Progress Energy

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June 2, 2008

Ms. Trina Vielhauer, Bureau Chief
Bureau of Air Resources
Division of Air Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400

Re: Progress Energy Florida, Inc.
Levy County Nuclear Plant Units 1 & 2
PSD Permit Application

Dear Ms. Vielhauer:

Submitted for your review are four (4) copies of completed application forms and supporting documentation for the issuance of a PSD permit involving the Levy County Nuclear Plant, Unit Nos. 1 and 2. In addition, the application fee in the amount of $7,500.00 is also enclosed.

The expected date of initial operation of this new facility will likely occur sometime in 2016.

If you have any questions regarding this application, please contact Mr. Chris Bradley at (727) 820-5962 or myself at (727) 820-5764.

Sincerely,

Jamie Hunter
Lead Environmental Specialist

Enclosures

cc: Mr. Mike Halpin, P.E., FDEP –Siting Coordination Office (w/o enc.)

Progress Energy Florida, Inc.
299 1st Ave. North, PEF-903
St. Petersburg, FL 33701

Report

Prevention of Significant Deterioration Permit Application

For

Proposed Levy Nuclear Plant

Levy County, Florida

Prepared for

Progress Energy

April 28, 2008

CH2MHILL
1000 Abernathy Road
Atlanta, GA 30328

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Tables

Figures

1.0 Introduction

Florida Power Corporation, doing business as Progress Energy Florida, Inc. (PEF) proposes to construct and operate a 2000 megawatt (MW) nuclear power plant (the Facility) on a 3105 acre tract of land, at a location, approximately 4 miles northeast of the town of Inglis, in Levy County, Florida. The Facility, to be known as the Levy Nuclear Plant (LNP), will utilize two Westinghouse AP1000 Pressurized Water Reactors, each of which will have a nominal generating capacity of 1000 MW of electric energy. As a nuclear powered electrical generating plant, the LNP facility will have very few sources of air emissions. With the exception of some relatively small diesel powered emergency power equipment, the plant will not have any significant sources of emissions due to the combustion of fossil or other fuels. The primary source of air emissions at the LNP facility will be two banks of mechanical draft cooling towers (one for each reactor) which will emit water vapor and particulate matter (PM) to the atmosphere. Particulate matter emissions from the cooling towers will consist of naturally occurring dissolved and suspended solids in the cooling tower circulating water that will be emitted with water droplets that become airborne as cooling tower "drift". Because the emissions of PM will exceed the State of Florida's major source threshold of 250 tons per year (tpy), a PSD Permit is being requested to construct and initially operate the facility. Air emissions of PM less than 10 µm (PM-10), sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) will not be emitted in significant quantities and PSD review will therefore not be triggered for those pollutants.

Construction of the facility is expected to commence with site clearing and preparation in 2010, followed by facility construction in 2011, with commercial operation of the first generating unit expected to begin in 2016, followed by the second unit in 2017.

This permit application was prepared with the assistance of the consulting firm CH2M HILL. Questions regarding this application should be addressed to the individuals listed below:

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2.0 Facility Description

2.1 General

Facility Name/Owner: Levy Nuclear Plant

Owner: Florida Power Corporation, dba Progress Energy Florida, Inc.

Location: Florida Highway 19
Levy County, Florida

Facility: 2200 MW Nuclear Power Plant

Contact: John J. (Jamie) Hunter
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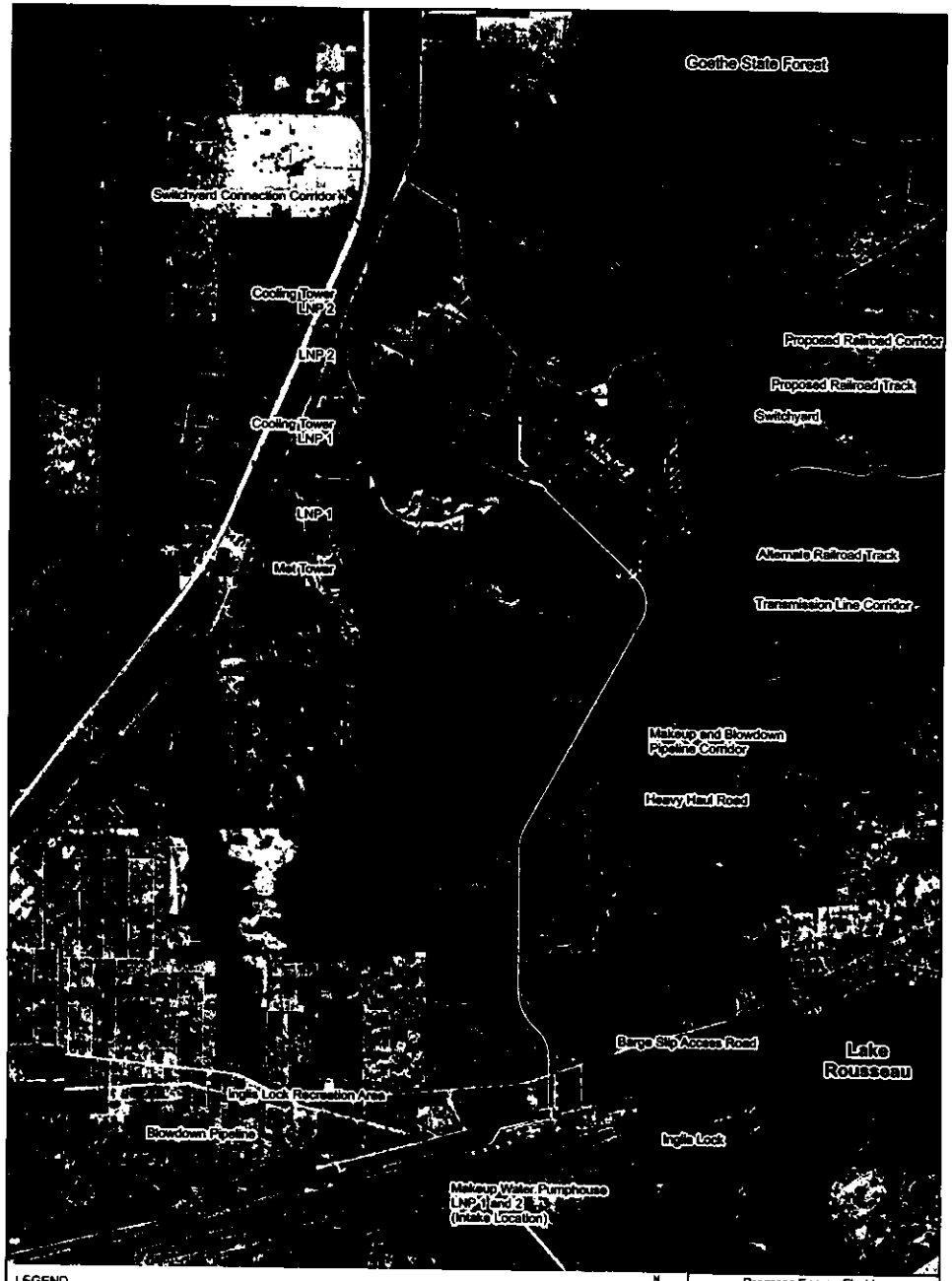
2.2 Site Description

The proposed LNP Facility will be located on 3105 acre tract of land, approximately 4 miles northeast of the town of Inglis, east of State Highway 19, as shown on Figure 2-1. The site was formerly owned by Rayonier Forest Products Inc., and was previously used for the growth and harvesting of softwood timber. The entire property is currently forested and there are no public roadways that enter or traverse the site, nor are there or have there been any structures or development of any kind on the property. The site is currently zoned for industrial use. The proposed layout of the Facility is illustrated on Figure 2-2. The Facility will be designed to include the following major components:

- Two Westinghouse AP1000 Pressurized Water Reactors
- Two condensing steam turbine generators, one for each AP1000 generating unit
- Mechanical draft wet cooling towers (two 44-cell units, one for each reactor).


Goethe State Forest
Switchyard Connection Corridor
Cooling Tower LNP 2
LNP 2
Cooling Tower LNP 1
LNP 1
Met Tower
Proposed Railroad Corridor
Proposed Railroad Track
Switchyard
Alternate Railroad Track
Transmission Line Corridor
Makeup and Blowdown Pipeline Corridor
Heavy Haul Road
Barge Slip Access Road
Lake Rousseau
Inglis Lock Recreation Area
Blowdown Pipeline
Inglis Lock
Makeup Water Pumphouse LNP 1 and 2 (Intake Location)
LEGEND
Site Access Road
Existing Trail
Pond
Goethe State Forest
Proposed Railroad Corridor (1 Mile Wide)
LNP Site Boundary
N
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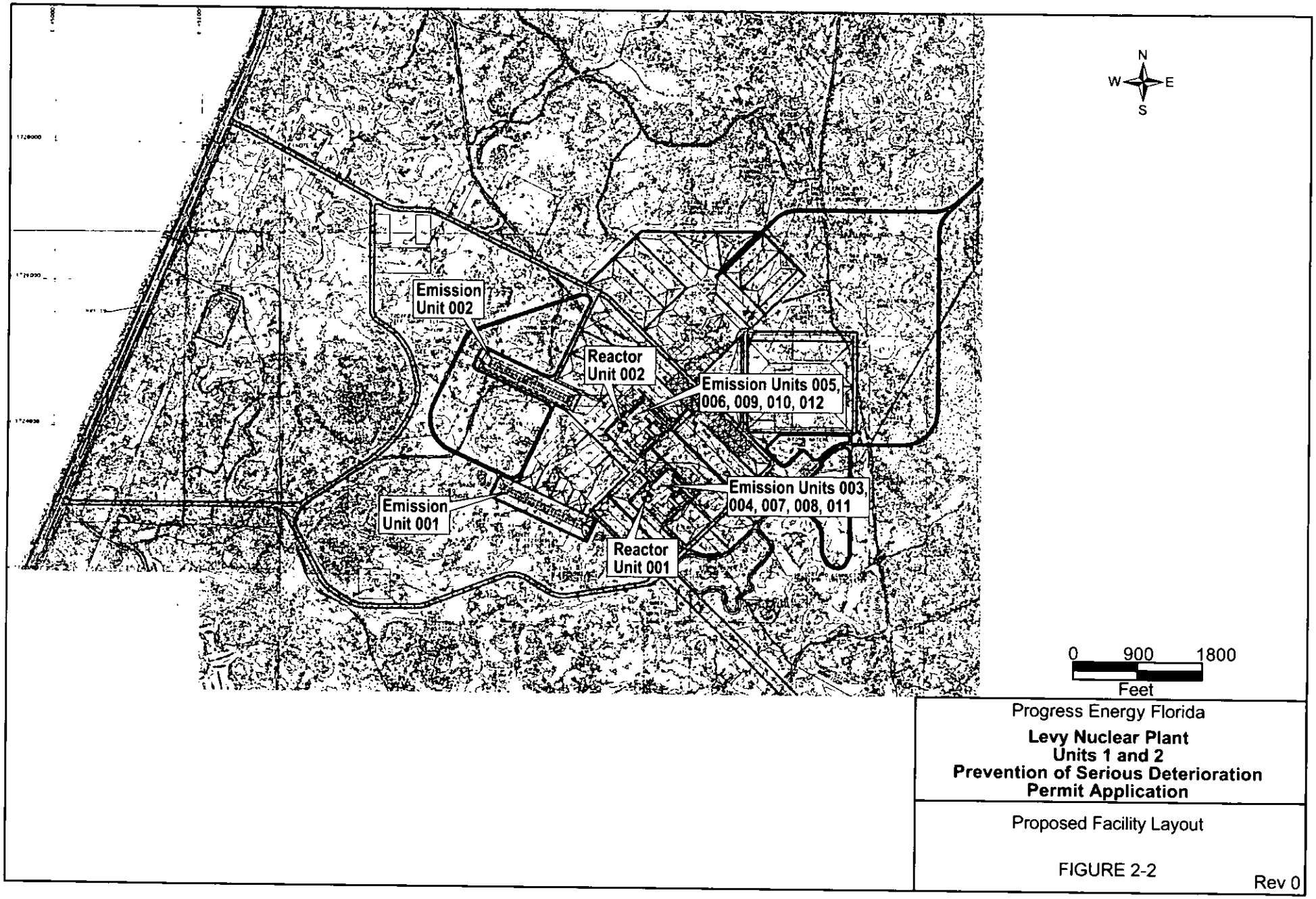
Mile
Progress Energy Florida
Levy Nuclear Plant Units 1 and 2
Prevention of Serious Deterioration Permit Application
Site Location Map
FIGURE 2-1
Rev 0



