



# Air Construction Permit Application

## AIR CONSTRUCTION PERMIT APPLICATION FOR LAKELAND ELECTRIC WINSTON PEAKING STATION

**Submitted By:** Golder Associates Inc.  
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**Distribution:** 5 copies – FDEP  
1 copy – Lakeland Electric  
1 copy – Golder Associates Inc.

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**AIR APPLICATION – LONG FORM**



# 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
- To establish, revise, or renew a plantwide applicability limit (PAL).

**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: <b>Lakeland Electric</b>	
2. Site Name: <b>Winston Peaking Station</b>	
3. Facility Identification Number: <b>1050352</b>	
4. Facility Location... Street Address or Other Locator: <b>1200 Airport Road</b> City: <b>Lakeland</b> County: <b>Polk</b> Zip Code: <b>33811</b>	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

#### Application Contact

1. Application Contact Name: <b>Ms. Farzie Shelton, Associate General Manager of Technical Support</b>	
2. Application Contact Mailing Address... Organization/Firm: <b>Lakeland Electric</b> Street Address: <b>501 E. Lemon Street</b> City: <b>Lakeland</b> State: <b>FL</b> Zip Code: <b>33801-5079</b>	
3. Application Contact Telephone Numbers... Telephone: <b>(863) 834 - 6603</b> ext. Fax: <b>(863) 834 - 6362</b>	
4. Application Contact E-mail Address: <b>farzie.shelton@lakelandelectric.com</b>	

#### Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s):	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**

- 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

**Lakeland Electric requests a phased air construction permit to initially classify the 20 emergency generators as “emergency stationary RICE” followed by a classification of “compression ignition (CI) stationary RICE” upon re-designation by Lakeland Electric.**

**Lakeland Electric also requests a concurrent Title V permit revision to incorporate the phased designation of the diesel engines.**

**Pursuant to Title V Permit No. 1050352-005-AV, the 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 fuel oil storage tank. The storage tank is an unregulated emission unit.**



## APPLICATION INFORMATION

### Owner/Authorized Representative Statement


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

1. Owner/Authorized Representative Name :
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Owner/Authorized Representative Telephone Numbers... Telephone: ( ) ext. Fax: ( )
4. Owner/Authorized Representative E-mail Address:
5. Owner/Authorized Representative Statement:  <i>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.</i>  _____ Signature  _____ Date

## APPLICATION INFORMATION

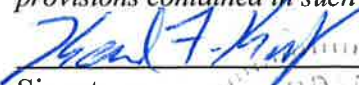
### Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: <b>Tony Candales, Assistant General Manager of Production</b>
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source or CAIR source.
3. Application Responsible Official Mailing Address... Organization/Firm: <b>Lakeland Electric</b> Street Address: <b>501 East Lemon Street</b> City: <b>Lakeland</b> State: <b>FL</b> Zip Code: <b>33801-5079</b>
4. Application Responsible Official Telephone Numbers... Telephone: <b>(863) 834-6559</b> Fax: <b>(863) 834-6362</b>
5. Application Responsible Official E-mail Address: <b>tony.candales@lakelandelectric.com</b>
6. Application Responsible Official Certification: <p>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</p> <p> Signature</p> <p><u>July 15, 2013</u> Date</p>

**APPLICATION INFORMATION**

**Professional Engineer Certification**

<p>1. Professional Engineer Name: <b>Kennard F. Kosky</b>                  Registration Number: <b>14996</b></p>
<p>2. Professional Engineer Mailing Address...                  Organization/Firm: <b>Golder Associates Inc.**</b>                  Street Address: <b>6026 NW 1st Place</b>                  City: <b>Gainesville</b> State: <b>FL</b> Zip Code: <b>32607</b></p>
<p>3. Professional Engineer Telephone Numbers...                  Telephone: <b>(352) 336-5600</b> ext. <b>21156</b> Fax: <b>(352) 336-6603</b></p>
<p>4. Professional Engineer E-mail Address:</p>
<p>5. Professional Engineer Statement:  <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i>                  (1) <i>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</i>                  (2) <i>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.</i>                  (3) <i>If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/> , 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.</i>                  (4) <i>If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/> , 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 <input type="checkbox"/> , 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.</i>                  (5) <i>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 <input type="checkbox"/> , 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.</i></p> <p style="text-align: center;">                   _____                  Signature                  (seal)             </p> <p style="text-align: right;">                 _____                  7/15/13                  Date             </p>

\* Attach any exception to certification statement.

