2] *n-Hexane emissions are based off of potential 30% content in naphtha.*

Tank Information		
Type	Internal Floating Roof	
Shell Diameter	25	ft
Shell Height	32	ft
Throughput	2759400	gallons/year
Nearest City	Shreveport	
Insulation	Uninsulated	

Tank Paint	
Roof Color	Gray (Light)
Roof Condition	New
Shell Color	Gray (Light)
Shell Condition	New
Internal Shell Condition	Light Rust

Tank Construction		
Tank Construction:	Welded	
Rim-Seal System:	Mechanical-shoe seal: Shoe-mounted secondary	
Seal Fit:	Average-Fitting	
Deck Construction:	Welded	
Deck Seam Length:	25	ft
Number of Support Columns		
Effective Column Diameter		ft

Contents	
Tank Contents	Naphtha
Crude Oil	No

Constants			
Ideal Gas Constant	R	10.731	psia * ft^3/(lb-mole * °R)
Paint Solar Absorptance	α_R	0.54	
Paint Solar Absorptance	α_S	0.54	
Solar Insolation	I	1424.00	Btu/(ft^2 * day)

Deck Fittings		
Fitting Type	Number of Fittings N_{Fi}	Fitting Loss Factor $N_{Fi}K_{Fi}$
Access hatch: Bolted cover, gasketed	1	1.6
Gauge-float well (automatic gauge): Bolted cover, gasketed	1	2.8
Gauge-hatch/sample port: Weighted mechanical actuation, gasketed	1	0.47
Rim vent: Weighted mechanical actuation, gasketed	1	0.71

Emissions Summary			
Total Losses	L_t	1310.84	lb/yr
Total Losses	L_t	0.150	lb/hr
Total Losses	L_t	0.66	ton/yr
n-Hexane Losses	L_t	393.25	lb/yr
n-Hexane Losses	L_t	0.045	lb/hr
n-Hexane Losses	L_t	0.20	ton/yr

Standing Losses	L_s	1286.97	lb/yr
Rim Seal Loss	L_R	1129.42	lb/yr
Deck Fitting Loss	L_F	157.55	lb/yr
Deck Seam Loss	L_D	0.00	lb/yr
Zero Wind Speed Rim Seal Loss Factor	K_{Ra}	1.60	lb-mole/(ft * yr)
Wind Speed Dependent Rim Seal Loss Factor	K_{Rb}	0.30	lb-mole/(mph^n * ft * yr)
Average Ambient Wind Speed	v	0.00	mph
Seal Wind Speed Exponent	n	1.60	
Vapor Pressure Function	P*	0.282	
Product Factor	K_C	1.00	
Deck Seam Loss Factor	K_D	0.00	lb-mole/ft-yr
Deck Seam Length Factor	S_D	0.05	ft/ft^2
Min Daily Ambient Temp.	T_{AN}	515.77	°R
Max Daily Ambient Temp.	T_{AX}	535.67	°R
Avg. Daily Ambient Temp.	T_{AA}	525.72	°R
Liquid Bulk Temp.	T_B	528.80	°R
Avg. Daily Liq. Surface Temp.	T_{LA}	530.95	°R
Atmospheric Pressure	P_A	14.56	psia
Vapor Pressure at T_{LA}	P_{VA}	10.000	psia
Total Deck Fitting Losss Factor	F_F	5.58	lb-mole/yr
Vapor Molecular Weight	M_V	100.00	lb/lb-mole

Working Losses	L_w	23.87	lb/yr
Annual Net Throughput	Q	65700.00	bbl/yr
Shell Clingage Factor	C_S	0.0015	bbl/1000 ft^2
Average Organic Liquid Density	W_L	6.42	lb/gal
Number of Support Columns	N_C	0	
Effective Column Diameter	F_C	0	ft

Notes:

[1] *AP-42 Chapter 7.1 (11/19): Section 7.1.3.2 - Routine Losses From Floating Roof Tanks*

[2] *n-Hexane emissions are based off of potential 30% content in naphtha.*

Tank Information		
Type	Internal Floating Roof	
Shell Diameter	35	ft
Shell Height	40	ft
Throughput	5518800	gallons/year
Nearest City	Shreveport	
Insulation	Uninsulated	

Tank Paint	
Roof Color	Gray (Light)
Roof Condition	New
Shell Color	Gray (Light)
Shell Condition	New
Internal Shell Condition	Light Rust

Tank Construction		
Tank Construction:	Welded	
Rim-Seal System:	Mechanical-shoe seal: Shoe-mounted secondary	
Seal Fit:	Average-Fitting	
Deck Construction:	Welded	
Deck Seam Length:	25	ft
Number of Support Columns		
Effective Column Diameter		ft

Contents	
Tank Contents	Naphtha
Crude Oil	No

Constants			
Ideal Gas Constant	R	10.731	psia * ft^3/(lb-mole * °R)
Paint Solar Absorptance	α_R	0.54	
Paint Solar Absorptance	α_S	0.54	
Solar Insolation	I	1424.00	Btu/(ft^2 * day)

Deck Fittings		
	Number of Fittings	
Fitting Type	N_{Fi}	Fitting Loss Factor $N_{Fi}K_{Fi}$
Access hatch: Bolted cover, gasketed	1	1.6
Gauge-float well (automatic gauge): Bolted cover, gasketed	1	2.8
Gauge-hatch/sample port: Weighted mechanical actuation, gasketed	1	0.47
Rim vent: Weighted mechanical actuation, gasketed	1	0.71