Progress Energy Florida

Levy Nuclear Plant
Units 1 and 2
Prevention of Serious Deterioration
Permit Application

Proposed Facility Layout

FIGURE 2-2

Rev 0

- Cooling water intake structure, located in the Cross Florida Barge Canal, approximately 3.5 miles south of the LNP site
- Cooling tower water and boiler feed water make-up systems
- Outdoor electrical switchyard
- Back-up emergency diesel generators and diesel firewater pumps
- Paved and unpaved plant roads and parking areas
- Miscellaneous maintenance buildings/sheds, control room, laboratory and office

The main components of the LNP Facility are illustrated on Figure 2-2.

2.3 Process Description

The LNP Facility will be operated as a base load plant, 24 hours per day, 365 days per year except for limited periods of scheduled maintenance. For purposes of this permit application, the Facility is assumed to operate continuously, 8,760 hours of the year at full generating capacity.

The two mechanical draft cooling towers that will be used to cool the plant's condensers will obtain makeup water from the nearby Cross Florida Barge Canal. Cooling tower blowdown water will be piped to the nearby Crystal River Power plant for discharge from that facility's wastewater discharge canal into the Gulf of Mexico. The cooling towers are expected to be the LNP facility's only significant source of air emissions, with an estimated 507 tons per year of PM emissions. Particulate matter emissions from the cooling towers will consist of naturally occurring dissolved and suspended solids in the cooling tower circulating water that will be emitted with water droplets that become airborne as cooling tower "drift". It is noted that each reactor will also have a small independently operated two-cell "service water" cooling tower that will utilize fresh well water for cooling. The circulating water flow rate in these small towers will be only 10,500 gallons per minute (gpm) during normal operation. At less than two percent of the normal operating flow rate of the main condenser cooling towers, these service water cooling towers will not be a significant source of PM or PM-10 emissions and are therefore not being included in this application.

The Facility will have four 4000 kW diesel powered emergency standby generators and four 35 kW ancillary diesel powered emergency generators. During normal operation, the Facility will generate all of its own power needs, or obtain it from the local power grid. In the event that the facility is not operational and power is not available from the local power grid, the emergency generators will be used to keep the control room and certain essential plant equipment and utilities energized.

The Facility will also have two diesel powered firewater pumps. During normal operation, the power supply from the Facility or the local power grid would run the firewater system. If electric power is not available in the event of an emergency, the emergency firewater pumps will be available to maintain water pressure to the fire water systems.

2.4 Operation

Facility will be capable of operating up to a maximum of 24 hours per day, 365 days per year. The emergency generators and fire pumps will be limited to a total of 48 hours per

year (normally 4 hours per month) of non-emergency operations, primarily for reliability testing and maintenance. The Facility will employ approximately 773 personnel once fully operational.

3.0 Emission Source Information

3.1 Proposed Facility Emission Sources

3.1.1 Mechanical Draft Cooling Tower Emissions

The principal source of emissions from the LNP Facility will be the two mechanical draft wet cooling towers. The emissions from the cooling towers will be PM, a very small component of which will be PM-10. Particulate matter emissions from the cooling towers will consist of naturally occurring dissolved and suspended solids in the cooling tower circulating water that will be emitted with water droplets that become airborne as cooling tower "drift". PM emissions from the cooling towers have been estimated on the basis of the amount of drift leaving the tower (less than 0.0005% based on manufacturer's specifications), a rate of 600,000 gpm for circulating water in each tower (531,100 gpm for normal operation with the potential to operate up to 600,000 gpm), the density of the salt water from the canal (8.57 lb/gal), the total dissolved solids in the makeup water that will be used in the cooling towers (25,000 parts per million [ppm]), and the cycles of concentration that will be used during operation (1.5 during normal operation, with temporary excursions that can range up to 2.0). The estimated PM emissions from both towers during normal operation at full capacity are 115.7 pounds per hour (lb/hr), or 507 tpy. The maximum short-term excursion PM emission rate is estimated to be 154.26 lb/hr. The total estimated PM-10 emission rate from both cooling towers during normal operation at full capacity is 1.27 lb/hr, or 5.6 tpy. The maximum short-term excursion PM-10 emission rate is estimated to be 1.7 lb/hr. These emission estimates are based on a methodology and calculation that is contained in Appendix A.

3.1.2 Emergency Generators and Fire Pump Engine Emissions

Each reactor will be equipped with two diesel powered 4,000 kW emergency generators and two small 35 kW ancillary generators, with an expected maximum expected non-emergency operation of 48 hours per year per generator for reliability testing and maintenance. The Facility will also have two diesel powered fire pumps, with a maximum expected non-emergency operation of 48 hours per year per pump for reliability testing and maintenance. These diesel powered engines will emit a small amount of emissions due to the combustion of diesel fuel. Each engine will have its own point-of-use diesel fuel storage tank which will have the potential to emit a minimal small amount of VOC emissions as a result of breathing losses and during infrequent tank filling events. A summary of the estimated emissions from the emergency generators and fire pumps is provided in Table 3-1. The emission calculations for the emergency generators and the fire pump engines have been based on EPA's published AP-42 emission factors and are contained in Appendix A.

TABLE 3-1
Summary of Estimated Annual Emissions from Diesel Powered Generators and Fire Pumps at LNP

	Diesel Generators[a]		
Pollutant	**Four 4000 kW Standby Units (lb/yr)**	**Four 35 kW Ancillary Units (lb/yr)**	**Two Diesel-Driven Fire Pumps [a] (lb/yr)**
Particulates (PM10)[b]	2168	33	136
Sulphur Oxides[b][c]	111	1.6	6.4
Carbon Monoxide[b]	6645	101	415
VOC[b]	2518	38	157
Nitrogen Oxides[b]	30848	467	1928

Notes:

a) Based on 48 hrs/yr of non-emergency operation for each generator and diesel-driven fire pump.

b) Emission factors for diesel generators and diesel-driven fire pumps from AP-42 Chapter 3 - Stationary Internal Combustion Sources; Section 3.3 - Gasoline and Diesel Industrial Engines, Table 3.3-1.

c) Assumes sulphur content of Number 2 diesel fuel burned is 0.05 percent.

kW = kilowatt
lb/yr = pounds per year

3.1.2 Facility Emissions Summary

The total potential facility emissions and a comparison with the PSD Significant Emission Rates for each pollutant are summarized in Table 3-2. The table illustrates that PSD review will be required for PM emissions since the total facility PM emissions are in excess of the major source threshold of 250 tpy. All other pollutants, including PM-10, NO_X, SO_2, CO, and VOC will be less than the PSD Significant Emission Rates. A PSD permit application and review will therefore be required for PM, including a demonstration of best achievable control technology (BACT). A dispersion modeling analysis will not be required since there are no National Ambient Air Quality Standards (NAAQS) or PSD increments for PM.

TABLE 3-2
Summary of Potential Air Emissions from LNP (Emissions in Tons/Yr)[a]

Pollutant	**Cooling Towers**	**Emergency Generators**	**Fire Pumps**	**Storage Tanks**	**Total Emissions**	**PSD Significant Emission Rate**	**PSD Review Required?**
PM	507	-	-	-	507	25[b]	Yes
PM10	5.6	1.1	0.1	-	6.8	15	No
NO_X	-	15.4	1.0	-	16.4	40	No
SO_2	-	0.06	0.01	-	0.06	40	No
CO	-	3.3	0.2	-	3.5	100	No
VOC	-	1.3	0.1	<1	2.4	40	No

Notes:
a: Based on continuous operation of cooling towers, 48 hrs/yr of non-emergency operation for generators and fire pumps
b: The facility is a major source of PM emissions since its emissions are greater than 250 tpy

3.1.3 Non-regulated Pollutants

EPA's guidance on the assessment of non-regulated "toxic pollutants" suggests that permit applicants evaluate emissions of toxic air emissions that could potentially be of concern to the public. Due to the minor amount of diesel fuel that will be combusted in the emergency generators and fire pump, potential toxic air pollutants will be insignificant. As a result, an impact analysis for air toxic emissions is not required.

4.0 Applicable Regulations

4.1 Applicable Pollutants

Expected emissions rates from the proposed Facility for the cooling towers and emergency power and fire equipment were previously discussed and summarized in Section 3. The maximum expected annual PM emissions from the Facility will exceed 250 tons/year, which makes the facility a major source of emissions under the regulations governing PSD (40 CFR 52.21). All other emissions (i.e., PM-10, NO_X, SO_2, CO, and VOC) will be emitted at levels well below the PSD Significant Emission Rate thresholds. As a result, only PM emissions are subject to PSD review. PSD review requires demonstrations of BACT and compliance with State and National Ambient Air Quality Standards (NAAQS). A BACT analysis for PM emissions from the Facility is provided in this application; however, because there are no NAAQS or PSD increments for PM, an ambient air quality impact analysis (i.e., dispersion modeling) is not required.

It is also noted that EPA has stipulated that, until PM-2.5 significance levels and increments (and sufficient emission factors) are established, PM-10 air quality standards are to be used as surrogates for PM-2.5. For this reason, the discussions in the application related to PM-10 are also assumed to apply to PM-2.5.

4.2 Emission Limits and Performance Standards

4.2.1 Cooling Towers

There are no state or federal prescribed emission limits or performance standards that are applicable to cooling towers.

4.2.2 Emergency Generators

National Emission Standards for Hazardous Air Pollutants (NESHAP) have been developed by the U.S. EPA for stationary reciprocating internal combustion engines (40 CFR 63, Subpart ZZZZ). This regulation generally applies to engines greater than 500 brake horsepower (bhp) that are located at a major source of HAP emissions. Because the LNP facility will not be a major source of HAPs, this regulation does not apply to the generators. The engines will be subject to a New Source Performance Standard (NSPS) for non-road diesel engines (Subpart IIII) and the manufacturer of these engines will be required to provide certification of compliance with these regulations prior to operation. There are no other potentially applicable regulations that apply specifically to the emergency generators.