\*\*Board of Professional Engineers Certificate of Authorization #00001670.



## II. FACILITY INFORMATION

### A. GENERAL FACILITY INFORMATION

#### Facility Location and Type

1. Facility UTM Coordinates... Zone <b>17</b> East (km) <b>400.2</b> North (km) <b>3100.6</b>		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) <b>28/01/45</b> Longitude (DD/MM/SS) <b>82/00/53</b>	
3. Governmental Facility Code: <b>0</b>	4. Facility Status Code: <b>A</b>	5. Facility Major Group SIC Code: <b>49</b>	6. Facility SIC(s): <b>4911</b>
7. Facility Comment :  <b>The Winston Peaking Station consists of 20 nominal 2.5 MW GM EMD 20/645/E4B diesel engines, associated generators, one 350 kW Volvo TAD1232GE emergency diesel engine generator set, and a 294,000-gallon fuel oil storage tank. Each engine uses SCR and air/fuel ratio regulators for emission control. The units provide a nominal 50 MW of electrical power collectively. The fuel for the engines is distillate fuel oil with a maximum sulfur content of 0.05% and natural gas. The facility can operate one single emission unit or all 20 emission units or in any combination of these.</b>			

#### Facility Contact

1. Facility Contact Name: <b>Ms. Farzie Shelton, Associate General Manager of Technical Support</b>
2. Facility Contact Mailing Address... Organization/Firm: <b>Lakeland Electric</b> Street Address: <b>501 E. Lemon Street</b> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <span>City: <b>Lakeland</b></span> <span>State: <b>FL</b></span> <span>Zip Code: <b>33801-5079</b></span> </div>
3. Facility Contact Telephone Numbers: Telephone: <b>(863) 834 - 6603</b> ext.      Fax: <b>(863) 834 - 6362</b>
4. Facility Contact E-mail Address: <b>farzie.shelton@lakelandelectric.com</b>

#### 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: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <span>City:</span> <span>State:</span> <span>Zip Code:</span> </div>
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. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:  <b>NESHAP 40 CFR Part 63 Subpart ZZZZ. Initial classification as emergency stationary RICE followed by re-classification as compression ignition stationary RICE determined by Lakeland Electric. See Part II.</b>	

**List of Pollutants Emitted by Facility**

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

**B. EMISSIONS CAPS**

**Facility-Wide or Multi-Unit Emissions Caps**

1. Pollutant Subject to Emissions Cap	2. Facility-Wide Cap [Y or N]? (all units)	3. Emissions Unit ID's Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap
<b>NOx</b>	<b>Y</b>			<b>&lt;250</b>	<b>ESCPSD</b>

7. Facility-Wide or Multi-Unit Emissions Cap Comment:  
**Upon re-classification potential-to-emit will be less than 250 tons/year.**

### C. FACILITY ADDITIONAL INFORMATION

#### Additional Requirements for All Applications, Except as Otherwise Stated

<p>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)</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>07/21/09</u></p>
<p>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)</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>07/21/09</u></p>
<p>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)</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>07/21/09</u></p>

#### Additional Requirements for Air Construction Permit Applications

<p>1. Area Map Showing Facility Location:</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility)</p>
<p>2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL):</p> <p><input checked="" type="checkbox"/> Attached, Document ID: <u>Part II</u></p>
<p>3. Rule Applicability Analysis:</p> <p><input checked="" type="checkbox"/> Attached, Document ID: <u>Part II</u></p>
<p>4. List of Exempt Emissions Units:</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)</p>
<p>5. Fugitive Emissions Identification:</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>