Emissions Summary			
Total Losses	L_t	1772.84	lb/yr
Total Losses	L_t	0.202	lb/hr
Total Losses	L_t	0.89	ton/yr
n-Hexane Losses	L_t	531.85	lb/yr
n-Hexane Losses	L_t	0.061	lb/hr
n-Hexane Losses	L_t	0.27	ton/yr

Standing Losses	L_s	1738.74	lb/yr
Rim Seal Loss	L_R	1581.19	lb/yr
Deck Fitting Loss	L_F	157.55	lb/yr
Deck Seam Loss	L_D	0.00	lb/yr
Zero Wind Speed Rim Seal Loss Factor	K_{Ra}	1.60	lb-mole/(ft * yr)
Wind Speed Dependent Rim Seal Loss Factor	K_{Rb}	0.30	lb-mole/(mph^n * ft * yr)
Average Ambient Wind Speed	v	0.00	mph
Seal Wind Speed Exponent	n	1.60	
Vapor Pressure Function	P*	0.282	
Product Factor	K_C	1.00	
Deck Seam Loss Factor	K_D	0.00	lb-mole/ft-yr
Deck Seam Length Factor	S_D	0.03	ft/ft^2
Min Daily Ambient Temp.	T_{AN}	515.77	°R
Max Daily Ambient Temp.	T_{AX}	535.67	°R
Avg. Daily Ambient Temp.	T_{AA}	525.72	°R
Liquid Bulk Temp.	T_B	528.80	°R
Avg. Daily Liq. Surface Temp.	T_{LA}	530.95	°R
Atmospheric Pressure	P_A	14.56	psia
Vapor Pressure at T_{LA}	P_{VA}	10.000	psia
Total Deck Fitting Losss Factor	F_F	5.58	lb-mole/yr
Vapor Molecular Weight	M_V	100.00	lb/lb-mole

Working Losses	L_w	34.10	lb/yr
Annual Net Throughput	Q	131400.00	bbl/yr
Shell Clingage Factor	C_S	0.0015	bbl/1000 ft^2
Average Organic Liquid Density	W_L	6.42	lb/gal
Number of Support Columns	N_C	0	
Effective Column Diameter	F_C	0	ft

Notes:

[1] *AP-42 Chapter 7.1 (11/19): Section 7.1.3.2 - Routine Losses From Floating Roof Tanks*

[2] *n-Hexane emissions are based off of potential 30% content in naphtha.*

Tank Information		
Type	Vertical Fixed-Roof	
Shell Diameter	45	ft
Shell Height	48	ft
Average Height of Liquid	24	ft
Maximum Height of Liquid	48	ft
Throughput	15330000	gallons/year
Maximum Liquid Volume	571068.14	gallons
Turnovers	27.41	turnovers/year
Nearest City	Shreveport	
Insulation	Uninsulated	
Tank Paint		
Roof Color	Gray (Light)	
Roof Condition	New	
Shell Color	Gray (Light)	
Shell Condition	New	
Tank Roof		
Type	Cone	
Cone Slope (If Applicable)	0.167	ft/ft
Dome Radius (If Applicable)		ft
Vent Settings		
Breather Vent Pressure Setting	0.03	psig
Breather Vent Vacuum Setting	-0.03	psig
Tank Pressure	0	psig
Contents		
Tank Contents	Distillate fuel oil No. 2	

Constants			
Ideal Gas Constant	R	10.731	psia * ft^3/(lb-mole * °R)
Paint Solar Absorptance	α_R	0.54	
Paint Solar Absorptance	α_S	0.54	
Solar Insolation	I	1424.00	Btu/(ft^2 * day)

Emissions Summary			
Total Losses	L_t	552.67	lb/yr
Total Losses	L_t	0.063	lb/hr
Total Losses	L_t	0.28	ton/yr

Standing Losses	L_s	145.56	lb/yr
Min Daily Ambient Temp.	T_{AN}	515.77	°R
Max Daily Ambient Temp.	T_{AX}	535.67	°R
Avg. Daily Ambient Temp.	T_{AA}	525.72	°R
Liquid Bulk Temp.	T_B	528.03	°R
Average Vapor Temperature	T_V	532.47	°R
Daily Vapor Temp. Range	ΔT_V	28.78	°R
Avg. Daily Liq. Surface Temp.	T_{LA}	530.25	°R
Min Daily Liq. Surface Temp.	T_{LN}	523.05	°R
Max Daily Liq. Surface Temp.	T_{LX}	537.44	°R
Atmospheric Pressure	P_A	14.7	psia
Vent Pressure Range	ΔP_B	0.06	psia
Vapor Pressure at T_{LA}	P_{VA}	0.009	psia
Vapor Pressure at T_{LN}	P_{VN}	0.007	psia
Vapor Pressure at T_{LX}	P_{VX}	0.011	psia
Daily Vapor Press. Range	ΔP_V	0.004	psia
Vapor Molecular Weight	M_V	130.00	lb/lb-mole
Vapor Space Exp. Factor	K_E	0.05	
Vapor Saturation Factor	K_S	0.99	
Stock Vapor Density	W_V	0.000	lb/ft^3
Vapor Space Outage	H_{VO}	25.25	ft
Shell Height	H_S	48.00	ft
Liquid Height	H_L	24.00	ft
Roof Height	H_R	3.75	ft
Cone Roof Slope	S_R	0.17	ft/ft
Shell Radius	R_S	22.50	ft
Dome Roof Radius	R_R	45.00	ft
Roof Outage	H_{RO}	1.25	ft

