Lakeland Electric
Winston Peaking Station
Facility ID No.: 1050352
Polk County

Title V Air Operation Permit Renewal

FINAL Permit Project No.: 1050352-005-AV

Permitting Authority:
State of Florida
Department of Environmental Protection
Southwest District Office
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Telephone: 813-632-7600
Fax: 813-632-7668

Compliance Authority:
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Florida Department of Environmental Protection

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

Permittee:
Lakeland Electric
501 E. Lemon Street
Lakeland, FL 33801

FINAL Permit No.: 1050352-005-AV
Facility ID No.: 1050352
SIC No.: 4911
Project: Title V Air Operation Permit Renewal

The purpose of this permit is to renew the Title V Air Operation Permit and incorporate the terms and conditions of the construction permit No. 1050352-006-AC to remove the NSPS requirements of 40 CFR 60, Subpart Kb. This existing facility is located at 1200 Airport Road, Lakeland, Polk County; UTM Coordinates: Zone 17, 400.08 km East and 3100.69 km North; and, Latitude: $28^0$01'39.82" North and Longitude: $82^0$00'59.14" West.

This Title V Air Operation Permit Renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:
Appendix I-1, List of Insignificant Emissions Units and/or Activities
Appendix TV-6, Title V Conditions (version dated 06/23/06 with AOR and Renewal updates 11/10/2008)
APPENDIX SS-1, STACK SAMPLING FACILITIES version dated 10/07/96
Appendix CP-1, Compliance Plan dated 03/02/05
Appendix CAM
Appendix 63, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE)
Appendix 63, Subpart A – NESHAP General Provisions
Appendix 63, Subpart ZZZZ – Summary of NESHAP 40 CFR 63, Subpart ZZZZ Applicable Requirements
Appendix 63, Subpart ZZZZ – RICE Inventory at Winston
TABLE 297.310-1, CALIBRATION SCHEDULE version dated 10/07/96

Effective Date: May 12, 2011
Renewal Application Due Date: September 30, 2015
Expiration Date: May 12, 2016

_____
Cindy Zhang-Torres, P.E.
Air Permitting Manager
Southwest District

CZT/qn/pp

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of twenty nominal 2.5-MW GM EMD 20/645/E4B diesel engines, one 350-kW Volvo TAD1232GE emergency diesel engine generator set and one 294,000-gallon No. 2 fuel oil storage tank. Each of the twenty nominal 2.5 MW diesel engines uses selective catalytic reduction, oxidation catalyst, and an air/fuel ratio regulator for its emission reduction control. The engines are fired on No. 2 distillate fuel oil or natural gas with 6% diesel fuel for ignition. Fuel oil will contain a maximum sulfur content of 0.05 percent. These twenty nominal 2.5 MW units are designed for peaking service and are capable of providing a nominal 50 MW (55-MW at peak load) of electrical power. The emergency diesel generator set is categorically exempt from the requirement to obtain an air construction permit with the fuel limitation of 32,000 gallons per year in the unit. However it is not exempt from Title V permitting requirements due to unit specific applicable requirement of complying with the requirements of 40 CFR Part 63, Subpart ZZZZ - National Emission Standards of Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE). The addition of this emergency generator gave the facility the potential to emit (PTE) about 260 tons per year of NO_x per year, which makes the facility a PSD major facility.

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Renewal application received 7/21/2009, this facility is an area source of hazardous air pollutants (HAPs). This facility is classified as a prevention of significant deterioration (PSD) major facility. This facility is subject to the Maximum Achievable Control Technology (MACT) standards of 40 CFR 63, Subpart A – General Provisions and Subpart ZZZZ – National Emission Standards of Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE), as revised in the March 3, 2010 Federal Registers for all twenty diesel engines and one emergency diesel engine. The March 3, 2010 Subpart ZZZZ revisions have an effective date of May 3, 2010, and a compliance date of May 3, 2013 for all existing CI RICE at this area source of HAP. This facility is not subject to Title IV (Acid Rain Program). Each of the twenty diesel engines is subject to CAM (Compliance Assurance Monitoring) standards of 40 CFR 64.