**C. FACILITY ADDITIONAL INFORMATION (CONTINUED)**

**Additional Requirements for FESOP Applications**

1. List of Exempt Emissions Units:  
 Attached, Document ID: \_\_\_\_\_  Not Applicable (no exempt units at facility)

**Additional Requirements for Title V Air Operation Permit Applications**

1. List of Insignificant Activities: (Required for initial/renewal applications only)  
 Attached, Document ID: \_\_\_\_\_  Not Applicable (revision application)

2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)  
 Attached, Document ID: \_\_\_\_\_  
 Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)  
 Attached, Document ID: \_\_\_\_\_  
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)  
 Attached, Document ID: \_\_\_\_\_  
 Equipment/Activities Onsite but Not Required to be Individually Listed  
 Not Applicable

5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)  
 Attached, Document ID: \_\_\_\_\_  Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:  
 Attached, Document ID: \_\_\_\_\_  Not Applicable

**C. FACILITY ADDITIONAL INFORMATION (CONTINUED)**

**Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program**

1. Acid Rain Program Forms:

Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):

- Attached, Document ID: \_\_\_\_\_  Previously Submitted, Date: \_\_\_\_\_  
 Not Applicable (not an Acid Rain source)

Phase II NO<sub>x</sub> Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):

- Attached, Document ID: \_\_\_\_\_  Previously Submitted, Date: \_\_\_\_\_  
 Not Applicable

New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):

- Attached, Document ID: \_\_\_\_\_  Previously Submitted, Date: \_\_\_\_\_  
 Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):

- Attached, Document ID: \_\_\_\_\_  Previously Submitted, Date: \_\_\_\_\_  
 Not Applicable (not a CAIR source)

**Additional Requirements Comment**

## **EMISSIONS UNIT INFORMATION**

### **Section [1]**

#### **GM EMD 20/645/E4B Diesel Engines**

### **III. EMISSIONS UNIT INFORMATION**

**Title V Air Operation Permit Application** - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

**Air Construction Permit or FESOP Application** - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

**Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application** – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.



# EMISSIONS UNIT INFORMATION

## Section [1]

### GM EMD 20/645/E4B Diesel Engines

#### 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:  
**20 GM EMD 20/645/E4B Diesel Engines**

3. Emissions Unit Identification Number: **001 - 020**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date: <b>Jan 2002</b>	7. Emissions Unit Major Group SIC Code: <b>49</b>
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8. Federal Program Applicability: (Check all that apply)

- Acid Rain Unit
- CAIR Unit

9. Package Unit:

Manufacturer: **Genertek**

Model Number: **20 GM EMD 20/645/E4B**

10. Generator Nameplate Rating: **50 MW (nominal)**

11. Emissions Unit Comment:

**This emission unit consists of 20 nominal 2.5-MW GM EMD 20/645/E4B diesel engines operating in simple cycle mode. Twenty engines provide a nominal total 50 MW (55 MW at peak load) of electrical power.**