4.2.2 Diesel Fuel Oil Tanks

New source performance standards (NSPS) have been developed by the U.S. EPA for volatile organic liquid storage vessels and specified in 40 CFR 60, Subpart Kb. All storage vessels having a volume greater than 40 m^3 (10,567 gallons) in volume are subject to this NSPS. Storage vessels having a volume greater than 151 m^3 (39,890 gallons) containing VOCs with a vapor pressure less than 3.5 kPa (0.51 psia) are exempt from this NSPS. The

storage tanks for the main 4,000 kW standby generators, currently estimated to be 85,000 gallons each, will exceed this size, but will be exempt from this NSPS requirement based on the low vapor pressure of diesel fuel. The diesel fuel tanks for the ancillary generators and fire pump engines will be less than 1,000 gallons in size and will also be exempt from this NSPS. The diesel fuel tanks will be located in close proximity to each generator or pump. Total VOC emissions from all storage tanks combined are expected to be minimal, and less than 1 ton/yr for all tanks combined.

4.3 Monitoring Requirements

4.3.1 Pre-construction Monitoring

PSD regulations have a potential requirement for the development and operation of ambient air quality and meteorological monitoring either on the project site or at a location representative of the site. Air quality monitoring could be required for any criteria pollutant emitted in significant amounts if representative data are not available. Because only PM emissions from the LNP facility will exceed the PSD applicability, only that pollutant is potentially subject to his requirement; however, there are no ambient air quality standards for PM. Additionally, since there are no NAAQS for PM, dispersion modeling for PM is not required and therefore meteorological data is not required for dispersion modeling.

4.3.2 4.3.2 Operational Monitoring

The LNP Facility will comply with all applicable operational monitoring requirements imposed by the facility's construction and operating permits, once issued. There are no prescribed operational monitoring requirements for cooling towers or emergency power equipment as proposed for use at the facility. It is anticipated that any operation requirements for these units will be stipulated in the PSD permit that will be issued for the facility.

5.0 Demonstration of Best Achievable Control Technology

5.1 Introduction

Under PSD regulations, a new or modified "major source" is required to apply BACT for any pollutant emitted in "major" or "significant" amounts. As discussed in Section 3.0, the proposed modification will have the potential to emit PM emissions in "significant" quantities. A BACT analysis is therefore required for this pollutant. The purpose of this review is to demonstrate that the air pollution control measures for PM emissions to be utilized at the LNP Facility represent BACT as defined by Section 169 of the Clean Air Act:

"An emission limitation (including a visible emissions standard) based on the maximum degree of reduction of each pollutant subject to regulations under the Act which would be emitted from any proposed major stationary source or major modification, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, economic impacts and other costs, determines is achievable for such source or modifications through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment of innovative fuel combination techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which will exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 and 61."

Both the EPA and FDEP require that the demonstration of BACT described above should follow the "top-down" approach. This approach ensures that a BACT demonstration consider the most stringent level of control technology available. If it can be shown that this level of control is technically, economically, or environmentally infeasible, then the next most stringent level of control is determined and similarly evaluated. The process continues until the BACT level under consideration cannot be eliminated by any substantial or unique economic or environmental objectives. For this project, the only sources of emission for which BACT will apply will be mechanical draft cooling towers, diesel powered emergency generators, and diesel powered fire pump engine.

The purpose of this section is to demonstrate that the proposed emission control systems and methods of operation will be representative of BACT. The following sections present the control technology alternatives available and a demonstration of BACT for each.

5.2 Methodology

The requirement to conduct a BACT analysis and determination is set forth in section 165(a)(4) of the Clean Air Act and in federal regulations 40 CFR 51.166(j). EPA has developed a process for conducting BACT analyses. This method is referred to as the "top-down" method. The steps to conduct a "top-down" analysis are listed in EPA's "New Source Review Workshop Manual," Draft, October 1990:

- Step 1 – Identify All Control Technologies

- Step 2 – Eliminate Technically Infeasible Options
- Step 3 – Rank Remaining Control Technologies by Control Effectiveness
- Step 4 – Evaluate Most Effective Controls and Document Results
- Step 5 – Select BACT

5.3 Cooling Towers

This section contains the BACT analysis for the multi-cell mechanical draft cooling towers. Cooling water will circulate through each of the generating unit non-contact condensers to remove the heat released by the condensing steam and then will flow to the multi-cell mechanical draft cooling towers where heat will be rejected to the environment, primarily through evaporation of a portion of the cooling water. A very small portion of the cooling water will be carried into the ambient air in liquid form as cooling tower "drift" that will contain a small amount of naturally occurring dissolved and suspended solids that is present in the circulating water. Of the PM emissions from the cooling towers, a very small component (approximately 1 percent), are estimated to be PM-10 emissions.

Because the exhaust air from wet cooling towers is saturated with water vapor, drift eliminators are the only control technology identified for limiting PM emissions from wet cooling towers. Other PM emission control equipment such as electrostatic precipitators (ESPs), wet electrostatic precipitators (WESPs), and fabric filters are not technically feasible for use on wet cooling towers. A review of EPA's RBLC database indicated that the most efficient drift eliminators that are currently available are designed to limit drift loss to less than 0.0005%. A summary of EPA's most recently published BACT determinations is provided below:

Facility	Drift Rate (%)	Basis	State	Date
Great River Energy	0.0005	Drift Eliminators	ND	9/14/07
Archer Daniels	0.0005	Drift Eliminators	IA	6/29/07
ASAlliance	0.005	Drift Eliminators	OH	8/10/06
PEF Anclote	0.0005	Drift Eliminators	FL	10/20/06
Diamond Wanapa	0.0005	Drift Eliminators	OR	8/8/05

For the LNP project, proposed BACT for the cooling towers is the use of mist eliminators to limit drift loss to 0.0005% of the circulating water rate in the cooling towers. This level of control represents the best control that is currently available.

5.4 Emergency Generators and Diesel Fire Pump

The emergency generators and fire pump engines proposed for the LNP facility will utilize low sulfur fuel oil (<0.05% S) and good combustion techniques to minimize emissions. These engines will be purchased based on the specification that they will meet any EPA non-road emission standards in force at the time of procurement, which at this time are specified in 40 CFR 60, Subpart IIII. Conformance with these standards is proposed as BACT for these engines. Because of the limited use of the emergency generators and fire pump engines during testing, maintenance, and emergency operations, these emissions may be classified as insignificant under the State of Florida's Operating Permit program as

provided for under FDEP Rule 62-213.430(6), F.A.C. BACT for the emergency generators and fire pump engines is proposed to be the specification and use of EPA non-road compliant engines at the time of procurement, low sulfur diesel fuel, good combustion and operating practices, and the emission rates proposed in Section 3.

6.0 Ambient Air Quality Impact Analysis

The only emissions from the proposed LNP Facility that will trigger PSD review requirements are PM. All other emissions (i.e., PM-10, NO_X, SO_2, CO, and VOC) will be emitted at levels below the PSD Significant Emission Rate thresholds and are not subject to review. A dispersion modeling analysis is not required since there are no National Ambient Air Quality Standards (NAAQS) or PSD increments for PM.

EPA's guidance on the assessment of non-regulated Hazardous Air Pollutants (HAPs) requires that permit applicants evaluate emissions of HAPs that could potentially be of concern to the public. Due to the minor amount of diesel fuel that will be combusted in the emergency generators and fire pump, potential HAP emissions are expected to be insignificant. As a result, an impact analysis for air toxic emissions is not required.

7.0 Additional Impact Analyses

As required by PSD regulations, this section addresses possible impacts on visibility, vegetation and soils, growth, PSD Class I areas, and nonattainment areas.

7.1 PSD Class I Areas

The Clean Air Act Amendments of 1977 identify "clean air areas" as Prevention of Significant Deterioration (PSD) Class I areas. PSD Class I areas include all international parks, national wilderness and memorial parks that exceed 2023.4 hectares (ha) (5000 acres [ac.]), and national parks that exceed 2428.1 ha (6000 ac.). There are three PSD Class I areas within 300 km (186 mi.) of the LNP site. These three areas are the Chassahowitzka National Wildlife Refuge (NWR) located approximately 40 km (25 mi.) south of the LNP site, the St. Marks NWR located approximately 175 km (109 mi.) to the northwest of the site, and the Okefenokee National Wilderness Area (NWA) located approximately 175 km (109 mi.) to the north-northeast of the site. Because of the very small quantity of air emissions that will be emitted from the LNP facility, no significant air quality impacts attributable to the construction or operation of the facility are expected in any of these Class I areas. No significant or adverse impacts on visibility in any area, including the nearest PSD Class I areas, are expected as a result of the operation of the LNP facility. There will be no significant emissions of PM-10, NO_X, SO_2, CO, or VOC emissions as a result of the operation of the plant. The only significant increase in emissions will be for PM (i.e., >PM-10) from the cooling towers and these emissions are not expected to have any discernible impact on visibility at any location.

7.2 Effects on Visibility

7.2.1 Introduction

The LNP Facility will be constructed in a rural area that is remote from other industrial sources. The operation of this facility is not expected to have a significant impact on ambient air quality at any location.

Aside from some very limited periods when the cooling tower plumes could be visible from selected offsite locations, there should be no discernible or measurable impacts to visibility as a result of the operation of the facility. Because of the very large nature of the LNP site, and the large distances to the nearest property boundaries, the cooling tower plumes are not expected to be visible under most circumstances from offsite locations or the nearest roadways. Cooling tower plumes would normally be expected to be most visible during very cold weather when conditions are favorable for condensation of the vapor plume.

7.3 Effects on Vegetation and Soils

One indicator of potential vegetation and soils effects is a comparison of predicted ambient concentrations with ambient air quality standards. Of most significance here is the fact that the secondary NAAQS were established to prevent adverse "welfare" effects such as direct

damage to vegetation and harmful contamination of soils. In light of the fact that the facility is expected to have no significant impact on ambient air quality at any location, and its operation will not threaten or exceed any ambient standard or PSD increment, no significant impacts due to air emissions are expected on vegetation and soils.

7.4 Effects on Associated Growth

Employment at the LNP facility during normal operations is estimated to total approximately 773 personnel during normal operations once the Facility becomes fully operation. Many of these personnel will be assigned to work shifts to maintain a constant presence at the plant. While there will be an increase in traffic entering and leaving the area due to the increase in the workforce, no significant change in local air quality is expected to result. Most personnel hired for this project will most likely be drawn from the existing regional population.

7.5 Impacts on Nonattainment Areas

Presently, the entire State of Florida is designated as being in attainment of the national ambient air quality standards (NAAQS) and the Florida Ambient Air Quality Standards (FAAQS) for all pollutants. The LNP site is located in Levy County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as being in attainment of the NAAQS. The Florida Department of Environmental Protection (FDEP), in collaboration with local environmental programs, operates a network of ambient air quality monitoring stations throughout the state. There are 13 monitoring stations in the geographic area surrounding the LNP site. The monitoring stations are located in Alachua, Citrus, Lake, Marion, and Pasco counties. There are no monitoring stations located within Levy County. These stations monitor for various NAAQS and FAAQS criteria pollutants (that is, ozone, particulate matter of 2.5 micrometers [µm] and smaller [PM-2.5], particulate matter of 10 µm and smaller [PM-10], sulfur dioxide [SO_2], and carbon monoxide [CO]). The monitoring data from these ambient air quality monitors suggests that the air quality of the area is good and that there are no areas where the ambient air quality standards are considered to be at risk of being threatened or exceeded. Additionally, the air emissions from the LNP are expected to be minimal and are not expected to have a significant impact on ambient air quality at any location. It is noted that the NAAQS for ozone was revised by the USEPA on March 12, 2008. The new standard, which will not be implemented in Florida for several years until the State Implementation Plan can be revised by FDEP and approved by the USEPA, will be more restrictive than the previous standard; however, the attainment status of Levy County is not expected to change as a result of this revision.