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

E.U. ID No.	Brief Description
001-020	20 GM EMD 20/645/E4B diesel engines and associated electric generators (Existing Stationary CI RICE Diesel Engines > 500 HP each)
021	One 350-kW VOLVO TAD1232GE emergency diesel engine and associated electric generator. (Existing Stationary Emergency CI RICE Diesel Engine > 500 HP)

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:
Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix H-1, Permit History
Statement of Basis

These documents are on file with the permitting authority:
Initial Title V Air Operation Permit issued 03/17/2005
Application for a Title V Air Operation Permit Renewal received 07/21/2009
Additional Information Request dated 09/16/2009
Additional Information Response received 12/15/2009
Additional Information Request dated 01/13/2010
Additional Information Response received 09/13/2010
Additional Information Request dated 10/19/2010
Additional Information Response received 11/04/2010

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV-6, TITLE V CONDITIONS, is a part of this permit.

2. [Not federally enforceable.] General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.]

3. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rules 62-296.320(4)(b)1. & 4., F.A.C.]

4. Prevention of Accidental Releases (Section 112(r) of CAA).
a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 10162
Fairfax, VA 22038
Telephone: (703) 227-7650

and,
b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.
[40 CFR 68]

5. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.
[Rules 62-213.440(1), 62-213.430(6) and 62-4.040(1)(b), F.A.C.]

6. Compliance Plan. Appendix CP-1, Compliance Plan for Natural Gas Compliance Testing, is a part of this permit.
[Rule 62-213.440(2), F.A.C.]

7. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. Nothing was deemed necessary and ordered at this time.
[Rule 62-296.320(1)(a), F.A.C.]

8. Emissions of Unconfined Particulate Matter. Pursuant to Rules 62-296.320(4)(c)1., 3. & 4., F.A.C., reasonable precautions to prevent emissions of unconfined particulate matter at this facility include the following requirements (see Condition 57. of APPENDIX TV-6, TITLE V CONDITIONS):

a. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

b. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.

c. Reasonable precautions include the following:

- Paving and maintenance of roads, parking areas and yards.
- Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
- Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
- Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne.
- Landscaping or planting of vegetation.
- Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
- Confining abrasive blasting where possible.
- Enclosure or covering of conveyor systems.

d. In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.
[Rule 62-296.320(4)(c)2., F.A.C.; and, 1050352-001-AC]

{Permitting Note: This condition implements the requirements of Rules 62-296.320(4)(c)1., 3., & 4., F.A.C. (see Condition 57. of APPENDIX TV-6, TITLE V CONDITIONS.}

9. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.
[Rule 62-213.440, F.A.C.]

10. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.
[Rules 62-213.440(3) and 62-213.900, F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51. of APPENDIX TV-6, TITLE V CONDITIONS)}

11. Annual Operating Report. The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. On or before April 1 of each year, submit to the Compliance Authority, an Annual Operating Report [DEP Form 62-210.900(5)], for the preceding calendar year. The report may be submitted electronically in accordance with the instructions received with the AOR package sent by the Department, or a hard copy may be submitted.
[Rule 62-210.370(2), F.A.C.]

12. The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Southwest District office.

Department of Environmental Protection
Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-632-7600; Fax: 813-632-7668

13. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air and EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303-8960
Telephone: 404/562-9155; Fax: 404/562-9163

14. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.
[Rule 62-213.420(4), F.A.C.]

Section III. Emissions Unit(s) and Conditions.

Subsection A. This section addresses the following emissions unit(s).

E.U. ID No.	Brief Description
001-020	20 GM EMD 20/645/E4B diesel engines and associated electric generators (Existing Stationary CI RICE Diesel Engines > 500 HP each)

Twenty GM EMD 20/645/E4B diesel engines and associated electric generators. Each Power Module consists of one General Motors (GM) Electro Motive Division (EMD) 20-cylinder Model 645 E4B, 2-cycle turbocharged internal combustion (IC) engine and one Baylor-Stallion Model G8558RNV electric generator. The GM EMD IC engine has a power rating of 3,600 brake horsepower (bhp) at 100 percent load. The Baylor-Stallion generator has a power output rating of 2,500 kilowatt (continuous rating) and 2,750 kilowatts (kW) under peak load conditions. The 20 generators are designed to produce a nominal 50 MW (55 MW at peak load) of electric power. The IC engines will be fired with low-sulfur (maximum of 0.05 weight percent sulfur) diesel fuel oil and natural gas (with 6 percent diesel fuel for ignition) and operate using selective catalytic reduction (SCR), oxidation catalyst, and an air/fuel ratio regulator for the control of nitrogen oxide (NO_X) emissions. Compliance Assurance Monitoring (CAM) applies to each of these engines and detailed in attached Appendix CAM.