**EMISSIONS UNIT INFORMATION**

**Section [1]**

**GM EMD 20/645/E4B Diesel Engines**

**Emissions Unit Control Equipment/Method:** Control 1 of 2

1. Control Equipment/Method Description:  
**Selective Catalytic Reduction (SCR) for NOx control**

2. Control Device or Method Code: **139**

**Emissions Unit Control Equipment/Method:** Control 2 of 2

1. Control Equipment/Method Description:  
**Oxidation Catalyst**

2. Control Device or Method Code: **109**

**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]

GM EMD 20/645/E4B Diesel Engines

## 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:
3. Maximum Heat Input Rate: <b>560</b> million Btu/hr
4. Maximum Incineration Rate:           pounds/hr tons/day
5. Requested Maximum Operating Schedule: <b>24</b> hours/day <b>7</b> days/week <b>52</b> weeks/year <b>100</b> hours/year
6. Operating Capacity/Schedule Comment: <b>Maximum heat input rate is for 20 engines (28 MMBTU/hr/engine).</b>  <b>The 100 hours/year is according to CFR 63.6640(f) for classification as emergency stationary RICE for initial classification.</b>  <b>Dual fuel is used for this emission unit and 20 engines can operate as a single emission unit or in combination. Operating schedule is representative of a single engine.</b>  <b>After re-classification, No. 2 fuel oil would be burned in any combination of the 20 engines at a maximum of 41,000 engine-hours per year at 100 percent load. The engines may also operate a maximum of 17,520 engine-hours at peak load. Natural gas can be burned in any combination of the 20 engines at a maximum of 85,000 engine-hours per year at 100 percent load. Note that natural gas is not available to the facility at present.</b>

**EMISSIONS UNIT INFORMATION**

**Section [1]**

**GM EMD 20/645/E4B Diesel Engines**

**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: <b>20 Diesel Engines</b>		2. Emission Point Type Code: <b>1</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: <b>Each 2.5 MW unit exhausts through a single stack.</b>			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>34 feet</b>		7. Exit Diameter: <b>2.3 feet</b>
8. Exit Temperature: <b>Natural Gas 740°F</b> <b>Fuel Oil 635°F</b>	9. Actual Volumetric Flow Rate: <b>21,350 acfm</b>	10. Water Vapor: <b>%</b>	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: <b>17</b> East (km): <b>400.2</b> North (km): <b>3100.6</b>		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: <b>Single stack for each engine.</b>			

**EMISSIONS UNIT INFORMATION**

**Section [1]**

**GM EMD 20/645/E4B Diesel Engines**

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate: Segment 1 of 2**

1. Segment Description (Process/Fuel Type): <b>Internal Combustion Engines; Electric Generation; Natural Gas – Reciprocating</b>		
2. Source Classification Code (SCC): <b>2-01-002-02</b>		3. SCC Units: <b>Million Cubic Feet Burned</b>
4. Maximum Hourly Rate: <b>0.502</b>	5. Maximum Annual Rate: <b>50.2</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>1,050</b>
10. Segment Comment: <b>Heat input from natural gas limited to 26.35 MMBtu/hr. Maximum hourly based on 59°F condition and 1,050 Btu/ft<sup>3</sup> (HHV). Maximum annual based on 100 engine-hours total at 100% load for 20 engines. Maximum hourly rate = 26.35 MMBtu/hr / 1,050 MMBtu/MMft<sup>3</sup> x 20 engines = 0.502 MMft<sup>3</sup>/hr. Maximum annual rate = 26.35 MMBtu/hr / 1,050 MMBtu/MMft<sup>3</sup> x 100 hours/year x 20 engines = 50.2 MMft<sup>3</sup>/yr. (Initial classification.)</b>		

**Segment Description and Rate: Segment 2 of 2**

1. Segment Description (Process/Fuel Type): <b>Internal Combustion Engines; Electric Generation; Distillate Oil (Diesel) - Reciprocating</b>		
2. Source Classification Code (SCC): <b>2-01-001-02</b>		3. SCC Units: <b>1,000 Gallons Burned</b>
4. Maximum Hourly Rate: <b>4.0</b>	5. Maximum Annual Rate: <b>7,695.1</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.05</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>139.7</b>
10. Segment Comment: <b>Maximum hourly rate for 20 engines at peak load and based on fuel oil heating value of 139.7 MMBtu/10<sup>3</sup> gallons (fuel analysis). Maximum annual rate for 20 engines at 100% load and based on 100 engine-hours. Maximum hourly = 28 MMBtu/hr / 139.7 MMBtu/10<sup>3</sup> gallons x 20 engines = 4.0 x 10<sup>3</sup> gallons. Maximum annual = 25 MMBtu/hr / 139.7 MMBtu/10<sup>3</sup> gallons x 100 hours/year x 20 engines = 357.9 x 10<sup>3</sup> gallons. (Initial classification.)</b>		