Appendix A

Emission Calculations

Emission Calculation Methodology

Cooling Tower Emissions (Per Tower)

Cooling tower emissions are based on the following factors:

Number of Cooling Towers = 2 (one for each generating unit)
Maximum Drift Rate = 0.0005% (Manufacturer Specification)
Circulating Water Flow Rate (gpm) = 531,100 (normal operation)
= 600,000 (potential)
Water Density = 8.57 lb/gal (salt water)
Total Dissolved Solids (TDS) = 25,000 ppm (makeup water from Barge Canal)
Cycles of Concentration = 1.5 (normal operation)
= 2.0 (short-term excursions)
Fraction of PM-10 in PM emissions = 1.1% (based on particle size distribution see additional explanation, attached)

PM Emissions Calculation (Normal Operation)

PM Emission Rate (per tower) = 600,000 x 0.000005 x 8.57 x 25,000 E-06 x 60 x 1.5

= 57.85 lb/hr

= 253.37 tons/yr

PM Emissions Calculation (Short-term Excursions)

PM Emission Rate (per tower) = 600,000 x 0.000005 x 8.57 x 25,000 E-06 x 60 x 2.0

= 77.13 lb/hr

PM-10 Emissions Calculation (Normal Operation)

PM-10 Emission Rate (per tower) = 57.85 x 0.011

= 0.636 lb/hr

= 2.79 tons/yr

PM-10 Emissions Calculation (Short-term Excursions)

PM-10 Emission Rate (per tower) = 77.13 x 0.011

= 0.85 lb/hr

Emergency Generator and Fire Pump Emissions

Generator emissions are based on the following factors:

Standby generator horsepower (HP) = 5200 (approximate, four identical units)
Ancillary generator horsepower (HP) = 80 (approximate, four identical units)
Fire pump horsepower (HP) = 650 (approximate, two identical units)
Sulfur content of diesel = 0.05% maximum
Emission Factors (EF):

NOx	0.031	lb/hp-hr	(AP-42 Table 3.3-1)
CO	0.0067	lb/hp-hr	(AP-42 Table 3.3-1)
SOx	0.000103	lb/hp-hr	(AP-42 Table 3.3-1, assumes 0.05% S in fuel)
PM10	0.0022	lb/hp-hr	(AP-42 Table 3.3-1)
VOC	0.0025	lb/hp-hr	(AP-42 Table 3.3-1)

Emission Rate (per unit) = EF x HP (lb/hr)

Storage Tank Emissions

The storage tanks will have a minimal amount of VOC emissions due to tank breathing losses and emissions during infrequent tank filling operations. These emissions are estimated to be less than 1 ton/yr.

Table A-1
Cooling Tower Emission Calculation
Progress Energy Levy County

Parameter	Units	Value
Recirculating Rate Per Unit	gal/min	531,100
Numbers of Units	---	2
Cooling Tower Drift Rate	---	0.0005%
Salt Water Density	lb/gal	8.57
Total Dissolved Solids (TDS)	Concentration, ppm	25,000
Conversion Factor	minutes/hour	60
Cooling Tower PM Emissions	lb/hr	68.27
Cooling Tower PM Emissions	tons/yr	299
Number of Cells used in Modeling		22
Cooling Tower PM Emissions Per Cell	lb/(hr-cell)	3.10
Ratio of PM-10/PM	---	1.10%
Cooling Tower PM-10 Emissions	lb/hr	0.75
Cooling Tower PM-10 Emissions	tons/yr	3.28
Cooling Tower PM Emissions Per Cell	lb/(hr-cell)	0.034

Table A-1
Estimated Solid Particulate Size Distribution [1]
Levy Nuclear Plant

TDS = 25000 ppmw
Density of Solid Particles (NaCl) = 2.20E-06 (μg)/(μm^3)

EPRI Droplet Diameter (μm)	Droplet Volume (μm^3)	Droplet Mass (μg)	Particle Mass (Solids) (μg)	Solid Particle Volume (μm^3)	Solid Particle Diameter (μm)	EPRI % Mass Smaller	
10	524	5.24E-04	1.31E-05	5.95	2.248	0.000	
20	4189	4.19E-03	1.05E-04	47.60	4.496	0.196	
30	14137	1.41E-02	3.53E-04	160.65	6.745	0.226	
40	33510	3.35E-02	8.38E-04	380.80	8.993	0.514	
					10.000	1.0972	**Note: Value is interpolated (1.1%)**
50	65450	6.54E-02	1.64E-03	743.75	11.241	1.816	
60	113097	1.13E-01	2.83E-03	1285.20	13.489	5.702	
70	179594	1.80E-01	4.49E-03	2040.85	15.738	21.348	
90	381704	3.82E-01	9.54E-03	4337.54	20.234	49.812	
110	696910	6.97E-01	1.74E-02	7919.43	24.730	70.509	
130	1150347	1.15E+00	2.88E-02	13072.12	29.227	82.023	
150	1767146	1.77E+00	4.42E-02	20081.20	33.723	88.012	
180	3053628	3.05E+00	7.63E-02	34700.32	40.468	91.032	
210	4849048	4.85E+00	1.21E-01	55102.82	47.213	92.468	
240	7238229	7.24E+00	1.81E-01	82252.61	53.957	94.091	
270	1.03E+07	1.03E+01	2.58E-01	117113.58	60.702	94.689	
300	1.41E+07	1.41E+01	3.53E-01	160649.62	67.447	96.288	
350	2.24E+07	2.24E+01	5.61E-01	255105.65	78.688	97.011	
400	3.35E+07	3.35E+01	8.38E-01	380799.11	89.929	98.34	
450	4.77E+07	4.77E+01	1.19E+00	542192.48	101.170	99.071	
500	6.54E+07	6.54E+01	1.64E+00	743748.26	112.411	99.071	
600	1.13E+08	1.13E+02	2.83E+00	1285196.99	134.893	100	
		Total Sum =	8.18E+00				
		Percent PM10 =	1.10%				

Note:
[1] Particle size distribution is based on the paper, "*Calculating Realistic PM-10 Emissions from Cooling Towers*", Gordon Frisbie and Joel Reisman, 2001.

Example Calculation for 10 µm Droplet Diameter

1.0 Droplet Volume

Volume of sphere = (4 x Pi x cube of the radius)/3
Volume of drift droplet = (4 x 3.1416 x (10 µm/2)^^{3})/3
Volume of drift droplet = 524 µm^3

2.0 Droplet Mass

Mass of droplet = Density of water x droplet volume
Mass of droplet = 1.0 E-06 µg/µm^3 x 524 µm^3
Mass of droplet = 524 E-06 µg

3.0 Particle Mass

Particle mass = (Total Dissolved Solids (TDS) in the cooling water x droplet mass)/10^6
Particle mass = 25,000 parts per million x 524 E-06 µg)/10^6
Particle mass = 1.31 E-05 µg

4.0 Solid Particle Volume

Solid particle volume = Particle Mass/Density of particles (NaCl)
The solid particle are assumed to have the same density as sodium chloride (NaCl), 2.2 E-06 µg/µm^3
Solid particle volume = 1.31 E-05 µg/2.20 E-06 µg/µm^3
Solid particle volume = 5.95 µm^3

5.0 Solid Particle Diameter

Solid particle diameter = 2 x cube root of (3 x Pi/4 x solid particle volume)
Solid particle diameter = 2 x (3 x 3.1416/4 x 5.95 µm^3)^1/3
Solid particle diameter = 2.248 µm

Calculating Realistic PM_{10} Emissions from Cooling Towers

Abstract No. 216 Session No. AM-1b

Joel Reisman and Gordon Frisbie
Greystone Environmental Consultants, Inc., 650 University Avenue, Suite 100, Sacramento, California 95825

ABSTRACT

Particulate matter less than 10 micrometers in diameter (PM_{10}) emissions from wet cooling towers may be calculated using the methodology presented in EPA's AP-42[1] , which assumes that all total dissolved solids (TDS) emitted in "drift" particles (liquid water entrained in the air stream and carried out of the tower through the induced draft fan stack.) are PM_{10}. However, for wet cooling towers with medium to high TDS levels, this method is overly conservative, and predicts significantly higher PM_{10} emissions than would actually occur, even for towers equipped with very high efficiency drift eliminators (e.g., 0.0006% drift rate). Such over-prediction may result in unrealistically high PM_{10} modeled concentrations and/or the need to purchase expensive Emission Reduction Credits (ERCs) in PM_{10} non-attainment areas. Since these towers have fairly low emission points (10 to 15 m above ground), over-predicting PM_{10} emission rates can easily result in exceeding federal Prevention of Significant Deterioration (PSD) significance levels at a project's fenceline. This paper presents a method for computing realistic PM_{10} emissions from cooling towers with medium to high TDS levels.

INTRODUCTION

Cooling towers are heat exchangers that are used to dissipate large heat loads to the atmosphere. Wet, or evaporative, cooling towers rely on the latent heat of water evaporation to exchange heat between the process and the air passing through the cooling tower. The cooling water may be an integral part of the process or may provide cooling via heat exchangers, for example, steam condensers. Wet cooling towers provide direct contact between the cooling water and air passing through the tower, and as part of normal operation, a very small amount of the circulating water may be entrained in the air stream and be carried out of the tower as "drift" droplets. Because the drift droplets contain the same chemical impurities as the water circulating through the tower, the particulate matter constituent of the drift droplets may be classified as an emission. The magnitude of the drift loss is influenced by the number and size of droplets produced within the tower, which are determined by the tower fill design, tower design, the air and water patterns, and design of the drift eliminators.

AP-42 METHOD OF CALCULATING DRIFT PARTICULATE

EPA's AP-42[1] provides available particulate emission factors for wet cooling towers, however, these values only have an emission factor rating of "E" (the lowest level of confidence acceptable). They are also rather high, compared to typical present-day manufacturers' guaranteed drift rates, which are on the order of 0.0006%. (Drift emissions are typically

expressed as a percentage of the cooling tower water circulation rate). AP-42 states that "a *conservatively high* PM_{10} emission factor can be obtained by (a) multiplying the total liquid drift factor by the TDS fraction in the circulating water, and (b) assuming that once the water evaporates, all remaining solid particles are within the PM_{10} range." (Italics per EPA).

If TDS data for the cooling tower are not available, a source-specific TDS content can be estimated by obtaining the TDS for the make-up water and multiplying it by the cooling tower cycles of concentration. [The cycles of concentration is the ratio of a measured parameter for the cooling tower water (such as conductivity, calcium, chlorides, or phosphate) to that parameter for the make-up water.]

Using AP-42 guidance, the total particulate emissions (PM) (after the pure water has evaporated) can be expressed as:

PM = Water Circulation Rate x Drift Rate x TDS [1]

For example, for a typical power plant wet cooling tower with a water circulation rate of 146,000 gallons per minute (gpm), drift rate of 0.0006%, and TDS of 7,700 parts per million by weight (ppmw):

PM = 146,000 gpm x 8.34 lb water/gal x 0.0006/100 x 7,700 lb solids/10^6 lb water x 60 min/hr = 3.38 lb/hr

On an annual basis, this is equivalent to almost 15 tons per year (tpy). Even for a state-of-the-art drift eliminator system, this is not a small number, especially if assumed to all be equal to PM_{10}, a regulated criteria pollutant. However, as the following analysis demonstrates, only a very small fraction is actually PM_{10}.