{Permitting note(s): The facility is an existing Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C. The facility used to be a synthetic PSD-minor facility with the NO_x emissions from Emission Unit Nos. 001-020 limited to 249.4 tpy. The facility added an emergency diesel generator that was categorically exempt from the requirements to obtain an air construction permit by limiting the fuel usage to 32,000 gallons per year of diesel (roughly equivalent to 10 tpy of NO_x emission) in the unit. The addition of this emergency diesel generator made the facility a PSD major facility with the potential NO_x emissions of 259.4 tpy. These emissions units are not regulated under Acid Rain, Phase II. Each 2.5 MW unit exhausts through a single stack. Stack height = 34 feet; exit diameter = 2.3 feet; exit temperature = 740^{0}F (natural gas), 635^{0}F (fuel oil); actual volumetric flow rate = 21,350 acfm.}

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The heat input to each internal combustion engine from firing No. 2 fuel oil shall not exceed 25 MMBtu per hour at 100% load or 28 MMBtu per hour at peak load**.** The heat input to each internal combustion engine from firing natural gas shall not exceed 26.35 MMBtu per hour at 100% load.
[Rules 62-4.160(2) & 62-210.200(PTE), F.A.C.; Construction Permits 1050352-001-AC & 1050352-004-AC]

A.2. Methods of Operation - (i.e. Fuels). Only No. 2 fuel oil and natural gas can be fired in the internal combustion engines. The permittee shall demonstrate compliance with the fuel oil sulfur limit by keeping the records specified in this permit.

a. Natural Gas. The heat input from natural gas shall not exceed 26.35 MMBtu/hr. Firing of natural gas requires 6% diesel fuel for ignition.

b. Fuel Oil. The heat input from No. 2 fuel oil shall not exceed 25 MMBtu/hr at full load or 28 MMBtu/hr at peak load. The maximum sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent, by weight.

[Rule 62-213.440(1)(b), F.A.C.; Construction Permits 1050352-001-AC & 1050352-004-AC]

A.3. Hours of Operation: The twenty internal combustion engines shall operate no more than 43,000 engine-hours when firing fuel oil at 100% load, or 17,520 engine-hours at peak load or 89,200 engine-hours when firing natural gas during any consecutive 12-month period. If multiple fuels are used during a 12-month period, the allowable hours for each fuel type shall be prorated so as not to exceed the NO_x emissions limit specified in Specific Condition A.5. The permittee shall install, calibrate, operate and maintain a monitoring system to measure the hours of operation for each fuel on each internal combustion engine. Compliance with the NO_x for the 20 engines shall be demonstrated using the equation contained in Specific Condition **A.27.**
[Rules 62-4.160(2) & 62-210.200(PTE), F.A.C.; and, 1050352-001-AC & 1050352-004-AC]

A.4. Emissions Unit Operating Rate Limitation After Testing. See Specific Condition **A.18.**
[Rule 62-297.310(2), F.A.C.]

Emission Limitations and Standards

{Permitting Note: Unless otherwise specified, the averaging time(s) for Specific Condition(s) A.5.-A.7. are based on the specified averaging time of the applicable test method.}

A.5. Nitrogen Oxides (NO_x): NO_X emissions from each internal combustion engine shall not exceed 13.9 lb/hr while in peak load operation firing distillate oil, or 11.6 lb/hr while in base load operation firing distillate oil, or 5.58 lb/hr in base load operation firing natural gas. Annual emissions of NO_X in tpy from these emission units shall be calculated by using the allowable NO_x emission rate in lb/hr for each mode of operation multiplied by the total operating hours for each mode of operation for the 20 engines divided by 2000. (See Specific Condition **A.27.**) This NO_x emission in tpy shall not exceed 249.4 TPY, based upon a consecutive 12-month period.
[Rule 62-212.400, F.A.C.; Construction Permits 1050352-001-AC & 1050352-004-AC]