**EMISSIONS UNIT INFORMATION**

**Section [1]**

**GM EMD 20/645/E4B Diesel Engines**

**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
<b>NOx</b>	<b>139</b>		<b>EL</b>
<b>CO</b>	<b>109</b>		<b>NS</b>

**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: <b>NOx (Emergency stationary RICE)</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>278.0 lb/hour                      13.9 tons/year</b>		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor:  Reference: <b>Permit Nos. 1050352-004-AC and 1050352-001-AC</b>		7. Emissions Method Code: <b>0</b>	
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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>Potential hourly emissions:</b> <b>Peak load, oil firing – 13.9 lb/hr x 20 engines = 278.0 lb/hr.</b> <b>Base load, oil firing – 11.6 lb/hr x 20 engines = 232.0 lb/hr.</b> <b>Base load, natural gas firing – 5.58 lb/hr x 20 engines = 111.6 lb/hr.</b>  <b>Annual emissions = 278 lb/hr x 100 hrs/yr x ton / 2,000 lb = 13.9 TPY.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emissions represent all 20 engines.</b> <b>Potential hourly emissions based on peak load condition firing distillate oil.</b>			

**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 4

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>278.0 lb/hr</b>	4. Equivalent Allowable Emissions: <b>278.0 lb/hour      13.9 tons/year</b>
5. Method of Compliance: <b>EPA Method 7 or 7E. Compliance test required for engines that emitted &gt;100 TPY NOx in the preceding 12 months.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Allowable emissions based on distillate oil-firing at peak load. Equivalent annual emission = 13.9 lb/hr x 100 hours/year x 20 engines x 1 ton / 2,000 lb = 13.9 TPY.</b>	

**Allowable Emissions** Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>232.0 lb/hr</b>	4. Equivalent Allowable Emissions: <b>232.0 lb/hour      11.6 tons/year</b>
5. Method of Compliance: <b>EPA Method 7 or 7E. Compliance test required for engines that emitted &gt;100 TPY NOx in the preceding 12 months.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Allowable emissions based on distillate oil-firing at base load. Equivalent annual emission = 11.6 lb/hr x 100 hours/year x 20 engines x 1 ton / 2,000 lb = 11.6 TPY.</b>	

**Allowable Emissions** Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>111.6 lb/hr</b>	4. Equivalent Allowable Emissions: <b>111.6 lb/hour      5.6 tons/year</b>
5. Method of Compliance: <b>EPA Method 7 or 7E. Compliance test required for engines that emitted &gt;100 TPY NOx in the preceding 12 months.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Allowable emissions based on natural gas-firing. Equivalent annual emissions = 5.58 lb/hr x 100 hours/year x 20 engines x 1 ton / 2,000 lb = 5.6 TPY.</b>	



**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: <b>NOx (CI stationary RICE)</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>278.0 lb/hour                      237.8 tons/year</b>		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor:  Reference: <b>Permit Nos. 1050352-004-AC and 1050352-001-AC</b>		7. Emissions Method Code: <b>0</b>	
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: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>Potential hourly emissions:</b> <b>Peak load, oil firing – 13.9 lb/hr x 20 engines = 278.0 lb/hr.</b> <b>Base load, oil firing – 11.6 lb/hr x 20 engines = 232.0 lb/hr.</b> <b>Base load, natural gas firing – 5.58 lb/hr x 20 engines = 111.6 lb/hr.</b>  <b>Annual emissions = 11.6 lb/hr x 41,000 hr/yr x ton / 2000 lb = 237.8 TPY.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emissions represent all 20 engines.</b> <b>Potential hourly emissions based on peak load condition firing distillate oil.</b>			