COMPUTING THE PM_{10} FRACTION

Based on a representative drift droplet size distribution and TDS in the water, the amount of solid mass in each drop size can be calculated. That is, for a given initial droplet size, assuming that the mass of dissolved solids condenses to a spherical particle after all the water evaporates, and assuming the density of the TDS is equivalent to a representative salt (e.g., sodium chloride), the diameter of the final solid particle can be calculated. Thus, using the drift droplet size distribution, the percentage of drift mass containing particles small enough to produce PM_{10} can be calculated. This method is conservative as the final particle is assumed to be perfectly spherical; hence as small a particle as can exist.

The droplet size distribution of the drift emitted from the tower is critical to performing the analysis. Brentwood Industries, a drift eliminator manufacturer, was contacted and agreed to provide drift eliminator test data from a test conducted by Environmental Systems Corporation (ESC) at the Electric Power Research Institute (EPRI) test facility in Houston, Texas in 1988 (Aull[2], 1999). The data consist of water droplet size distributions for a drift eliminator that achieved a tested drift rate of 0.0003 percent. As we are using a 0.0006 percent drift rate, it is reasonable to expect that the 0.0003 percent drift rate would produce smaller droplets, therefore,

this size distribution data can be assumed to be conservative for predicting the fraction of PM_{10} in the total cooling tower PM emissions.

In calculating PM_{10} emissions the following assumptions were made:

- Each water droplet was assumed to evaporate shortly after being emitted into ambient air, into a single, solid, spherical particle.
- Drift water droplets have a density (ρ_w) of water; 1.0 g/cm^3 or $1.0 * 10^{-6}$ $\mu g / \mu m^3$.
- The solid particles were assumed to have the same density (ρ_{TDS}) as sodium chloride, (i.e., 2.2 g/cm^3).

Using the formula for the volume of a sphere, $V = 4\pi r^3 / 3$, and the density of pure water, $\rho_w = 1.0$ g/cm^3, the following equations can be used to derive the solid particulate diameter, D_p, as a function of the TDS, the density of the solids, and the initial drift droplet diameter, D_d :

Volume of drift droplet = $(4/3)\pi(D_d/2)^3$ [2]

Mass of solids in drift droplet = $(TDS)(\rho_w)$(Volume of drift droplet) [3]

substituting,

Mass of solids in drift = $(TDS)(\rho_w)(4/3)\pi(D_d/2)^3$ [4]

Assuming the solids remain and coalesce after the water evaporates, the mass of solids can also be expressed as:

Mass of solids = (ρ_{TDS}) (solid particle volume) = $(\rho_{TDS})(4/3)\pi(D_p/2)^3$ [5]

Equations [4] and [5] are equivalent:

$$(\rho_{TDS})(4/3)\pi(D_p/2)^3 = (TDS)(\rho_w)(4/3)\pi(D_d/2)^3 \quad [6]$$

Solving for D_p:

$$D_p = D_d\,[(TDS)(\rho_w / \rho_{TDS})]^{1/3} \quad [7]$$

Where,

TDS is in units of ppmw
D_p = diameter of solid particle, micrometers (μm)
D_d = diameter of drift droplet, μm

Using formulas [2] – [7] and the particle size distribution test data, Table 1 can be constructed for drift from a wet cooling tower having the same characteristics as our example; 7,700 ppmw TDS and a 0.0006% drift rate. The first and last columns of this table are the particle size distribution derived from test results provided by Brentwood Industries. Using straight-line interpolation for a solid particle size 10 μm in diameter, we conclude that approximately 14.9 percent of the mass emissions are equal to or smaller than PM_{10}. The balance of the solid

particulate are particulate greater than 10 μm. Hence, PM_{10} emissions from this tower would be equal to PM emissions x 0.149, or 3.38 lb/hr x 0.149 = 0.50 lb/hr. The process is repeated in Table 2, with all parameters equal except that the TDS is 11,000 ppmw. The result is that approximately 5.11 percent are smaller at 11,000 ppm. Thus, while total PM emissions are larger by virtue of a higher TDS, overall PM_{10} emissions are actually lower, because more of the solid particles are larger than 10 μm.

Table 1. Resultant Solid Particulate Size Distribution (TDS = 7700 ppmw)

EPRI Droplet Diameter (μm)	Droplet Volume (μm^3) [2][1]	Droplet Mass (μg) [3]	Particle Mass (Solids) (μg) [4]	Solid Particle Volume (μm^3)	Solid Particle Diameter (μm) [7]	EPRI % Mass Smaller
10	524	5.24E-04	4.03E-06	1.83	1.518	0.000
20	4189	4.19E-03	3.23E-05	14.66	3.037	0.196
30	14137	1.41E-02	1.09E-04	49.48	4.555	0.226
40	33510	3.35E-02	2.58E-04	117.29	6.073	0.514
50	65450	6.54E-02	5.04E-04	229.07	7.591	1.816
60	113097	1.13E-01	8.71E-04	395.84	9.110	5.702
70	179594	1.80E-01	1.38E-03	628.58	10.628	21.348
90	381704	3.82E-01	2.94E-03	1335.96	13.665	49.812
110	696910	6.97E-01	5.37E-03	2439.18	16.701	70.509
130	1150347	1.15E+00	8.86E-03	4026.21	19.738	82.023
150	1767146	1.77E+00	1.36E-02	6185.01	22.774	88.012
180	3053628	3.05E+00	2.35E-02	10687.70	27.329	91.032
210	4849048	4.85E+00	3.73E-02	16971.67	31.884	92.468
240	7238229	7.24E+00	5.57E-02	25333.80	36.439	94.091
270	10305995	1.03E+01	7.94E-02	36070.98	40.994	94.689
300	14137167	1.41E+01	1.09E-01	49480.08	45.549	96.288
350	22449298	2.24E+01	1.73E-01	78572.54	53.140	97.011
400	33510322	3.35E+01	2.58E-01	117286.13	60.732	98.340
450	47712938	4.77E+01	3.67E-01	166995.28	68.323	99.071
500	65449847	6.54E+01	5.04E-01	229074.46	75.915	99.071
600	113097336	1.13E+02	8.71E-01	395840.67	91.098	100.000

[1] Bracketed numbers refer to equation number in text.

The percentage of PM_{10}/PM was calculated for cooling tower TDS values from 1000 to 12000 ppmw and the results are plotted in Figure 1. Using these data, Figure 2 presents predicted PM_{10} emission rates for the 146,000 gpm example tower. As shown in this figure, the PM emission rate increases in a straight line as TDS increases, however, the PM_{10} emission rate increases to a maximum at around a TDS of 4000 ppmw, and then begins to decline. The reason is that at higher TDS, the drift droplets contain more solids and therefore, upon evaporation, result in larger solid particles for any given initial droplet size.

CONCLUSION

The emission factors and methodology given in EPA's AP-42[1] Chapter 13.4 *Wet Cooling Towers*, do not account for the droplet size distribution of the drift exiting the tower. This is a critical factor, as more than 85% of the mass of particulate in the drift from most cooling towers will result in solid particles larger than PM_{10} once the water has evaporated. Particles larger than PM_{10} are no longer a regulated air pollutant, because their impact on human health has been shown to be insignificant. Using reasonable, conservative assumptions and a realistic drift

droplet size distribution, a method is now available for calculating realistic PM_{10} emission rates from wet mechanical draft cooling towers equipped with modern, high-efficiency drift eliminators and operating at medium to high levels of TDS in the circulating water.

Table 2. Resultant Solid Particulate Size Distribution (TDS = 11000 ppmw)

EPRI Droplet Diameter (μm)	Droplet Volume (μm^3) [2]'	Droplet Mass (μg) [3]	Particle Mass (Solids) (μg) [4]	Solid Particle Volume (μm^3)	Solid Particle Diameter (μm) [7]	EPRI % Mass Smaller
10	524	5.24E-04	5.76E-06	2.62	1.710	0.000
20	4189	4.19E-03	4.61E-05	20.94	3.420	0.196
30	14137	1.41E-02	1.56E-04	70.69	5.130	0.226
40	33510	3.35E-02	3.69E-04	167.55	6.840	0.514
50	65450	6.54E-02	7.20E-04	327.25	8.550	1.816
60	113097	1.13E-01	1.24E-03	565.49	10.260	5.702
70	179594	1.80E-01	1.98E-03	897.97	11.970	21.348
90	381704	3.82E-01	4.20E-03	1908.52	15.390	49.812
110	696910	6.97E-01	7.67E-03	3484.55	18.810	70.509
130	1150347	1.15E+00	1.27E-02	5751.73	22.230	82.023
150	1767146	1.77E+00	1.94E-02	8835.73	25.650	88.012
180	3053628	3.05E+00	3.36E-02	15268.14	30.780	91.032
210	4849048	4.85E+00	5.33E-02	24245.24	35.909	92.468
240	7238229	7.24E+00	7.96E-02	36191.15	41.039	94.091
270	10305995	1.03E+01	1.13E-01	51529.97	46.169	94.689
300	14137167	1.41E+01	1.56E-01	70685.83	51.299	96.288
350	22449298	2.24E+01	2.47E-01	112246.49	59.849	97.011
400	33510322	3.35E+01	3.69E-01	167551.61	68.399	98.340
450	47712938	4.77E+01	5.25E-01	238564.69	76.949	99.071
500	65449847	6.54E+01	7.20E-01	327249.23	85.499	99.071
600	113097336	1.13E+02	1.24E+00	565486.68	102.599	100.000

Figure 1: Percentage of Drift PM that Evaporates to PM10

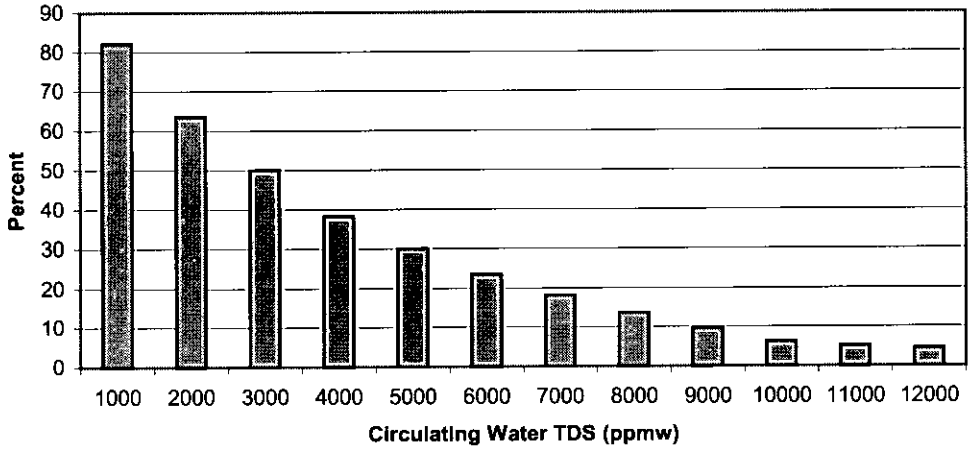
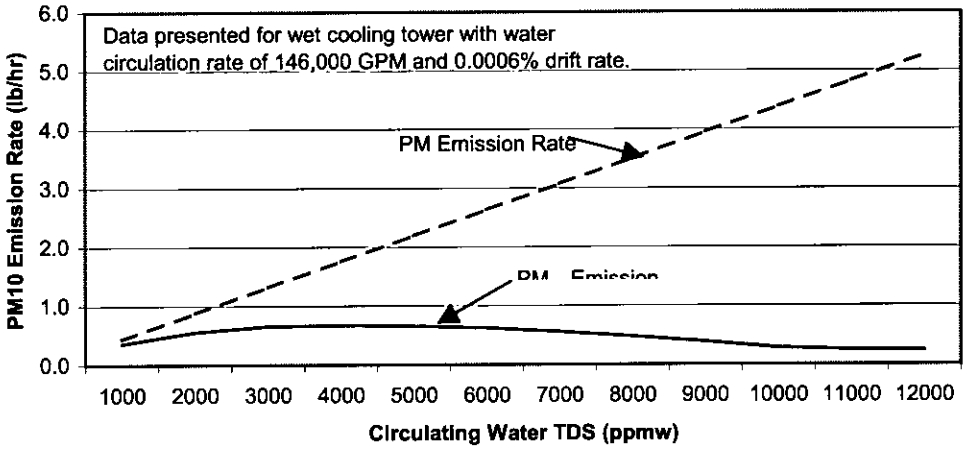


Figure 2: PM_{10} Emission Rate vs. TDS



REFERENCES

1. EPA, 1995. Compilation of Air pollutant Emission Factors, AP-42 Fifth edition, Volume I: *Stationary Point and Area Sources*, Chapter 13.4 Wet Cooling Towers, http://www.epa.gov/ttn/chief/ap42/, United States Environmental Protection Agency, Office of Air Quality Planning and Standards, January.