Working Losses	L_w	407.11	lb/yr
Vapor Molecular Weight	M_V	130.00	lb/lb-mole
Vapor Pressure at T_{LA}	P_{VA}	0.01	psia
Turnovers	N	27.41	
Sum of Increases in Liquid Level	ΣH_{QI}	1288.42	ft/yr
Max Height of Liquid	H_{LX}	48	ft
Net Working Loss Throughput	V_Q	2049150.98	ft^3/yr
Stock Vapor Density	W_V	0.000	lb/ft^3
L_W Turnover Factor	K_N	1.00	
L_W Product Factor	K_P	1.00	
Vent Correction Factor	K_B	1.00	
Tank Pressure	P_I	0.00	psig
Vent Pressure Setting	P_{BP}	0.03	psig

Notes:

[1] *AP-42 Chapter 7.1 (11/19): Section 7.1.3.1 - Routine Losses From Fixed Roof Tanks*

Tank Information		
Type	Vertical Fixed-Roof	
Shell Diameter	45	ft
Shell Height	48	ft
Average Height of Liquid	24	ft
Maximum Height of Liquid	48	ft
Throughput	15330000	gallons/year
Maximum Liquid Volume	571068.14	gallons
Turnovers	27.41	turnovers/year
Nearest City	Shreveport	
Insulation	Uninsulated	

Tank Paint		
Roof Color	Gray (Light)	
Roof Condition	New	
Shell Color	Gray (Light)	
Shell Condition	New	

Tank Roof		
Type	Cone	
Cone Slope (If Applicable)	0.167	ft/ft
Dome Radius (If Applicable)		ft

Vent Settings		
Breather Vent Pressure Setting	0.03	psig
Breather Vent Vacuum Setting	-0.03	psig
Tank Pressure	0	psig

Contents
Tank Contents Distillate fuel oil No. 2

Constants			
Ideal Gas Constant	R	10.731	psia * ft^3/(lb-mole * °R)
Paint Solar Absorptance	α_R	0.54	
Paint Solar Absorptance	α_S	0.54	
Solar Insolation	I	1424.00	Btu/(ft^2 * day)

Emissions Summary			
Total Losses	L_t	552.67	lb/yr
Total Losses	L_t	0.063	lb/hr
Total Losses	L_t	0.28	ton/yr

Standing Losses	L_s	145.56	lb/yr
Min Daily Ambient Temp.	T_{AN}	515.77	°R
Max Daily Ambient Temp.	T_{AX}	535.67	°R
Avg. Daily Ambient Temp.	T_{AA}	525.72	°R
Liquid Bulk Temp.	T_B	528.03	°R
Average Vapor Temperature	T_V	532.47	°R
Daily Vapor Temp. Range	ΔT_V	28.78	°R
Avg. Daily Liq. Surface Temp.	T_{LA}	530.25	°R
Min Daily Liq. Surface Temp.	T_{LN}	523.05	°R
Max Daily Liq. Surface Temp.	T_{LX}	537.44	°R
Atmospheric Pressure	P_A	14.7	psia
Vent Pressure Range	ΔP_B	0.06	psia
Vapor Pressure at T_{LA}	P_{VA}	0.009	psia
Vapor Pressure at T_{LN}	P_{VN}	0.007	psia
Vapor Pressure at T_{LX}	P_{VX}	0.011	psia
Daily Vapor Press. Range	ΔP_V	0.004	psia
Vapor Molecular Weight	M_V	130.00	lb/lb-mole
Vapor Space Exp. Factor	K_E	0.05	
Vapor Saturation Factor	K_S	0.99	
Stock Vapor Density	W_V	0.000	lb/ft^3
Vapor Space Outage	H_{VO}	25.25	ft
Shell Height	H_S	48.00	ft
Liquid Height	H_L	24.00	ft
Roof Height	H_R	3.75	ft
Cone Roof Slope	S_R	0.17	ft/ft
Shell Radius	R_S	22.50	ft
Dome Roof Radius	R_R	45.00	ft
Roof Outage	H_{RO}	1.25	ft

Working Losses	L_w	407.11	lb/yr
Vapor Molecular Weight	M_V	130.00	lb/lb-mole
Vapor Pressure at T_{LA}	P_{VA}	0.01	psia
Turnovers	N	27.41	
Sum of Increases in Liquid Level	ΣH_{QI}	1288.42	ft/yr
Max Height of Liquid	H_{LX}	48	ft
Net Working Loss Throughput	V_Q	2049150.98	ft^3/yr
Stock Vapor Density	W_V	0.000	lb/ft^3
L_W Turnover Factor	K_N	1.00	
L_W Product Factor	K_P	1.00	
Vent Correction Factor	K_B	1.00	
Tank Pressure	P_I	0.00	psig
Vent Pressure Setting	P_{BP}	0.03	psig

Notes:

[1] *AP-42 Chapter 7.1 (11/19): Section 7.1.3.1 - Routine Losses From Fixed Roof Tanks*