**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 3

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>278.0 lb/hr</b>	4. Equivalent Allowable Emissions: <b>278.0 lb/hour      121.8 tons/year</b>
5. Method of Compliance: <b>EPA Method 7 or 7E. Compliance test required for engines that emitted &gt;100 TPY NOx in the preceding 12 months.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Allowable emissions based on distillate oil-firing at peak load. Equivalent annual emission = 13.9 lb/hr x 17,520 hours/year x 1 ton / 2,000 lb = 121.8 TPY.</b>	

**Allowable Emissions** Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>232.0 lb/hr</b>	4. Equivalent Allowable Emissions: <b>232.0 lb/hour      237.8 tons/year</b>
5. Method of Compliance: <b>EPA Method 7 or 7E. Compliance test required for engines that emitted &gt;100 TPY NOx in the preceding 12 months.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Allowable emissions based on distillate oil-firing at base load. Equivalent annual emission = 11.6 lb/hr x 41,000 hours/year x 1 ton / 2,000 lb = 237.8 TPY.</b>	

**Allowable Emissions** Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>111.6 lb/hr</b>	4. Equivalent Allowable Emissions: <b>111.6 lb/hour      237.2 tons/year</b>
5. Method of Compliance: <b>EPA Method 7 or 7E. Compliance test required for engines that emitted &gt;100 TPY NOx in the preceding 12 months.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Allowable emissions based on natural gas-firing. Equivalent annual emissions = 5.58 lb/hr x 85,000 hours/year x 1 ton / 2,000 lb = 237.2 TPY.</b>	

**EMISSIONS UNIT INFORMATION**

Section [1]  
 GM EMD 20/645/E4B Diesel Engines

**POLLUTANT DETAIL INFORMATION**

Page [1] of [1]  
 Nitrogen Oxides - NOx

**G. VISIBLE EMISSIONS INFORMATION**

**Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: <b>VE20</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: <b>Annual VE Test using EPA Method 9</b>	
5. Visible Emissions Comment: <b>Rule 62-296.320(4)(b)1, F.A.C. and Permit No. 1050352-002-AV.                  Annual VE test required for emission units with &gt; 400 hr/yr operation in preceding 12 months.</b>	

**Visible Emissions Limitation:** Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: <b>VE99</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: <b>None</b>	
5. Visible Emissions Comment: <b>Excess emissions allowed for 2 hours (120 minutes) per 24 hours for startup, shutdown, and malfunction. Rule 62-210.700(1), F.A.C.</b>	

## EMISSIONS UNIT INFORMATION

Section [1]

GM EMD 20/645/E4B Diesel Engines

### H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

**Continuous Monitoring System:** Continuous Monitor 1 of 1

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>IFM Elector Inc.</b> Model Number: Serial Number: <b>SID10ABFKOW/LS</b>	
5. Installation Date: <b>11/2001</b>	6. Performance Specification Test Date: <b>2/28/2002</b>
7. Continuous Monitor Comment: <b>Continuous monitoring of ammonia flow to SCR. Permit No. 1050352-002-AV.</b>	

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

# EMISSIONS UNIT INFORMATION

## Section [1]

### GM EMD 20/645/E4B Diesel Engines

#### 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) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>07/21/09</u>
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) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>07/21/09</u>
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) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>07/21/09</u>
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) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>07/21/09</u> <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>February 2009</u> Test Date(s)/Pollutant(s) Tested: <u>January 2009</u> <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> 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: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [1]

**GM EMD 20/645/E4B Diesel Engines**

**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)): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

**Additional Requirements for Title V Air Operation Permit Applications**

1. Identification of Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

**Additional Requirements Comment**

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**ATTACHMENT PART II**  
**DESCRIPTION OF PLANTWIDE APPLICABILITY LIMIT**  
**AND APPLICABILITY ANALYSIS**