A.6. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density if which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20% opacity). The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.
[Rule 62-296.320(4)(b)1, F.A.C.; Construction Permit 1050352-001-AC]

A.7. Ammonia Emissions. The concentration of ammonia in the exhaust gas from each internal combustion engine shall not exceed 10 ppmvd @15% O_2 while firing natural gas or fuel oil.
[Rule 62-4.070, F.A.C.; Construction Permit 1050352-001-AC]

Excess Emissions

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.}

A.8. Excess Emissions Allowed. Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
[Rule 62-210.700(1), F.A.C.; Construction Permit 1050352-001-AC]

A.9. Excess Emissions Prohibited. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited.
[Rule 62-210.700(4), F.A.C.; Construction Permit 1050352-001-AC]

Monitoring of Operations

A.10. Fuel Monitoring. The fuel oil shall be monitored initially and annually for the sulfur content using ASTM D4294 Method (or equivalent). The permittee shall retain records of vendor certificate of fuel oil supply to have sulfur content of maximum 0.05% by weight. The permittee shall also maintain daily records of fuel oil and natural gas consumption for the emission units.
[Rules 62-297.440, F.A.C. & 62-210.200, F.A.C.; Construction Permit 1050352-001-AC]

A.11. Time Monitoring. The permittee shall have installed and calibrated, and shall operate and maintain a monitoring system to measure the hours of operation for each fuel on each internal combustion engine**.**
[Rule 62-213.440, F.A.C.; Construction Permit 1050352-001-AC]

A.12. Ammonia Monitoring. The flow of ammonia to the Selective Catalytic Reduction unit shall be continuously monitored while the emission unit is in operation to ensure that the ammonia flow is maintained at the same level as recorded during the most recent successful compliance test for NO_X emissions. (See attached Appendix CP-1, Compliance Plan for Natural Gas Compliance Testing.)
[Rules 62-4.070 & 62-213.440, F.A.C.]

Test Methods and Procedures

A.13. Initial Tests Required. Initial performance tests to demonstrate compliance with the emission standards specified in this permit shall be conducted within 60 days after achieving at least 90% of permitted capacity, but not later than 180 days after initial operation of the emissions unit. Initial performance tests shall be conducted for NO_x and visible emissions on a sample of 5 (five) randomly picked internal combustion engines for the first year. A different set of randomly picked five engines from the remaining internal combustion engines will be tested

during subsequent years of operation until all of the engines have completed the initial performance test. Initial performance test while firing natural gas shall be done when the fuel is available to the facility. Initial performance tests shall be conducted for ammonia slip for both oil and gas (when available) on only one internal combustion engine. **(See the attached Appendix CP-1, Compliance Plan for Natural Gas Compliance Testing.)**
[Rules 62-213.440(2), 62-297.310(7)(a)1. & 62-297.310(7)(c), F.A.C.; Construction Permit 1050352-001-AC]

{Permitting Note: Initial performance tests for NO_x and visible emissions have been completed for all 20 internal combustion engines on distillate oil firing. Initial performance test for ammonia slip was carried out on EU 003 on distillate oil firing. Testing on natural gas firing is pending since the facility is not yet connected to the natural gas pipeline.}

A.14. Annual Performance Tests. To demonstrate compliance with the emission standards specified in this permit, the permittee shall conduct annual performance tests for visible emissions on each emissions unit that operated for more than 400 hours in the preceding 12-month period. Annual performance tests for NO_X shall be conducted on the emission units that emitted a cumulative total of more than 100 tons per year of NO_X in the preceding 12-month period. The facility will be required to keep 12-month emission totals of NO_X in tons per year for each internal combustion engine during each federal fiscal year (October 1- September 30). Tests required on an annual basis shall be conducted at least once during each federal fiscal year.
[Rule 62-297.310(7)(a)4. & 62-297.310(7)(c), F.A.C.; Construction Permits 1050352-001-AC & 1050352-004-AC]

A.15. Tests Prior to Permit Renewal. Prior to renewing the air operation permit, the permittee shall conduct simultaneous performance tests for NO_X, visible emissions and ammonia on the internal combustion engine that operated for the most hours in the previous five years. These tests shall be conducted within the 12-month period prior to renewing the air operation permit. For pollutants required to be tested annually, the permittee may submit the most recent annual compliance test to satisfy the requirements of this provision.
[Rule 62-297.310(7)(a)3., F.A.C.; Construction Permits 1050352-001-AC & 1050352-004-AC]

A.16. Performance Test Methods. Compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-204.800, F.A.C.