Tank Information		
Type	Vertical Fixed-Roof	
Shell Diameter	70	ft
Shell Height	42	ft
Average Height of Liquid	21	ft
Maximum Height of Liquid	42	ft
Throughput	30660000	gallons/year
Maximum Liquid Volume	1209113.42	gallons
Turnovers	25.97	turnovers/year
Nearest City	Shreveport	
Insulation	Uninsulated	
Tank Paint		
Roof Color	Gray (Light)	
Roof Condition	New	
Shell Color	Gray (Light)	
Shell Condition	New	
Tank Roof		
Type	Cone	
Cone Slope (If Applicable)	0.167	ft/ft
Dome Radius (If Applicable)		ft
Vent Settings		
Breather Vent Pressure Setting	0.03	psig
Breather Vent Vacuum Setting	-0.03	psig
Tank Pressure	0	psig
Contents		
Tank Contents	Distillate fuel oil No. 2	

Constants			
Ideal Gas Constant	R	10.731	psia * ft^3/(lb-mole * °R)
Paint Solar Absorptance	α_R	0.54	
Paint Solar Absorptance	α_S	0.54	
Solar Insolation	I	1424.00	Btu/(ft^2 * day)

Emissions Summary			
Total Losses	L_t	1144.97	lb/yr
Total Losses	L_t	0.131	lb/hr
Total Losses	L_t	0.57	ton/yr

Standing Losses	L_s	322.56	lb/yr
Min Daily Ambient Temp.	T_{AN}	515.77	°R
Max Daily Ambient Temp.	T_{AX}	535.67	°R
Avg. Daily Ambient Temp.	T_{AA}	525.72	°R
Liquid Bulk Temp.	T_B	528.03	°R
Average Vapor Temperature	T_V	533.17	°R
Daily Vapor Temp. Range	ΔT_V	28.71	°R
Avg. Daily Liq. Surface Temp.	T_{LA}	530.60	°R
Min Daily Liq. Surface Temp.	T_{LN}	523.42	°R
Max Daily Liq. Surface Temp.	T_{LX}	537.78	°R
Atmospheric Pressure	P_A	14.7	psia
Vent Pressure Range	ΔP_B	0.06	psia
Vapor Pressure at T_{LA}	P_{VA}	0.009	psia
Vapor Pressure at T_{LN}	P_{VN}	0.007	psia
Vapor Pressure at T_{LX}	P_{VX}	0.011	psia
Daily Vapor Press. Range	ΔP_V	0.004	psia
Vapor Molecular Weight	M_V	130.00	lb/lb-mole
Vapor Space Exp. Factor	K_E	0.05	
Vapor Saturation Factor	K_S	0.99	
Stock Vapor Density	W_V	0.000	lb/ft^3
Vapor Space Outage	H_{VO}	22.94	ft
Shell Height	H_S	42.00	ft
Liquid Height	H_L	21.00	ft
Roof Height	H_R	5.83	ft
Cone Roof Slope	S_R	0.17	ft/ft
Shell Radius	R_S	35.00	ft
Dome Roof Radius	R_R	70.00	ft
Roof Outage	H_{RO}	1.94	ft

Working Losses	L_w	822.40	lb/yr
Vapor Molecular Weight	M_V	130.00	lb/lb-mole
Vapor Pressure at T_{LA}	P_{VA}	0.01	psia
Turnovers	N	25.97	
Sum of Increases in Liquid Level	ΣH_{QI}	1064.92	ft/yr
Max Height of Liquid	H_{LX}	42	ft
Net Working Loss Throughput	V_Q	4098301.96	ft^3/yr
Stock Vapor Density	W_V	0.000	lb/ft^3
L_W Turnover Factor	K_N	1.00	
L_W Product Factor	K_P	1.00	
Vent Correction Factor	K_B	1.00	
Tank Pressure	P_I	0.00	psig
Vent Pressure Setting	P_{BP}	0.03	psig

Notes:

[1] *AP-42 Chapter 7.1 (11/19): Section 7.1.3.1 - Routine Losses From Fixed Roof Tanks*

Tank Information		
Type	Vertical Fixed-Roof	
Shell Diameter	10	ft
Shell Height	19	ft
Average Height of Liquid	9.5	ft
Maximum Height of Liquid	19	ft
Throughput	279071	gallons/year
Maximum Liquid Volume	11162.85	gallons
Turnovers	26.39	turnovers/year
Nearest City	Shreveport	
Insulation	Uninsulated	
Tank Paint		
Roof Color	Gray (Light)	
Roof Condition	New	
Shell Color	Gray (Light)	
Shell Condition	New	
Tank Roof		
Type	Cone	
Cone Slope (If Applicable)	0.167	ft/ft
Dome Radius (If Applicable)		ft
Vent Settings		
Breather Vent Pressure Setting	0.03	psig
Breather Vent Vacuum Setting	-0.03	psig
Tank Pressure	0	psig
Contents		
Tank Contents	Sulfuric Acid	

Constants			
Ideal Gas Constant	R	10.731	psia * ft^3/(lb-mole * °R)
Paint Solar Absorptance	α_R	0.54	
Paint Solar Absorptance	α_S	0.54	
Solar Insolation	I	1424.00	Btu/(ft^2 * day)

Emissions Summary			
Total Losses	L_t	5.11	lb/yr
Total Losses	L_t	0.001	lb/hr
Total Losses	L_t	0.00	ton/yr