## PART II

### INTRODUCTION

Lakeland Electric owns and operates the Winston Peaking Station located at 1200 Airport Road, Lakeland, Polk County, Florida. Winston Peaking Station, which is currently operating under Title V Operating Permit No. 1050352-005-AV, includes 20 nominal 2.5 General Motors (GM) EMD 20/645/E4B diesel engines (Emission Units 001-020). The engines currently utilize No. 2 distillate oil with a sulfur content of 0.05 percent and are capable of firing natural gas. When originally permitted, the facility escaped PSD review by limiting operation below 250 tons/year of NO<sub>x</sub> since the facility was not one of the 28 listed categories. The facility also includes a 350 kW Volvo TAD1232GE emergency diesel generator (Emission Unit 021) that, when combined with the other emission units, gave the facility the potential to emit (PTE) about 260 tons/year of NO<sub>x</sub> making the facility a PSD major facility.

The 20 GM diesel engines and the Volvo emergency generator have unit specific requirements as part of 40 CFR Part 63, Subpart ZZZZ - National Emission Standards of Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE). However, over the last five years the operation of the 20 GM diesel engines at the Winston Peaking Station has declined to a point that these units can meet the requirements of “emergency stationary RICE” under Part ZZZZ. While the 20 diesel engines were originally installed with selective catalytic reduction (SCR) and oxidation catalyst system that can meet the requirements of 40 CFR Part 63 Subpart ZZZZ, the existing fuel currently stored at the facility would not meet the Subpart ZZZZ requirements. The replacement of the existing inventory would be significantly costly for units that are currently being operated less than 20 hours per year. Future operation is expected to be similar. As a result, Lakeland Electric requests a phased air construction permit to initially classify the 20 emergency generators as “emergency stationary RICE” followed by a classification of “compression ignition (CI) stationary RICE” upon re-designation by Lakeland Electric. The initial classification would limit the operation of these 20 engines individually to 100 hrs/yr of non-emergency operation, which includes maintenance and readiness testing and 50 hrs/yr of other non-emergency use through a federal enforceable condition. In the future, Lakeland Electric would reclassify these units as “CI stationary RICE”. Upon re-classification, the 20 engines will meet operating limits that would make the entire Winston Station a minor PSD facility.

### OPERATION 2008-2012

Table 1 provides the annual hours of operation for each of the 20 engines from 2004 through 2012 based on data submitted in the FDEP Annual Operating Reports for the Winston Peaking Station. As shown in this table, since 2008 all the engines have been operated less than 100 hrs/yr and in 2011 and 2012 the maximum operation for any engine was 28 hours and 16 hours, respectively.



## REQUESTED AIR CONSTRUCTION PERMIT

As described in the introduction, Lakeland Electric requests a phased air construction permit to initially classify the 20 GM EMD diesel engines as “emergency stationary RICE” followed by a re-classification of these engines as “CI stationary RICE.” As emergency stationary RICE, the hours of non-emergency operation would be limited to 100 hrs/yr and would meet the requirements of 40 CFR 63.6640(f). As CI stationary RICE these units would meet the applicable requirements of 40 CFR Part 63 identified in the existing Title V permit. The suggested condition for this phasing of classifications is presented below as changes to Condition A.3 of the existing Title V permit. Strikeout denotes deletion and underline denotes addition.

Lakeland Electric also proposes the following CO stack testing schedule after re-classification of the engines as “CI stationary RICE:” Any ten of the 20 GM EMD engines will be tested within 180 days after re-classification and the remaining ten engines will be tested within 3 years of operation of these engines.

No other changes are requested.

**A.3. Hours of Operation:** The twenty internal combustion engines shall operate no more than 100 hours/year as emergency stationary RICE as defined in 40 CFR Part 63 Subpart ZZZZ. Upon notification to the Department that this classification is no longer valid, the twenty engines shall operate no more than ~~413,000~~ engine-hours when firing fuel oil at 100% load, or 17,520 engine-hours at peak load or ~~850,020~~ 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 NOx 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 NOx 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]

## REGULATORY APPLICABILITY

Under Federal and State of Florida PSD review requirements, all major new or modified sources of air pollutants regulated under the Clean Air Act (CAA) must be reviewed and a pre-construction permit issued. The U.S. Environmental Protection Agency (EPA) has approved Florida’s State Implementation Plan (SIP), which contains PSD regulations. The applicable PSD rules in Florida are found in Rule 62-212.400, Florida Administrative Code (F.A.C.).