- **a.** EPA Method 7 or 7E – Determination of Nitrogen Oxide Emissions from Stationary Sources;
- **b.** EPA Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources;
- **c.** Method CTM-027 or equivalent for ammonia slip (see Specific Condition **A.13.**)

No other test methods may be used for compliance testing unless prior DEP approval is received, in writing, from the DEP Emissions Monitoring Section Administrator.
[Construction Permit 1050352-001-AC]

A.17. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's

emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.
[Rule 62-297.310(1), F.A.C.]

A.18. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rules 62-297.310(2) & (2)(b), F.A.C.]

A.19. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.
[Rule 62-297.310(3), F.A.C.]

A.20. Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.

b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a FINAL surrogate standard and an existing mass emission limiting standard.

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, attached to this permit.

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

A.21. Determination of Process Variables.

(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

A.22. Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

A.23. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

1. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a. Did not operate; or

b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.

2. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

a. Visible emissions, if there is an applicable standard;

b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and

c. Each NESHAP pollutant, if there is an applicable emission standard.

3. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.

4. The owner or operator shall notify the compliance authority, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. The notification shall also include the EU No., Test Method, and pollutants to be tested as a note.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved.]

Recordkeeping and Reporting Requirements

A.24. Records Retention. All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained at the facility for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request.
[Rules 62-4.160(14) & 62-213.440(1)(b)2., F.A.C.; Construction Permit 1050352-001-AC]

A.25. Emissions Performance Test Reports. A report indicating the results of any required emissions performance test shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested

emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C.
[Rule 62-297.310(8), F.A.C.; and, 1050352-001-AC]

A.26. Monthly Operations Summary. By the fifth calendar day of each month, the permittee shall record the 12- month hours of operation of the internal combustion engines, 12-month emission totals for NO_X (see Specific Condition **A.27.**), and amount of the No. 2 fuel oil and natural gas fired in the internal combustion engines. The information shall be recorded in a written or electronic log and shall be available for inspection and/or printing within at least one day of a request from the Compliance Authority.
[Rule 62-4.160(15), F.A.C.; Construction Permits 1050352-001-AC & 1050352-004-AC]

A.27. Compliance Assurance Demonstration Method. Using the information required by Specific Conditions **A.3.** & **A.26.**, compliance with the 12-month NO_X emissions limit for the 20 engines shall be demonstrated by using the following equation:

$$[(X * 11.6 \text{ lbs/hr}) + (Y * 13.9 \text{ lbs/hr}) + (Z * 5.6 \text{ lbs/hr})] / (2000 \text{ lbs/ton}) = \text{Calculated tons of } NO_X.$$

Where:
X = Documented hours per year firing oil at 100% load (total of all 20 engines)
Y = Documented hours per year firing oil at peak load (total of all 20 engines)
Z = Documented hours per year firing natural gas at 100% load (total of all 20 engines)
[Construction Permit 1050352-004-AC]

A.28. Excess Emissions Report. In the case of excess emissions resulting from malfunctions, the owner or operator shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Compliance Authority.
[Rule 62-210.700(6), F.A.C]

A.29. Test Reports.
(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Compliance Authority on the results of each such test.
(b) The required test report shall be filed with the Compliance Authority as soon as practical but no later than 45 days after the last sampling run of each test is completed.
(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
    1. The type, location, and designation of the emissions unit tested.
    2. The facility at which the emissions unit is located.
    3. The owner or operator of the emissions unit.
    4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
    5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission-limiting standard.
    6. The type of air pollution control devices installed on the emissions unit, their general

condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.