Standing Losses	L_s	1.40	lb/yr
Min Daily Ambient Temp.	T_{AN}	515.77	°R
Max Daily Ambient Temp.	T_{AX}	535.67	°R
Avg. Daily Ambient Temp.	T_{AA}	525.72	°R
Liquid Bulk Temp.	T_B	528.03	°R
Average Vapor Temperature	T_V	531.80	°R
Daily Vapor Temp. Range	ΔT_V	28.84	°R
Avg. Daily Liq. Surface Temp.	T_{LA}	529.92	°R
Min Daily Liq. Surface Temp.	T_{LN}	522.70	°R
Max Daily Liq. Surface Temp.	T_{LX}	537.13	°R
Atmospheric Pressure	P_A	14.7	psia
Vent Pressure Range	ΔP_B	0.06	psia
Vapor Pressure at T_{LA}	P_{VA}	0.006	psia
Vapor Pressure at T_{LN}	P_{VN}	0.006	psia
Vapor Pressure at T_{LX}	P_{VX}	0.006	psia
Daily Vapor Press. Range	ΔP_V	0.000	psia
Vapor Molecular Weight	M_V	98.08	lb/lb-mole
Vapor Space Exp. Factor	K_E	0.05	
Vapor Saturation Factor	K_S	1.00	
Stock Vapor Density	W_V	0.000	lb/ft^3
Vapor Space Outage	H_{VO}	9.78	ft
Shell Height	H_S	19.00	ft
Liquid Height	H_L	9.50	ft
Roof Height	H_R	0.83	ft
Cone Roof Slope	S_R	0.17	ft/ft
Shell Radius	R_S	5.00	ft
Dome Roof Radius	R_R	10.00	ft
Roof Outage	H_{RO}	0.28	ft

Working Losses	L_w	3.71	lb/yr
Vapor Molecular Weight	M_V	98.08	lb/lb-mole
Vapor Pressure at T_{LA}	P_{VA}	0.01	psia
Turnovers	N	26.39	
Sum of Increases in Liquid Level	ΣH_{QI}	474.96	ft/yr
Max Height of Liquid	H_{LX}	19	ft
Net Working Loss Throughput	V_Q	37303.29	ft^3/yr
Stock Vapor Density	W_V	0.000	lb/ft^3
L_W Turnover Factor	K_N	1.00	
L_W Product Factor	K_P	1.00	
Vent Correction Factor	K_B	1.00	
Tank Pressure	P_I	0.00	psig
Vent Pressure Setting	P_{BP}	0.03	psig

Notes:

[1] *AP-42 Chapter 7.1 (11/19): Section 7.1.3.1 - Routine Losses From Fixed Roof Tanks*

Tank Information		
Type	Internal Floating Roof	
Shell Diameter	26.25	ft
Shell Height	26.25	ft
Throughput	36000	gallons/year
Nearest City	Shreveport	
Insulation	Uninsulated	

Tank Paint	
Roof Color	Gray (Light)
Roof Condition	New
Shell Color	Gray (Light)
Shell Condition	New
Internal Shell Condition	Light Rust

Tank Construction		
Tank Construction:	Welded	
Rim-Seal System:	Mechanical-shoe seal: Shoe-mounted secondary	
Seal Fit:	Average-Fitting	
Deck Construction:	Welded	
Deck Seam Length:	25	ft
Number of Support Columns		
Effective Column Diameter		ft

Contents	
Tank Contents	Methanol
Crude Oil	No

Constants			
Ideal Gas Constant	R	10.731	psia * ft^3/(lb-mole * °R)
Paint Solar Absorptance	α_R	0.54	
Paint Solar Absorptance	α_S	0.54	
Solar Insolation	I	1424.00	Btu/(ft^2 * day)

Deck Fittings		
	Number of Fittings	
Fitting Type	N_{Fi}	Fitting Loss Factor $N_{Fi}K_{Fi}$
Access hatch: Bolted cover, gasketed	1	1.6
Gauge-float well (automatic gauge): Bolted cover, gasketed	1	2.8
Gauge-hatch/sample port: Weighted mechanical actuation, gasketed	1	0.47
Rim vent: Weighted mechanical actuation, gasketed	1	0.71

Emissions Summary			
Total Losses	L_t	57.78	lb/yr
Total Losses	L_t	0.007	lb/hr
Total Losses	L_t	0.03	ton/yr

Standing Losses	L_s	57.47	lb/yr
Rim Seal Loss	L_R	50.73	lb/yr
Deck Fitting Loss	L_F	6.74	lb/yr
Deck Seam Loss	L_D	0.00	lb/yr
Zero Wind Speed Rim Seal Loss Factor	K_{Ra}	1.60	lb-mole/(ft * yr)
Wind Speed Dependent Rim Seal Loss Factor	K_{Rb}	0.30	lb-mole/(mph^n * ft * yr)
Average Ambient Wind Speed	v	0.00	mph
Seal Wind Speed Exponent	n	1.60	
Vapor Pressure Function	P*	0.038	
Product Factor	K_C	1.00	
Deck Seam Loss Factor	K_D	0.00	lb-mole/ft-yr
Deck Seam Length Factor	S_D	0.05	ft/ft^2
Min Daily Ambient Temp.	T_{AN}	515.77	°R
Max Daily Ambient Temp.	T_{AX}	535.67	°R
Avg. Daily Ambient Temp.	T_{AA}	525.72	°R
Liquid Bulk Temp.	T_B	528.80	°R
Avg. Daily Liq. Surface Temp.	T_{LA}	530.95	°R
Atmospheric Pressure	P_A	14.56	psia
Vapor Pressure at T_{LA}	P_{VA}	2.039	psia
Total Deck Fitting Losss Factor	F_F	5.58	lb-mole/yr
Vapor Molecular Weight	M_V	32.04	lb/lb-mole