A “major facility” is defined as any 1 of 28 named source categories that have the potential to emit 100 tons/year or more, or any other stationary facility that has the potential to emit 250 tons/year or more of any pollutant regulated under the CAA. “Potential to emit” means the capability, at maximum design capacity, to emit a pollutant after the application of control equipment. Once a new source is determined to be a “major facility” for a particular pollutant, any pollutant emitted in amounts greater than the PSD significant emission rates is subject to PSD review. For an existing major source for which a modification is proposed, the modification is subject to PSD review if the net increase in emissions due to the modification is greater than the PSD SERs.

Winston Peaking Station is a major PSD facility under FDEP rules since the potential-to-emit exceeds 250 tons/year for NO<sub>x</sub>. Based on Rule 62-210.200(205), F.A.C., “modification” is defined as any physical change in, change in the method of operation of, or addition to a facility which would result in an increase in the actual emissions of any pollutant subject to new source review regulation under the CAA.

This application is not a physical change or a change in the method of operation and does not affect any emissions from the facility. Therefore, PSD review is not applicable. Upon re-classification of the 20 engines as a CI stationary RICE, the facility would require PSD review. The suggested changes in Condition A.3 reduce the potential emission of the 20 engines by over 11 tons of NO<sub>x</sub>/year from what was originally authorized to keep total emissions to 249.4 tons NO<sub>x</sub>/year. As indicated in the Introduction, the current potential to emit is 260 tons/year including the emergency diesel generator. The requested potential-to-emit for the 20 engines after re-classification is 237.8 tons NO<sub>x</sub>/year. Therefore, after re-classification as CI RICE, the Winston Peaking Station will have a potential-to-emit of less than 250 TPY.

	2012	2011	2010	2009	2008	2007	2006	2005	2004
<b>Unit 1</b>	11	27	61	54	89	73	66	155	208
<b>Unit 2</b>	11	24	58	54	84	108	64	151	122
<b>Unit 3</b>	13	25	60	60	89	113	61	154	200
<b>Unit 4</b>	11	23	57	53	87	81	64	153	203
<b>Unit 5</b>	12	24	59	66	86	81	64	153	202
<b>Unit 6</b>	11	26	55	50	83	102	62	148	197
<b>Unit 7</b>	13	24	54	48	82	109	63	150	199
<b>Unit 8</b>	12	26	55	23	89	73	58	148	195
<b>Unit 9</b>	12	23	52	55	83	77	48	153	198
<b>Unit 10</b>	12	23	51	48	82	94	61	149	197
<b>Unit 11</b>	11	27	57	53	93	64	60	132	186
<b>Unit 12</b>	10	26	54	40	87	64	57	132	191
<b>Unit 13</b>	11	26	56	51	90	68	52	127	171
<b>Unit 14</b>	16	23	52	51	90	65	51	128	188
<b>Unit 15</b>	11	24	53	51	91	79	55	133	183
<b>Unit 16</b>	10	23	57	48	83	73	57	128	187
<b>Unit 17</b>	13	24	48	48	82	76	57	128	182
<b>Unit 18</b>	11	25	49	47	82	66	56	126	186
<b>Unit 19</b>	13	23	45	50	86	69	53	124	183
<b>Unit 20</b>	12	28	52	47	83	72	50	124	176
<b>TOTAL:</b>	<b>236</b>	<b>494</b>	<b>1,085</b>	<b>997</b>	<b>1,721</b>	<b>1,607</b>	<b>1,159</b>	<b>2,796</b>	<b>3,754</b>