2. Aull, 1999. Memorandum from R. Aull, Brentwood Industries to J. Reisman, Greystone, December 7, 1999.

KEY WORDS

Drift
Drift eliminators
Cooling tower
PM_{10} emissions
TDS

Appendix B

Florida Permit Application Forms

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: **PROGRESS ENERGY FLORIDA, INC.**	
2. Site Name: **LEVY NUCLEAR PLANT**	
3. Facility Identification Number:	
4. Facility Location... **APPROX. 4 MILES NE OF INGLIS, EAST OF HIGHWAY 19** Street Address or Other Locator: City: **INGLIS** County: **LEVY** Zip Code: **UNKNOWN**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☐ Yes ☒ No

Application Contact

1. Application Contact Name: **JOHN J. (JAMIE) HUNTER, LEAD ENVIRONMENTAL SPECIALIST**
2. Application Contact Mailing Address... Organization/Firm: **PROGRESS ENERGY FLORIDA** Street Address: **299 FIRST AVENUE NORTH, PEF-903** City: **ST. PETERSBURG** State: **FL** Zip Code: **33701**
3. Application Contact Telephone Numbers... Telephone: **(727) 820-5764** ext. Fax: **(727) 820-5229**
4. Application Contact E-mail Address: **JOHN.HUNTER@PGNMAIL.COM**

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 6/2/08	3. PSD Number (if applicable): 403
2. Project Number(s): 0750088-001-AC	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

- [x] Air construction permit.
- [ ] Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- [ ] Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- [ ] Initial Title V air operation permit.
- [ ] Title V air operation permit revision.
- [ ] Title V air operation permit renewal.
- [ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- [ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- [ ] Air construction permit and Title V permit revision, incorporating the proposed project.
- [ ] Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- [ ] I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

Progress Energy is proposing to construct and operate a 2200 MW nuclear powered electric generating facility, referred to as the Levy Nuclear Plant (LNP).

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
001	COOLING TOWER FOR GENERATING UNIT LNP 1	AC1A	
002	COOLING TOWER FOR GENERATING UNIT LNP 2	AC1A	
003	EMERGENCY GENERATOR FOR UNIT LNP 1	AC1F	
004	EMERGENCY GENERATOR FOR UNIT LNP 1	AC1F	
005	EMERGENCY GENERATOR FOR UNIT LNP 2	AC1F	
006	EMERGENCY GENERATOR FOR UNIT LNP 2	AC1F	
007	ANCILLARY GENERATOR FOR UNIT LNP 1	AC1F	
008	ANCILLARY GENERATOR FOR UNIT LNP 1	AC1F	
009	ANCILLARY GENERATOR FOR UNIT LNP 2	AC1F	
010	ANCILLARY GENERATOR FOR UNIT LNP 2	AC1F	
011	FIRE PUMP FOR UNIT LNP 1	AC1F	
012	FIRE PUMP FOR UNIT LNP 2	AC1F	

Application Processing Fee

Check one: [x] Attached - Amount: $ 7,500 [ ] Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
DANIEL RODERICK, VICE PRESIDENT, NUCLEAR PROJECTS/CONSTRUCTION

2. Owner/Authorized Representative Mailing Address...
Organization/Firm: **PROGRESS ENERGY FLORIDA**
Street Address: **P.O. BOX 14042, SA2C**
City: **ST. PETERSBURG** State: **FL** Zip Code: **33733**

3. Owner/Authorized Representative Telephone Numbers...
Telephone: **(352) 563-4800** ext. Fax: **(727) 409-5829**

4. Owner/Authorized Representative E-mail Address:
DANIEL.RODERICK@PGNMAIL.COM

5. Owner/Authorized Representative Statement:

I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.

Signature

5/30/08
Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **Albert J. Ugelow**
   Registration Number: **31840**
2. Professional Engineer Mailing Address...
   Organization/Firm: **CH2M HILL**
   Street Address: **3011 SW Williston Road**
   City: **Gainesville** State: **FL** Zip Code: **32608-3928**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 335 - 5877** ext.**52388** Fax: **(352) 692 - 4016**
4. Professional Engineer E-mail Address: **Albert.Ugelow@ch2m.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature 5/16/08 Date 5/16/08

(seal)

* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates Zone **17** East (km) **342.236** North (km) **3217.224**		2. Facility Latitude/Longitude Latitude (N) Longitude (W)	
3. Governmental Facility Code: **0**	4. Facility Status Code: **C**	5. Facility Major Group SIC Code: **49**	6. Facility SIC(s):
7. Facility Comment : **PLANT COORDINATES ARE FOR A LOCATION MIDWAY BETWEEN REACTORS LNP 1 AND LNP 2 (REFER TO PLAN VIEW IN PSD REPORT).**			

Facility Contact

1. Facility Contact Name: **JAMIE HUNTER, LEAD ENVIRONMENTAL SPECIALIST**
2. Facility Contact Mailing Address... Organization/Firm: **PROGRESS ENERGY FLORIDA, INC.** Street Address: **299 FIRST AVENUE NORTH, PEF 903** City: **ST. PETERSBURG** State: **FL** Zip Code: **33701**
3. Facility Contact Telephone Numbers: Telephone: **(727) 820-5764** ext. Fax: **(727) 409-5829**
4. Facility Contact E-mail Address: **JOHN.HUNTER@PGNMAIL.COM**

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official E-mail Address:

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☐ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☐ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment: **EMERGENCY GENERATORS – NSPS SUBPART IIII (STATIONARY DIESEL POWERED ENGINES)**	

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	**A**	**N**
PM10	**B**	**N**
NOX	**B**	**N**
SO2	**B**	**N**
CO	**B**	**N**
VOC	**B**	**N**

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: **PSD REPORT** [ ] Previously Submitted, Date:_____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID:**PSD REPORT** [ ] Previously Submitted, Date:_____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID:**PSD REPORT** [ ] Previously Submitted, Date:_____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   [X] Attached, Document ID:**PSD REPORT** [ ] Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL):
   [X] Attached, Document ID:**PSD REPORT**
3. Rule Applicability Analysis:
   [X] Attached, Document ID:**PSD REPORT**
4. List of Exempt Emissions Units:
   [ ] Attached, Document ID: _____ [X] Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification:
   [ ] Attached, Document ID:_____ [X] Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.):
   [ ] Attached, Document ID:_____ [X] Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.):
   [ ] Attached, Document ID:_____ [X] Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.):
   [ ] Attached, Document ID:_____ [X] Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.):
   [X] Attached, Document ID: **PSD REPORT** [ ] Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    [ ] Attached, Document ID:_____ [X] Not Applicable

COOLING TOWERS

EMISSIONS UNIT INFORMATION

Section [1] of [4]
Cooling Towers For Units LNP 1 and LNP 2

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **MECHANICAL DRAFT COOLING TOWERS, EMISSION UNIT 001 FOR GENERATING UNIT LNP1. NOTE THAT EMISSION UNIT 002 (FOR UNIT LNP 2) IS IDENTICAL TO 001**

3. Emissions Unit Identification Number:

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
C	**2011**	**2016**	**49**

8. Federal Program Applicability: (Check all that apply)

☐ Acid Rain Unit
☐ CAIR Unit
☐ Hg Budget Unit

9. Package Unit:
Manufacturer: **UNKNOWN** Model Number: **UNKNOWN**

10. Generator Nameplate Rating: **N/A**

11. Emissions Unit Comment:

EMISSIONS UNIT INFORMATION
Section [1] of [4]
Cooling Towers For Units LNP 1 and LNP 2
Emissions Unit Control Equipment/Method: Control **1** of **1**

1. Control Equipment/Method Description: **HIGH EFFICIENCY MIST/DRIFT ELIMINATORS**
2. Control Device or Method Code: **014**

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION
Section [1] of [4]
Cooling Towers For Units LNP 1 and LNP 2

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **600,000 GPM CIRCULATING WATER RATE**	
2. Maximum Production Rate: **N/A**	
3. Maximum Heat Input Rate: million Btu/hr **N/A**	
4. Maximum Incineration Rate: pounds/hr **N/A** tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment: **Circulating water rate is per tower (2 total). PM Emission rate from the cooling towers is directly related to the circulating water flow rate, mist eliminator performance rate, and solids content of circulating water.**	

EMISSIONS UNIT INFORMATION
Section [1] of [4]
Cooling Towers For Units LNP 1 and LNP 2

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **001, 002**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **Each cooling tower is arranged in an array of 2x22 cells (refer to plan view of facility in PSD Report). Cooling towers 001 and 002 are identical units.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **001 - COOLING TOWER FOR GENERATING UNIT LNP 1** **002 – COOLING TOWER FOR GENERATING UNIT LNP 2**		
5. Discharge Type Code: **V**	6. Stack Height: **55** Feet	7. Exit Diameter: **33** feet
8. Exit Temperature: **~115** °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: **100%**
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **STACK HEIGHT AND DIAMETER IS PER CELL, HEIGHT IS TO TOP OF EACH COOLING TOWER CELL FAN ENCLOSURE (44 TOTAL CELLS). LOCATION OF COOLING TOWERS IS AS FOLLOWS (UTM COORDINATES ARE FOR EAST END OF EACH COOLING TOWER):** **001: 3216.967 N, 342.030 W (KM)** **002: 3217.493 N, 341.976 W (KM)**		

EMISSIONS UNIT INFORMATION
Section [1] of [4]
Cooling Towers For Units LNP 1 and LNP 2

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**014**	**N/A**	**WP**
PM10	**014**	**N/A**	**WP**