Working Losses	L_w	0.31	lb/yr
Annual Net Throughput	Q	857.14	bbl/yr
Shell Clingage Factor	C_S	0.0015	bbl/1000 ft^2
Average Organic Liquid Density	W_L	6.61	lb/gal
Number of Support Columns	N_C	0	
Effective Column Diameter	F_C	0	ft

Notes:

[1] *AP-42 Chapter 7.1 (11/19): Section 7.1.3.2 - Routine Losses From Floating Roof Tanks*

Tank Information		
Type	Vertical Fixed-Roof	
Shell Diameter	12	ft
Shell Height	15	ft
Average Height of Liquid	7.5	ft
Maximum Height of Liquid	15	ft
Throughput	50000	gallons/year
Maximum Liquid Volume	12690.40	gallons
Turnovers	4.22	turnovers/year
Nearest City	Shreveport	
Insulation	Uninsulated	

Tank Paint		
Roof Color	Gray (Light)	
Roof Condition	New	
Shell Color	Gray (Light)	
Shell Condition	New	

Tank Roof		
Type	Cone	
Cone Slope (If Applicable)	0.167	ft/ft
Dome Radius (If Applicable)		ft

Vent Settings		
Breather Vent Pressure Setting	0.03	psig
Breather Vent Vacuum Setting	-0.03	psig
Tank Pressure	0	psig

Contents	
Tank Contents	Distillate fuel oil No. 2

Constants			
Ideal Gas Constant	R	10.731	psia * ft^3/(lb-mole * °R)
Paint Solar Absorptance	α_R	0.54	
Paint Solar Absorptance	α_S	0.54	
Solar Insolation	I	1424.00	Btu/(ft^2 * day)

Emissions Summary			
Total Losses	L_t	4.56	lb/yr
Total Losses	L_t	0.001	lb/hr
Total Losses	L_t	0.00	ton/yr

Standing Losses	L_s	3.23	lb/yr
Min Daily Ambient Temp.	T_{AN}	515.77	°R
Max Daily Ambient Temp.	T_{AX}	535.67	°R
Avg. Daily Ambient Temp.	T_{AA}	525.72	°R
Liquid Bulk Temp.	T_B	528.03	°R
Average Vapor Temperature	T_V	532.28	°R
Daily Vapor Temp. Range	ΔT_V	28.80	°R
Avg. Daily Liq. Surface Temp.	T_{LA}	530.15	°R
Min Daily Liq. Surface Temp.	T_{LN}	522.95	°R
Max Daily Liq. Surface Temp.	T_{LX}	537.35	°R
Atmospheric Pressure	P_A	14.7	psia
Vent Pressure Range	ΔP_B	0.06	psia
Vapor Pressure at T_{LA}	P_{VA}	0.009	psia
Vapor Pressure at T_{LN}	P_{VN}	0.007	psia
Vapor Pressure at T_{LX}	P_{VX}	0.011	psia
Daily Vapor Press. Range	ΔP_V	0.004	psia
Vapor Molecular Weight	M_V	130.00	lb/lb-mole
Vapor Space Exp. Factor	K_E	0.05	
Vapor Saturation Factor	K_S	1.00	
Stock Vapor Density	W_V	0.000	lb/ft^3
Vapor Space Outage	H_{VO}	7.83	ft
Shell Height	H_S	15.00	ft
Liquid Height	H_L	7.50	ft
Roof Height	H_R	1.00	ft
Cone Roof Slope	S_R	0.17	ft/ft
Shell Radius	R_S	6.00	ft
Dome Roof Radius	R_R	12.00	ft
Roof Outage	H_{RO}	0.33	ft

Working Losses	L_w	1.32	lb/yr
Vapor Molecular Weight	M_V	130.00	lb/lb-mole
Vapor Pressure at T_{LA}	P_{VA}	0.01	psia
Turnovers	N	4.22	
Sum of Increases in Liquid Level	ΣH_{QI}	59.09	ft/yr
Max Height of Liquid	H_{LX}	15	ft
Net Working Loss Throughput	V_Q	6683.47	ft^3/yr
Stock Vapor Density	W_V	0.000	lb/ft^3
L_W Turnover Factor	K_N	1.00	
L_W Product Factor	K_P	1.00	
Vent Correction Factor	K_B	1.00	
Tank Pressure	P_I	0.00	psig
Vent Pressure Setting	P_{BP}	0.03	psig

Notes:

[1] *AP-42 Chapter 7.1 (11/19): Section 7.1.3.1 - Routine Losses From Fixed Roof Tanks*

Description of Source

Various process wastewater streams are treated by an onsite wastewater treatment system.

Wastewater Input	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5	Stream 6	Stream 7
$Water_{IN}$ (lb/hr)[1]	4216	168	1820	940	262	1428	105
TOC_{IN} (ppm)[1]	139	127	139	400	1413	10000	144
TOC_{IN} (lb/hr)	0.586	0.021	0.253	0.376	0.370	14.283	0.015
					Total TOC_{IN} (lb/hr)		15.905

Pollutant	TOC_{IN} (lb/hr)	Percent Emitted[(2)]	Emission Rates		
			Avg (lb/hr)	Max (lb/hr)	Annual (tons/yr)
Total VOC	15.905	3.00%	0.477	0.573	2.09

(1) Wastewater streams and TOC content based on process specifications.

(2) 3% of TOC content is assumed to be emitted to atmosphere as VOC.

Description of Source

Facility fugitive leak emissions are estimated based on equipment component counts and railcar loading throughputs.

Summary of Emissions

Pollutant	Emission Factor[1] (lbs/hr)	Emission Factor[1] (lbs/MMBtu)	Control Efficiency	Emissions		
				Average[2] (lbs/hr)	Maximum[3] (lbs/hr)	Annual[4] (tons/yr)
Total VOC	0.557	---	---	0.557	---	2.44
n-Hexane	0.057	---	---	0.057	---	0.25
Methanol	0.122	---	---	0.122	---	0.53

Equipment Leak Fugitive Emissions

Leaking components[1]	2%
Non-leaking components[1]	98%

Total VOCs						
Component Type and Service	Component Count	Leak Emission Factor[2] (kg/hr-comp.)	No-Leak Emission Factor[3] (kg/hr-comp.)	Average Emissions (lbs/hr)	Maximum Emissions (lbs/hr)	Annual Emissions (tpy)
Connectors - All	259	0.00025	7.50E-06	0.007	--	0.03
Valves - Gas	74	0.02680	7.80E-06	0.089	--	0.39
Valves - Light Liquid	137	0.01090	7.80E-06	0.068	--	0.30
Valves - Heavy Liquid	23	0.00023	7.80E-06	0.001	--	0.00
Pumps - Light Liquid	38	0.11400	2.40E-05	0.193	--	0.85
Pumps - Heavy Liquid	8	0.02100	2.40E-05	0.008	--	0.03
			Total VOC	**0.365**	--	**1.60**

(1) Percentages of leaking components based on 98% non-leaking (0 range), and 2% leaking.

(2) Emission factors taken from EPA's Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017, November 1995) Average Emission Factors (Table 2-2).

(3) Default Zero Values: Petroleum Industry (Table 2-12)

Leaking components[1]	2%
Non-leaking components[1]	98%

Methanol[2]						
Component Type and Service	Component Count	Leak Emission Factor[3] (kg/hr-comp.)	No-Leak Emission Factor[4] (kg/hr-comp.)	Average Emissions (lbs/hr)	Maximum Emissions (lbs/hr)	Annual Emissions (tpy)
Connectors - All	58	0.00025	7.50E-06	0.002	--	0.01
Valves - Gas	0	0.02680	7.80E-06	0.000	--	0.00
Valves - Light Liquid	58	0.01090	7.80E-06	0.029	--	0.13
Valves - Heavy Liquid	0	0.00023	7.80E-06	0.000	--	0.00
Pumps - Light Liquid	18	0.11400	2.40E-05	0.091	--	0.40
Pumps - Heavy Liquid	0	0.02100	2.40E-05	0.000	--	0.00
			Methanol	**0.122**	--	**0.53**

(1) Percentages of leaking components based on 98% non-leaking (0 range), and 2% leaking.

(2) Methanol lines conservatively assumed to contain 100% methanol for permit emissions calculations purposes.

(3) Emission factors taken from EPA's Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017, November 1995) Average Emission Factors (Table 2-2).

(4) Default Zero Values: Petroleum Industry (Table 2-12)

Railcar Loading Fugitive Emissions[1]

saturation factor (S)[2]	1
temperature of bulk liquid loaded (T)	77 °F
temperature of bulk liquid loaded (T)	537 °R
collection efficiency (eff)[2]	98.7 %

Product	Throughput (gal/yr)	Vapor Pressure (P) (psia)	Vapor Molecular Weight (M) (lb/lbmol)	Emission Factor[3] (lb/10^3 gal)	Total VOC Emission Rates		
					Avg (lb/hr)	Max (lb/hr)	Annual (tons/yr)
Distillate fuel oil No. 2	30660000	0.009	130	0.00034	0.001	0.001	0.01
Naphtha	5518800	10.0	100	0.30164	0.190	0.228	0.83
				Total VOC	**0.191**	**0.229**	**0.84**
				n-Hexane[4]	**0.057**	**0.068**	**0.25**

(1) Biodiesel and naptha products are loaded onto railcars for shipment offsite. Railcar loading will occur under vapor balance service. Recovered emissions are routed to the facility's Thermal Oxidizer. Fugitive emissions from loading activities are calculated here.

(2) Factors are taken from AP-42 Chapter 5.2, Transportation And Marketing Of Petroleum Liquids (6/08).

(3) Emission Factor Calculated according to methodology of AP-42 Chapter 5.2, Transportation And Marketing Of Petroleum Liquids (6/08).

(4) n-Hexane emissions are based off of potential 30% content in naphtha.

Description of Source

Facility fugitive roadway emissions are based on onsite traffic of feedstock delivery trucks.

road surface silt loading (sL)[1]	0.6 g/m^2
average weight of trucks (W)	25 tons
trucks per day	140 trucks
VMT per truck	1.94 miles
total VMT per day	271.6 VMT/day
truck hours per year[2]	3744 hours/year

Pollutant	Particle Size Multiplier (k)[1] (lb/VMT)	Emission Factor (lb/VMT)	Emission Rates		
			Avg (lb/hr)	Max (lb/hr)	Annual (tons/yr)
Particulate Matter (PM_{10})	0.0022	0.0369	0.834	1.001	1.56
Particulate Matter ($PM_{2.5}$)	0.00054	0.0090	0.205	0.246	0.38

(1) Factors are taken from AP-42 Chapter 13.2.1, Paved Roads (01/11).

(2) Truck hours per year based on average of 12 hours/day **X** 6 days/week **X** 52 weeks/year.