7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

Compliance Assurance Monitoring (CAM) Requirements

A.30. These emissions units are subject to the CAM requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C.
[40 CFR 64; and, Rules 62-204.800 and 62-213.440(1)(b)1.a., F.A.C.]

Section III. Emissions Unit(s) and Conditions.

Subsection B. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
021	One VOLVO EMD TAD1232GE emergency diesel engine and associated electric generator (Existing Stationary CI RICE Emergency Diesel Engine > 500 HP)

One Volvo TAD1232GE emergency diesel engine and associated generator set. The VOLVO emergency diesel engine has a power rating of 514 brake horse power (bhp) at 100 percent load. The generator has a power output rating of 350 kW. The VOLVO diesel engine will be fired with low sulfur (maximum of 0.05 weight percent of sulfur) diesel fuel. This emission unit is subject to the requirements of 40 CFR 63, Subpart ZZZZ.

{Permitting Note: This emergency diesel engine was categorically exempt from the requirements to obtain an air construction permit pursuant to Rule 62-210.300(3)(a), F.A.C. This status will remain so long as the facility never burns more than 32,000 gallons of diesel in the unit. The burning of 32,000 gallons of diesel fuel is roughly equivalent to 10 tons per year (tpy) of nitrogen oxide (NO_x) emitted from this unit. This emission unit is not exempt from the Title V permitting requirements of a regulated emission unit due to the unit specific applicable requirement of compliance with the requirements of 40 CFR 63, Subpart ZZZZ.}

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameter

B.1. Methods of Operation - (i.e. Fuels). No. 2 fuel oil shall be fired in the emergency diesel internal combustion engine. The emergency diesel engine shall not burn more than 32,000 gallons of No. 2 diesel oil per consecutive 12-month period which is equivalent to 10 tpy of NO_x. The maximum sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent, by weight. The permittee shall demonstrate compliance with the fuel oil sulfur limit by keeping the records specified in this permit.
[Rule 62-213.440(1)(b), F.A.C.]

Recordkeeping and Reporting Requirements

B.2. Monthly Operations Summary. By the fifth calendar day of each month, the permittee shall record the most recent consecutive 12- month usage of No. 2 fuel oil fired in the emergency diesel engine. The information shall be recorded in a written or electronic log and shall be available for inspection and/or printing within one day of a request from the Compliance Authority.
[Rule 62-4.160(15), F.A.C.]

Section III. Emissions Unit(s) and Conditions.

Subsection C. Common Conditions for EU 001 – EU 021

Applicable Federal Requirements

C.1. Federal 40 CFR 63 NESHAP Subpart ZZZZ Requirements - The engines in EU Nos. 001-021 are subject to the applicable requirements of NESHAP 40 CFR 63 Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines), which is attached to this permit as **Appendix NESHAP 40 CFR 63 Subpart ZZZZ**, as it applies to existing RICE at area sources of hazardous air pollutants (HAP). The applicable requirements for each engine category and HP rating range are shown in **40 CFR 63, Subpart ZZZZ applicability table – Summary of NESHAP 40 CFR 63 Subpart ZZZZ Requirements for Existing CI RICE at Area Sources of HAP**, attached to this permit. [Rule 62-4.070(3), F.A.C.; NESHAP 40 CFR 63 Subpart ZZZZ]

*(Compliance Note – The final compliance date for the applicable Subpart ZZZZ requirements for the existing compression ignition (**CI**) RICE engines (E.U. Nos. 001-021) at this area source of HAP is 05/03/2013. (40 CFR 63.6595(a)(1).)*

C.2. Federal NESHAP 40 CFR 63 Subpart A General Provisions Requirements - The engines in EU Nos. 001 - 021 are subject to the applicable requirements of NESHAP 40 CFR 63 Subpart A (General Provisions for 40 CFR 63), as adopted and incorporated by reference in Rules 62-204.800(11)(d), F.A.C., which is attached to this permit as **Appendix NESHAP 40 CFR 63 Subpart A General Provisions**. The applicable requirements of Subpart A are shown in Table 8 to 40 CFR 63 Subpart ZZZZ *(see Appendix 40 CFR 63 Subpart ZZZZ)*.
[Rule 62-208.800(11)(d), F.A.C.; NESHAP 40 CFR 63 Subpart ZZZZ]