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [1] of [4] Page **[1] of [2]**
Cooling Towers For Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **77.13** lb/hour* **253.37** tons/year*	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0005% DRIFT RATE** Reference: **MANUFACTURER SPECIFICATION**	7. Emissions Method Code: **5**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **SEE PSD REPORT.**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS ARE FOR EMISSION UNIT 001. UNIT 002 IS IDENTICAL.** * 77.13 lb/hr emission rate is based on a short-term excursion peak. 253.37 tons/yr is based on the average annual emission rate	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [1] of [4] Page **[1] of [2]**
Cooling Towers For Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0005% OF COOLING WATER FOW RATE**	4. Equivalent Allowable Emissions: **77.13** lb/hour * **253.37** tons/year*
5. Method of Compliance: **DESIGN BASIS**	
6. Allowable Emissions Comment (Description of Operating Method): **EMISSION RATE BASED ON 0.0005% MAXIMUM DRIFT LOSS TO ATMOSPHERE** * 77.13 lb/hr emission rate is based on a short-term excursion peak. 253.37 tons/yr is based on the average annual emission rate	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [1] of [4] Page **[2] of [2]**
Cooling Towers For Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.85** lb/hour* **2.79** tons/year*	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **1.1% OF PM EMISSION RATE** 7. Reference: **SEE PSD REPORT**	7. Emissions Method Code: **5**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **See PSD Report**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS ARE FOR EMISSION UNIT 001. UNIT 002 IS IDENTICAL.** * 0.85 lb/hr emission rate is based on a short-term excursion peak. 2.79 tons/yr is based on the average annual emission rate	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [1] of [4] Page **[2] of [2]**
Cooling Towers For Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.1% OF PM EMISSION RATE**	4. Equivalent Allowable Emissions: **0.85** lb/hour* **2.79** tons/year*
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): **EMISSION RATE BASED ON 1.1% OF PM EMISSION RATE (SEE PSD REPORT)** * 0.85 lb/hr emission rate is based on a short-term excursion peak. 2.79 tons/yr is based on the average annual emission rate	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION
Section [1] of [4]
Cooling Towers For Units LNP 1 and LNP 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: **PSD REPORT** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: **N/A** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **PSD REPORT** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☐ Attached, Document ID: _____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [1] of [4]
Cooling Towers For Units LNP 1 and LNP 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☒ Attached, Document ID: **PSD REPORT** ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

EMERGENCY GENERATORS

EMISSIONS UNIT INFORMATION

Section [2] of [4]
Emergency Generators for Units LNP 1 and LNP 2

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **DIESEL POWERED EMERGENCY GENERATORS. FOUR IDENTICAL UNITS, 4,000 Kw EACH.**

3. Emissions Unit Identification Number: **003, 004, 005, 006**

4. Emissions Unit Status Code: **C**	5. Commence Construction Date: **2011**	6. Initial Startup Date: **2016**	7. Emissions Unit Major Group SIC Code: **49**

8. Federal Program Applicability: (Check all that apply)

☐ Acid Rain Unit

☐ CAIR Unit

☐ Hg Budget Unit

9. Package Unit:
Manufacturer: **UNKNOWN** Model Number: **UNKNOWN**

10. Generator Nameplate Rating: **4 MW (EACH UNIT)**

11. Emissions Unit Comment: **FOUR IDENTICAL 4,000 kW EMERGENCY GENERATORS.**

EMISSIONS UNIT INFORMATION
Section [2] of [4]
Emergency Generators for Units LNP 1 and LNP 2

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description: **GENERATORS WILL BE SPECIFIED TO MEET CURRENT APPLICABLE EPA NON-ROAD CRITERA DESIGN (NSPS SUBPART IIII) AT TIME OF PROCUREMENT, GOOD COMBUSTION PRACTICES, DIESEL FUEL**
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION
Section [2] of [4]
Emergency Generators for Units LNP 1 and LNP 2

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate: **4,000 kW Electric Generating Capacity**	
3. Maximum Heat Input Rate: **37.6** million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	days/week **48** hours/year
6. Operating Capacity/Schedule Comment: **MAXIMUM 4 HOURS PER MONTH OPERATION FOR RELIABILITY TESTING AND MAINTENANCE AND AS NEEDED FOR EMERGENCIES**	

EMISSIONS UNIT INFORMATION
Section [2] of [4]
Emergency Generators for Units LNP 1 and LNP 2

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **003, 004, 005, 006** **(SEE PSD REPORT**	2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **GENERATORS WILL BE LOCATED IN PROXIMITY TO NUCLEAR GENERATING UNITS LNP 1 AND LNP 2. SEE PSD REPORT FOR PLAN VIEW**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	

5. Discharge Type Code: **V**	6. Stack Height: **140** feet	7. Exit Diameter: **1.0** feet
8. Exit Temperature: **750** °F	9. Actual Volumetric Flow Rate: **30,000** acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates... Zone: **17** East (km): **SEE BELOW** North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)

15. Emission Point Comment: **APPROXIMATE GENERATOR LOCATIONS ARE AS FOLLOWS:**

003: 3217.368 N, 342.188 W (km)
004: 3217.368 N, 342.188 W (km)
005: 3217.078 N, 342.285 W (km)
006: 3217.078 N, 342.285 W (km)

FOUR IDENTICAL GENERATORS, EACH HAS ITS OWN DEDICATED EXHAUST STACK

EMISSIONS UNIT INFORMATION
Section [2] of [4]
Emergency Generators for Units LNP 1 and LNP 2

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **1**

1. Segment Description (Process/Fuel Type): **DIESEL FUEL COMBUSTION**		
2. Source Classification Code (SCC):	3. SCC Units: **1000 GALLONS**	
4. Maximum Hourly Rate: **0.276**	5. Maximum Annual Rate: **13.24**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **MAXIMUM HOURLY AND ANNUAL RATES ARE PER GENERATOR. ANNUAL RATE IS BASED ON 48 HOURS PER YEAR OPERATION FOR RELIABILITY TESTING AND MAINTENANCE AND AS NEEDED FOR EMERGENCIES.**		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

EMISSIONS UNIT INFORMATION
Section [2] of [4]
Emergency Generators for Units LNP 1 and LNP 2

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM10			**EL**
NOX			**EL**
SO2	**FUEL QUALITY**		**NS**
CO			**EL**
VOC			**EL**

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [2] of [4] Page [1] of [5]
Emergency Generators for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **11.3** lb/hour **0.3** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0022 lb/hp-hr** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**

11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS IN EFFECT AT TIME OF PROCUREMENT OF GENERATORS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [2] of [4] Page [1] of [1]
Emergency Generators for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0022 LB/HP-HR**	4. Equivalent Allowable Emissions: **45** lb/hour **1.1** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [2] of [4] Page [2] of [5]
Emergency Generators for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **NOX**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **160.7** lb/hour **3.86** tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.031 LB/HP-HR** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: [ ] 5 years [ ] 10 years

10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**

11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS IN EFFECT AT TIME OF PROCUREMENT OF GENERATORS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [2] of [4] Page [2] of [5]
Emergency Generators for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.031 LB/HP-HR**	4. Equivalent Allowable Emissions: **160.7** lb/hour **3.86** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [2] of [4] Page **[3] of [5]**
Emergency Generators for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.575** lb/hour **0.014** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.05% SULFUR IN FUEL** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS IN EFFECT AT TIME OF PROCUREMENT OF GENERATORS.**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [2] of [4] Page [3] of [5]
Emergency Generators for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05% SULFUR IN FUEL**	4. Equivalent Allowable Emissions: **0.575** lb/hour **0.014** tons/year
5. Method of Compliance: **VENDOR CERTIFICATION OF FUEL QUALITY**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF SULFUR CONTENT OF FUEL**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [2] of [4] Page [4] of [5]
Emergency Generators for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **34.6** lb/hour **0.83** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0067 lb/hp-hr** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS IN EFFECT AT TIME OF PROCUREMENT OF GENERATORS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [2] of [4] Page [4] of [5]
Emergency Generators for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0067 LB/HP-HR**	4. Equivalent Allowable Emissions: **34.6** lb/hour **0.83** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [2] of [4] Page [5] of [5]
Emergency Generators for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **13.1** lb/hour **0.31** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0025 lb/hp-hr** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS IN EFFECT AT TIME OF PROCUREMENT OF GENERATORS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [2] of [4] Page [5] of [5]
Emergency Generators for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0025 LB/HP-HR**	4. Equivalent Allowable Emissions: **13.1** lb/hour **0.31** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION
Section [2] of [4]
Emergency Generators for Units LNP 1 and LNP 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: **PSD REPORT** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **PSD REPORT** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID:**PSD REPORT** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☐ Attached, Document ID: _____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [2] of [4]
Emergency Generators for Units LNP 1 and LNP 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)):
   [x] Attached, Document ID: **PSD REPORT** [ ] Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.):
   [ ] Attached, Document ID: _____ [x] Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only)
   [ ] Attached, Document ID: _____ [x] Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements:
   [ ] Attached, Document ID: _____
2. Compliance Assurance Monitoring:
   [ ] Attached, Document ID: _____ [ ] Not Applicable
3. Alternative Methods of Operation:
   [ ] Attached, Document ID: _____ [ ] Not Applicable
4. Alternative Modes of Operation (Emissions Trading):
   [ ] Attached, Document ID: _____ [ ] Not Applicable

Additional Requirements Comment

ANCILLARY GENERATORS (4)

EMISSIONS UNIT INFORMATION

Section [3] of [4]

Ancillary Generators for Units LNP 1 and LNP 2

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **DIESEL POWERED ANCILLARY GENERATORS. FOUR IDENTICAL UNITS, 35 kW EACH.**

3. Emissions Unit Identification Number: **007, 008, 009, 010**

4. Emissions Unit Status Code: **C**	5. Commence Construction Date: **2011**	6. Initial Startup Date: **2016**	7. Emissions Unit Major Group SIC Code: **49**

8. Federal Program Applicability: (Check all that apply)

☐ Acid Rain Unit

☐ CAIR Unit

☐ Hg Budget Unit

9. Package Unit:
Manufacturer: **UNKNOWN** Model Number: **UNKNOWN**

10. Generator Nameplate Rating: **35 kW (EACH UNIT)**

11. Emissions Unit Comment: **FOUR IDENTICAL 35 kW ANCILLARY GENERATORS.**

EMISSIONS UNIT INFORMATION
Section [3] of [4]
Ancillary Generators for Units LNP 1 and LNP 2

Emissions Unit Control Equipment/Method: Control **1** of **1**

1. Control Equipment/Method Description: **GENERATORS WILL BE SPECIFIED TO MEET CURRENT APPLICABLE EPA NON-ROAD CRITERA DESIGN (NSPS SUBPART IIII) AT TIME OF PROCUREMENT, GOOD COMBUSTION PRACTICES, DIESEL FUEL**
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION
Section [3] of [4]
Ancillary Generators for Units LNP 1 and LNP 2

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate: **35 kW Electric Generating Capacity**	
3. Maximum Heat Input Rate: **0.9** million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	days/week **48** hours/year
6. Operating Capacity/Schedule Comment: **MAXIMUM 4 HOURS PER MONTH OPERATION FOR RELIABILITY TESTING AND MAINTENANCE AND AS NEEDED FOR EMERGENCIES**	

EMISSIONS UNIT INFORMATION
Section [3] of [4]
Ancillary Generators for Units LNP 1 and LNP 2

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **007, 008, 009, 010** **(SEE PSD REPORT)**	2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **GENERATORS WILL BE LOCATED IN PROXIMITY TO NUCLEAR GENERATING UNITS LNP 1 AND LNP 2. SEE PSD REPORT FOR PLAN VIEW**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	

5. Discharge Type Code: **V**	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates... Zone: **17** East (km): **SEE BELOW** North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)

15. Emission Point Comment: **GENERATOR LOCATIONS ARE AS FOLLOWS:**

007: 3217.368 N, 342.188 W (km)
008: 3217.368 N, 342.188 W (km)
009: 3217.078 N, 342.285 W (km)
010: 3217.078 N, 342.285 W (km)

FOUR IDENTICAL GENERATORS, EACH HAS ITS OWN DEDICATED EXHAUST STACK. STACK PARAMETERS TO BE DETERMINED.