Tank Information		
Type	Vertical Fixed-Roof	
Shell Diameter	3	ft
Shell Height	5	ft
Average Height of Liquid	2.5	ft
Maximum Height of Liquid	5	ft
Throughput	6610	gallons/year
Maximum Liquid Volume	264.38	gallons
Turnovers	31.25	turnovers/year
Nearest City	Shreveport	
Insulation	Uninsulated	
Tank Paint		
Roof Color	Gray (Light)	
Roof Condition	New	
Shell Color	Gray (Light)	
Shell Condition	New	
Tank Roof		
Type	Cone	
Cone Slope (If Applicable)	0.167	ft/ft
Dome Radius (If Applicable)		ft
Vent Settings		
Breather Vent Pressure Setting	0.03	psig
Breather Vent Vacuum Setting	-0.03	psig
Tank Pressure	0	psig
Contents		
Tank Contents	Distillate fuel oil No. 2	

Constants			
Ideal Gas Constant	R	10.731	psia * ft^3/(lb-mole * °R)
Paint Solar Absorptance	α_R	0.54	
Paint Solar Absorptance	α_S	0.54	
Solar Insolation	I	1424.00	Btu/(ft^2 * day)

Emissions Summary			
Total Losses	L_t	0.24	lb/yr
Total Losses	L_t	0.000	lb/hr
Total Losses	L_t	0.00	ton/yr

Standing Losses	L_s	0.07	lb/yr
Min Daily Ambient Temp.	T_{AN}	515.77	°R
Max Daily Ambient Temp.	T_{AX}	535.67	°R
Avg. Daily Ambient Temp.	T_{AA}	525.72	°R
Liquid Bulk Temp.	T_B	528.03	°R
Average Vapor Temperature	T_V	531.95	°R
Daily Vapor Temp. Range	ΔT_V	28.83	°R
Avg. Daily Liq. Surface Temp.	T_{LA}	529.99	°R
Min Daily Liq. Surface Temp.	T_{LN}	522.78	°R
Max Daily Liq. Surface Temp.	T_{LX}	537.19	°R
Atmospheric Pressure	P_A	14.7	psia
Vent Pressure Range	ΔP_B	0.06	psia
Vapor Pressure at T_{LA}	P_{VA}	0.009	psia
Vapor Pressure at T_{LN}	P_{VN}	0.007	psia
Vapor Pressure at T_{LX}	P_{VX}	0.011	psia
Daily Vapor Press. Range	ΔP_V	0.004	psia
Vapor Molecular Weight	M_V	130.00	lb/lb-mole
Vapor Space Exp. Factor	K_E	0.05	
Vapor Saturation Factor	K_S	1.00	
Stock Vapor Density	W_V	0.000	lb/ft^3
Vapor Space Outage	H_{VO}	2.58	ft
Shell Height	H_S	5.00	ft
Liquid Height	H_L	2.50	ft
Roof Height	H_R	0.25	ft
Cone Roof Slope	S_R	0.17	ft/ft
Shell Radius	R_S	1.50	ft
Dome Roof Radius	R_R	3.00	ft
Roof Outage	H_{RO}	0.08	ft

Working Losses	L_w	0.17	lb/yr
Vapor Molecular Weight	M_V	130.00	lb/lb-mole
Vapor Pressure at T_{LA}	P_{VA}	0.01	psia
Turnovers	N	31.25	
Sum of Increases in Liquid Level	ΣH_{QI}	124.99	ft/yr
Max Height of Liquid	H_{LX}	5	ft
Net Working Loss Throughput	V_Q	883.50	ft^3/yr
Stock Vapor Density	W_V	0.000	lb/ft^3
L_W Turnover Factor	K_N	1.00	
L_W Product Factor	K_P	1.00	
Vent Correction Factor	K_B	1.00	
Tank Pressure	P_I	0.00	psig
Vent Pressure Setting	P_{BP}	0.03	psig

Notes:

[1] *AP-42 Chapter 7.1 (11/19): Section 7.1.3.1 - Routine Losses From Fixed Roof Tanks*

Appendix D

Certificate of Good Standing

State of
Louisiana
Secretary of
State

COMMERCIAL DIVISION
225.925.4704

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

Name	Type	City	Status
LOUISIANA GREEN FUELS LLC	Limited Liability Company	COLUMBIA	Active

Previous Names

Business: LOUISIANA GREEN FUELS LLC
Charter Number: 44176934K
Registration Date: 12/4/2020
Domicile Address
303 WALL STREET
COLUMBIA, LA 71418
Mailing Address
PO BOX 1269
COLUMBIA, LA 71418

Status

Status: **Active**
Annual Report Status: **In Good Standing**
File Date: 12/4/2020
Last Report Filed: 12/10/2021
Type: Limited Liability Company

Registered Agent(s)

Agent: ROBERT F. MEREDITH, III
Address 1: 303 WALL STREET
City, State, Zip: COLUMBIA, LA 71418
Appointment Date: 8/12/2021

Officer(s)

Additional Officers: No

Officer: STRATEGIC BIOFUELS LLC
Title: Manager, Member
Address 1: C/O PAUL F. SCHUBERT, MANAGER
Address 2: 303 WALL ST
City, State, Zip: COLUMBIA, LA 71418

Amendments on File (2)

Description	Date

Change State of Incorporation	8/12/2021
Domestic LLC Agent/Domicile Change	6/3/2022

Print