EMISSIONS UNIT INFORMATION
Section [3] of [4]
Ancillary Generators for Units LNP 1 and LNP 2

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **1**

1. Segment Description (Process/Fuel Type): **DIESEL FUEL COMBUSTION**		
2. Source Classification Code (SCC):	3. SCC Units: **1000 GALLONS**	
4. Maximum Hourly Rate: **0.07**	5. Maximum Annual Rate: **3.3**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **0.87**
10. Segment Comment: **MAXIMUM ANNUAL RATE IS PER GENERATOR AND IS BASED ON 48 HOURS PER YEAR OPERATION FOR RELIABILITY TESTING AND MAINTENANCE AND AS NEEDED FOR EMERGENCIES.**		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

EMISSIONS UNIT INFORMATION
Section [3] of [4]
Ancillary Generators for Units LNP 1 and LNP 2

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM10			**EL**
NOX			**EL**
SO2	**FUEL QUALITY**		**NS**
CO			**EL**
VOC			**EL**

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [3] of [4] Page [1] of [5]
Ancillary Generators for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.175** lb/hour **0.004** tons/year	4. Synthetically Limited? [X] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0022 lb/hp-hr** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: [ ] 5 years [ ] 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS IN EFFECT AT TIME OF PROCUREMENT OF GENERATORS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Ancillary Generators for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0022 LB/HP-HR**	4. Equivalent Allowable Emissions: **0.175** lb/hour **0.004** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS, IF APPLICABLE**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Ancillary Generators for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **NOX**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2.5** lb/hour **0.06** tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.031 LB/HP-HR** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: [ ] 5 years [ ] 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS, IF APPLICABLE, IN EFFECT AT TIME OF PROCUREMENT OF GENERATORS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Ancillary Generators for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.031 LB/HP-HR**	4. Equivalent Allowable Emissions: **2.5** lb/hour **0.06** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS (IF APPLICABLE)**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Ancillary Generators for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.008** lb/hour **<0.001** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.05% SULFUR IN FUEL** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS, IF APPLICABLE, IN EFFECT AT TIME OF PROCUREMENT OF GENERATORS.**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Ancillary Generators for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05% SULFUR IN FUEL**	4. Equivalent Allowable Emissions: **0.008** lb/hour **<0.001** tons/year
5. Method of Compliance: **VENDOR CERTIFICATION OF FUEL QUALITY**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF SULFUR CONTENT OF FUEL**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Ancillary Generators for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.54** lb/hour **0.01** tons/year	4. Synthetically Limited? [X] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0067 lb/hp-hr** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: [ ] 5 years [ ] 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS, IF APPLICABLE, IN EFFECT AT TIME OF PROCUREMENT OF GENERATORS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Ancillary Generators for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0067 LB/HP-HR**	4. Equivalent Allowable Emissions: **0.54** lb/hour **0.01** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS, IF APPLICABLE**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Ancillary Generators for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.2** lb/hour **0.01** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0025 lb/hp-hr** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS, IF APPLICABLE, IN EFFECT AT TIME OF PROCUREMENT OF GENERATORS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [3] of [4] Page [5] of [5]
Ancillary Generators for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0022 LB/HP-HR**	4. Equivalent Allowable Emissions: **0.2** lb/hour **0.01** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS, IF APPLICABLE**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION
Section [3] of [4]
Ancillary Generators for Units LNP 1 and LNP 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: **PSD REPORT** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **PSD REPORT** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID:**PSD REPORT** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☐ Attached, Document ID: _____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [3] of [4]
Ancillary Generators for Units LNP 1 and LNP 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)):
   [x] Attached, Document ID: **PSD REPORT** [ ] Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.):
   [ ] Attached, Document ID: _____ [x] Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only)
   [ ] Attached, Document ID: _____ [x] Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements:
   [ ] Attached, Document ID: _____
2. Compliance Assurance Monitoring:
   [ ] Attached, Document ID: _____ [ ] Not Applicable
3. Alternative Methods of Operation:
   [ ] Attached, Document ID: _____ [ ] Not Applicable
4. Alternative Modes of Operation (Emissions Trading):
   [ ] Attached, Document ID: _____ [ ] Not Applicable

Additional Requirements Comment

FIRE PUMPS

EMISSIONS UNIT INFORMATION

Section [4] of [4]
Fire Pumps for Units LNP 1 and LNP 2

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **DIESEL POWERED FIRE PUMPS. TWO IDENTICAL UNITS**

3. Emissions Unit Identification Number: **011, 012**

4. Emissions Unit Status Code: **C**	5. Commence Construction Date: **2011**	6. Initial Startup Date: **2016**	7. Emissions Unit Major Group SIC Code: **49**

8. Federal Program Applicability: (Check all that apply)

☐ Acid Rain Unit

☐ CAIR Unit

☐ Hg Budget Unit

9. Package Unit:
Manufacturer: **UNKNOWN** Model Number: **UNKNOWN**

10. Generator Nameplate Rating: **650 HP, 2000 GPM (EACH UNIT)**

11. Emissions Unit Comment:

EMISSIONS UNIT INFORMATION
Section [4] of [4]
Fire Pumps for Units LNP 1 and LNP 2
Emissions Unit Control Equipment/Method: Control **1** of **1**

1. Control Equipment/Method Description: **PUMPS WILL BE SPECIFIED TO MEET CURRENT APPLICABLE EPA NON-ROAD CRITERA DESIGN (NSPS SUBPART IIII) AT TIME OF PROCUREMENT, GOOD COMBUSTION PRACTICES, DIESEL FUEL**
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION
Section [4] of [4]
Fire Pumps for Units LNP 1 and LNP 2

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate: **650 HP, 2000 GPM**	
3. Maximum Heat Input Rate: **3.5** million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	days/week **48** hours/year
6. Operating Capacity/Schedule Comment: **MAXIMUM 4 HOURS PER MONTH OPERATION FOR RELIABILITY TESTING AND MAINTENANCE AND AS NEEDED FOR EMERGENCIES**	

EMISSIONS UNIT INFORMATION
Section [4] of [4]
Fire Pumps for Units LNP 1 and LNP 2

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **011, 012** **(SEE PSD REPORT)**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **PUMPS WILL BE LOCATED IN PROXIMITY TO NUCLEAR GENERATING UNITS LNP 1 AND LNP 2. SEE PSD REPORT FOR PLAN VIEW**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: **17** East (km): **SEE BELOW** North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **APPROXIMATE FIRE PUMP LOCATIONS ARE AS FOLLOWS:** **011: 3217.368 N, 342.188 W (km)** **012: 3217.078 N, 342.285 W (km)** **TWO IDENTICAL PUMPS, EACH HAS ITS OWN DEDICATED EXHAUST STACK. STACK PARAMETERS TO BE DETERMINED**		

EMISSIONS UNIT INFORMATION
Section [4] of [4]
Fire Pumps for Units LNP 1 and LNP 2

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **1** of **1**

1. Segment Description (Process/Fuel Type): **DIESEL FUEL COMBUSTION**		
2. Source Classification Code (SCC):	3. SCC Units: **1000 GALLONS**	
4. Maximum Hourly Rate: **0.029**	5. Maximum Annual Rate: **1.39**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **MAXIMUM HOURLY AND ANNUAL RATES ARE PER PUMP. ANNUAL RATE IS BASED ON 48 HOURS PER YEAR OPERATION FOR RELIABILITY TESTING AND MAINTENANCE AND AS NEEDED FOR EMERGENCIES.**		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

EMISSIONS UNIT INFORMATION
Section [4] of [4]
Fire Pumps for Units LNP 1 and LNP 2

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM10			**EL**
NOX			**EL**
SO2	**FUEL QUALITY**		**NS**
CO			**EL**
VOC			**EL**

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [4] of [4] Page **[1] of [5]**
Fire Pumps for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **1.4** lb/hour **0.03** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0022 lb/hp-hr** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS IN EFFECT AT TIME OF PROCUREMENT OF PUMPS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
Section [4] of [4] Page **[1] of [1]**
Fire Pumps for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0022 LB/HP-HR**	4. Equivalent Allowable Emissions: **1.4** lb/hour **0.3** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Fire Pumps for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **NOX**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **20.1** lb/hour **0.5** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.031 LB/HP-HR** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER GENERATOR**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS IN EFFECT AT TIME OF PROCUREMENT OF PUMPS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Fire Pumps for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.031 LB/HP-HR**	4. Equivalent Allowable Emissions: **20.1** lb/hour **0.5** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Fire Pumps for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.07** lb/hour **0.002** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.05% SULFUR IN FUEL** Reference:	7. Emissions Method Code: **2**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER PUMP**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS IN EFFECT AT TIME OF PROCUREMENT OF GENERATORS.**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Fire Pumps for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05% SULFUR IN FUEL**	4. Equivalent Allowable Emissions: **0.07** lb/hour **0.002** tons/year
5. Method of Compliance: **VENDOR CERTIFICATION OF FUEL QUALITY**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF SULFUR CONTENT OF FUEL**	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Fire Pumps for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4.3** lb/hour **0.1** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0067 lb/hp-hr** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER PUMP**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS IN EFFECT AT TIME OF PROCUREMENT OF PUMPS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Fire Pumps for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0067 LB/HP-HR**	4. Equivalent Allowable Emissions: **4.3** lb/hour **0.1** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Fire Pumps for Units LNP 1 and LNP 2

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **1.64** lb/hour **0.04** tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0025 lb/hp-hr** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: [ ] 5 years [ ] 10 years
10. Calculation of Emissions: **SEE PSD REPORT. EMISSIONS ARE PER PUMP**	
11. Potential, Fugitive, and Actual Emissions Comment: **EMISSIONS WILL BE LIMITED BY NSPS SUBPART IIII REQUIREMENTS IN EFFECT AT TIME OF PROCUREMENT OF PUMPS. AP-42 EMISSION FACTOR USED AS A CONSERVATIVE ESTIMATE IN LIEU OF MANUFACTURERS SPECIFICATIONS**	

EMISSIONS UNIT INFORMATION **POLLUTANT DETAIL INFORMATION**
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Fire Pumps for Units LNP 1 and LNP 2

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0025 LB/HP-HR**	4. Equivalent Allowable Emissions: **1.64** lb/hour **0.04** tons/year
5. Method of Compliance: **MANUFACTURERS CERTIFICATION OF COMPLIANCE WITH SUBPART IIII STANDARDS**	
6. Allowable Emissions Comment (Description of Operating Method): **ALLOWABLE EMISSIONS CONSERVATIVELY ESTIMATED ON THE BASIS OF AP-42 EMISSION FACTORS**	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION
Section [4] of [4]
Fire Pumps for Units LNP 1 and LNP 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: **PSD REPORT** [ ] Previously Submitted, Date _____

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought).
   [X] Attached, Document ID: **PSD REPORT** [ ] Previously Submitted, Date _____

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID:**PSD REPORT** [ ] Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
   [X] Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
   [X] Not Applicable

6. Compliance Demonstration Reports/Records:
   [ ] Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [X] Not Applicable

7. Other Information Required by Rule or Statute:
   [ ] Attached, Document ID: _____ [X] Not Applicable

EMISSIONS UNIT INFORMATION
Section [4] of [4]
Fire Pumps for Units LNP 1 and LNP 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☒ Attached, Document ID: **PSD REPORT** ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment
