

**RECEIVED**

SFP 15 2008

BUREAU OF AIR REGULATION

**APPLICATION FOR AIR CONSTRUCTION  
PERMIT TO ALLOW NATURAL GAS IN  
ADDITION TO FUEL OIL  
JEA, ST. JOHNS RIVER POWER PARK  
DUVAL COUNTY, FLORIDA**

**Prepared For:**

**JEA  
11201 New Berlin Road  
Jacksonville, Florida 32226**

**Prepared By:**

**Golder Associates Inc.  
6241 NW 23rd Street, Suite 500  
Gainesville, Florida 32653-1500**

**August 2008**

**063-7633**

**DISTRIBUTION:**

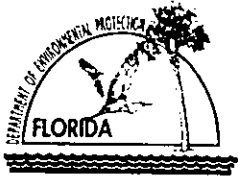
**4 Copies – FDEP**

**2 Copies – JEA**

**1 Copy – Golder Associates Inc.**

**APPLICATION FOR AIR PERMIT**

**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>JEA</b>	
2. Site Name: <b>St. Johns River Power Park (SJRPP)</b>	
3. Facility Identification Number: <b>0310045</b>	
4. Facility Location... Street Address or Other Locator: <b>11201 New Berlin Road</b> City: <b>Jacksonville</b> County: <b>Duval</b> Zip Code: <b>32226</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>John A. Worley, Director of Environmental Programs</b>	
2. Application Contact Mailing Address... Organization/Firm: <b>JEA</b> Street Address: <b>21 West Church Street</b> City: <b>Jacksonville</b> State: <b>FL</b> Zip Code: <b>32202</b>	
3. Application Contact Telephone Numbers... Telephone: <b>(904) 665-8729</b> ext. Fax: <b>(904) 665-8719</b>	
4. Application Contact E-mail Address: <b>worlja@jea.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

Application for an air construction permit to allow natural gas, in addition to fuel oil, as a startup/flame stabilization fuel for SJRPP Boiler Nos. 1 and 2 (EU IDs 016 and 017). New igniters will be installed to allow natural gas as fuel.

The modification will not significantly increase emissions and, therefore, this application will not trigger review under the FDEP Prevention of Significant Deterioration rules contained in 62-212.400, F.A.C. See Part II.

# APPLICATION INFORMATION

## Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
016	SJRPP Boiler No. 1	AC1B	NA
017	SJRPP Boiler No. 2	AC1B	NA

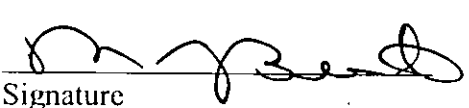
### Application Processing Fee

Check one:  Attached - Amount: \$ \_\_\_\_\_  Not Applicable

**APPLICATION INFORMATION**

**Owner/Authorized Representative Statement**

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

1. Owner/Authorized Representative Name : <b>Michael J. Brost, V.P., Electric System</b>
2. Owner/Authorized Representative Mailing Address... Organization/Firm: <b>JEA</b> Street Address: <b>21 West Church Street</b> City: <b>Jacksonville</b> State: <b>FL</b> Zip Code: <b>32202</b>
3. Owner/Authorized Representative Telephone Numbers... Telephone: <b>(904) 665-6537</b> ext. Fax: ( )
4. Owner/Authorized Representative E-mail Address: <b>brosmj@jea.com</b>
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  <u>8.29.08</u> Date

# APPLICATION INFORMATION

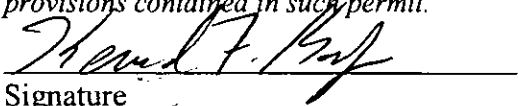
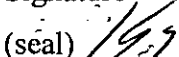
## Application Responsible Official Certification

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:
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, CAIR source, or Hg Budget source.
3. Application Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
4. Application Responsible Official Telephone Numbers... Telephone: ( ) ext. Fax: ( )
5. Application Responsible Official E-mail Address:
6. Application Responsible Official Certification: 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.  Signature _____ Date _____

# APPLICATION INFORMATION

## Professional Engineer Certification

1. Professional Engineer Name: <b>Kennard F. Kosky</b> Registration Number: <b>14996</b>
2. Professional Engineer Mailing Address... Organization/Firm: <b>Golder Associates Inc.**</b> Street Address: <b>6241 NW 23rd Street, Suite 500</b> City: <b>Gainesville</b> State: <b>FL</b> Zip Code: <b>32653</b>
3. Professional Engineer Telephone Numbers... Telephone: <b>(352) 336-5600</b> ext. <b>516</b> Fax: <b>(352) 336-6603</b>
4. Professional Engineer E-mail Address: <b>kkosky@golder.com</b>
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) 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> <i>(4) 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> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <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>   Signature _____ Date <u>8/26/09</u>  (seal) 

\* 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 17      East (km) <b>446.90</b> North (km) <b>3359.15</b>		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) <b>30/21/52</b> Longitude (DD/MM/SS) <b>81/37/25</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 facility includes the JEA Northside Generating Station and SJRPP.</b>			

#### Facility Contact

1. Facility Contact Name: <b>Bruce W. Kofler, Manager of Environmental Compliance</b>
2. Facility Contact Mailing Address... Organization/Firm: <b>SJRPP</b> Street Address: <b>11201 New Berlin Road</b> City: <b>Jacksonville</b> State: <b>FL</b> Zip Code: <b>32226</b>
3. Facility Contact Telephone Numbers: Telephone: <b>(904) 665-7886</b> ext.      Fax: <b>(904) 665-8719</b>
4. Facility Contact E-mail Address: <b>KofIBW@jea.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: City:      State:      Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: (    )      ext.      Fax: (    )
4. Facility Primary Responsible Official E-mail Address:

**Facility Regulatory Classifications**

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

1. <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 checked="" 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 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:  SJRPP Units 1 and 2 are subject to 40 CFR Part 60 Subpart Da	

**List of Pollutants Emitted by Facility**

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM/PM <sub>10</sub>	A	N
NO <sub>x</sub>	A	N
CO	A	N
VOC	A	N
SO <sub>2</sub>	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

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

### C. FACILITY ADDITIONAL INFORMATION

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

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>07/03/2008</u>
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) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>07/03/2008</u>
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) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>07/03/2008</u>

#### Additional Requirements for Air Construction Permit Applications

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

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

**Additional Requirements for FESOP Applications**

- |   |
|---|
| 1. List of Exempt Emissions Units:<br><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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)<br><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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)<br><input type="checkbox"/> Attached, Document ID: _____<br><input type="checkbox"/> Not Applicable (revision application with no change in applicable requirements)  |
| 3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)<br><input type="checkbox"/> Attached, Document ID: _____<br>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)<br><input type="checkbox"/> Attached, Document ID: _____<br><input type="checkbox"/> Equipment/Activities Onsite but Not Required to be Individually Listed<br><input type="checkbox"/> Not Applicable   |
| 5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)<br><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable  |
| 6. Requested Changes to Current Title V Air Operation Permit:<br><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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: 07/03/2008  
 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: 07/03/2008  
 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: 07/03/2008  
 Not Applicable (not a CAIR source)

**3. Hg Budget Part (DEP Form No. 62-210.900(1)(c)):**

- Attached, Document ID: \_\_\_\_\_  Previously Submitted, Date: \_\_\_\_\_  
 Not Applicable (not a Hg Budget unit)

**Additional Requirements Comment**

See Part II, Project Description.

## EMISSIONS UNIT INFORMATION

Section [1]  
SJRPP Units 1 and 2

### 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]**  
**SJRPP Units 1 and 2**

**A. GENERAL EMISSIONS UNIT INFORMATION**

**Title V Air Operation Permit Emissions Unit Classification**

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

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

**Emissions Unit Description and Status**

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

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

2. Description of Emissions Unit Addressed in this Section:  
**Units 1 and 2.**

3. Emissions Unit Identification Number: **016 and 017**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date: <b>12/86</b>	7. Emissions Unit Major Group SIC Code: <b>49</b>
--	--------------------------------	--	--

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

- Acid Rain Unit
- CAIR Unit
- Hg Budget Unit

9. Package Unit:  
Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: **679.6 MW**

11. Emissions Unit Comment:  
**Initial Startup Date for Unit 1 is the commercial operation date. Unit 2 began commercial operation in March 1988. Generator Nameplate Rating is nominal and for each unit.**

**EMISSIONS UNIT INFORMATION**

**Section [1]  
SJRPP Units 1 and 2**

**Emissions Unit Control Equipment/Method: Control 1 of 4**

1. Control Equipment/Method Description:  
Electrostatic Precipitators (ESP) for PM control.

2. Control Device or Method Code: 010

**Emissions Unit Control Equipment/Method: Control 2 of 4**

1. Control Equipment/Method Description:  
Flue Gas Desulfurization (FGD) for SO<sub>2</sub> control.

2. Control Device or Method Code: 039

**Emissions Unit Control Equipment/Method: Control 3 of 4**

1. Control Equipment/Method Description:  
Low NO<sub>x</sub> Burners and overfire air for NO<sub>x</sub> control.

2. Control Device or Method Code: 204 and 205

**Emissions Unit Control Equipment/Method: Control 4 of 4**

1. Control Equipment/Method Description:  
Selective Catalytic Reduction (SCR) with ammonia injection for NO<sub>x</sub> control. JEA is authorized to install the SCR equipment under Air Construction Permit No. 0-310045-017-AC. Construction is not required and, while construction has commenced, it is not yet complete. JEA is under no obligation to operate the SCR equipment and, if construction is completed, JEA may operate the SCR equipment on an intermittent basis.

2. Control Device or Method Code: 139 and 032



**EMISSIONS UNIT INFORMATION**

Section [1]  
 SJRPP Units 1 and 2

**C. EMISSION POINT (STACK/VENT) INFORMATION**

(Optional for unregulated emissions units.)

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: <b>EU 016 and EU 017</b>		2. Emission Point Type Code: <b>1</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
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>640 feet</b>	7. Exit Diameter: <b>22.3 Feet</b>	
8. Exit Temperature: <b>156°F</b>	9. Actual Volumetric Flow Rate: <b>1,800,000 acfm</b>	10. Water Vapor: <b>%</b>	
11. Maximum Dry Standard Flow Rate: <b>dscfm</b>		12. Nonstack Emission Point Height: <b>Feet</b>	
13. Emission Point UTM Coordinates... Zone:            East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: <b>Source: Title V Renewal Application Submitted July 3, 2008.</b>			

**EMISSIONS UNIT INFORMATION**

Section [1]  
SJRPP Units 1 and 2

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

**Segment Description and Rate: Segment 1 of 4**

1. Segment Description (Process/Fuel Type): External Combustion Boilers; Electric Generation; Bituminous/Subbituminous Coal; Pulverized Coal: Dry Bottom Co-firing up to 30 percent petroleum coke with coal		
2. Source Classification Code (SCC): 1-01-002-02	3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 238	5. Maximum Annual Rate: 2,084,880	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.65	8. Maximum % Ash: 9	9. Million Btu per SCC Unit: 25.82
10. Segment Comment: Based on 30% petroleum coke and 70% coal by weight at 6,144 MMBtu/hr maximum heat input (34.39% petroleum and 65.61% coal on a heat input basis; 12,910 Btu/lb). Sulfur content based on 1.2% sulfur coal and 6% sulfur petroleum coke. Maximum rates are for each unit. NOTE: SCC code for petroleum coke is 10100801. (Note: No change as a result of this application).		

**Segment Description and Rate: Segment 2 of 4**

1. Segment Description (Process/Fuel Type): External Combustion Boilers; Electric Generation; Bituminous/Subbituminous Coal; Pulverized Coal: Dry Bottom		
2. Source Classification Code (SCC): 1-01-002-02	3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 245.8	5. Maximum Annual Rate: 2,153,208	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: Variable	8. Maximum % Ash: 9	9. Million Btu per SCC Unit: 25
10. Segment Comment: Maximum rates are for each unit. (Note: No change as a result of this application)		

**EMISSIONS UNIT INFORMATION**

Section [1]  
 SJRPP Units 1 and 2

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

**Segment Description and Rate: Segment 3 of 4**

1. Segment Description (Process/Fuel Type): External Combustion Boilers; Electric Generation; Natural-Gas Boilers >100 MMBtu/hr		
2. Source Classification Code (SCC): 1-01-006-01		3. SCC Units: Million Cubic Feet Burned
4. Maximum Hourly Rate: 0.685	5. Maximum Annual Rate: 6,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,022
10. Segment Comment: Maximum hourly rate = $700 \text{ MMBtu/hr} / 1022 \text{ MMBtu}/10^6 \text{ ft}^3 = 0.685 \times 10^6 \text{ ft}^3/\text{hr}$ Maximum annual rate = $700 \text{ MMBtu/hr} / 1022 \text{ MMBtu}/10^6 \text{ ft}^3 \times 8,760 \text{ hr/yr} = 6,000 \times 10^6 \text{ ft}^3$ Natural gas used during startup only. Maximum hourly rate of 700 MMBtu/hr based on 28 igniters each rated at 25 MMBtu/hr. (Note: Natural gas used for startup and flame stabilization).		

**Segment Description and Rate: Segment 4 of 4**

1. Segment Description (Process/Fuel Type): External Combustion Boilers; Electric Generation; Distillate Oil - Grades 1 or 2 oil		
2. Source Classification Code (SCC): 1-01-005-01		3. SCC Units: 1,000 Gallons burned
4. Maximum Hourly Rate: 7.1	5. Maximum Annual Rate: 62,196	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 138
10. Segment Comment: Maximum hourly rate = $980 \text{ MMBtu/hr} / 138 \text{ MMBtu}/1,000 \text{ gallon} = 7.1 \times 10^3 \text{ gallons/hr}$ . Maximum annual rate = $7.1 \times 10^3 \text{ gallons/hr} \times 8,760 \text{ hr/yr} = 62,196 \times 10^3 \text{ gallons/yr}$ . No. 2 fuel oil used for startup and flame stabilization only. Maximum hourly rate of 980 MMBtu/hr based on 28 igniters each rated at 35 MMBtu/hr.		

**EMISSIONS UNIT INFORMATION**

Section [1]  
SJRPP Units 1 and 2

**E. EMISSIONS UNIT POLLUTANTS**

**List of Pollutants Emitted by Emissions Unit**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NO <sub>x</sub>	204 and 205	139 and 032	EL
CO			NS
SO <sub>2</sub>	039		EL
VOC			NS
PM	010		EL
PM <sub>10</sub>	010		NS

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
 SJRPP Units 1 and 2

Page [1] of [6]  
 Nitrogen Oxides - NO<sub>x</sub>

**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>NO<sub>x</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 383.6 lb/hour                      119.6 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>280 lb/10<sup>6</sup> ft<sup>3</sup></b> Reference: <b>AP-42, Section 1.4</b>		7. Emissions Method Code: <b>3</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>See Table 2 for emissions calculation.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>These emissions only represent the components for natural gas firing in the igniters without controls listed in Section A of this application. Distillate oil usage is currently authorized. Each boiler's overall emissions are primarily a result of coal/pet coke firing.</b>			



**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
 SJRPP Units 1 and 2

Page [1] of [6]  
 Nitrogen Oxides - NO<sub>x</sub>

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -  
 ALLOWABLE EMISSIONS**

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): <b>No changes in allowable emissions result from the project.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**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>CO</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 115.1 lb/hour                      35.9 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: 84 lb/10 <sup>6</sup> ft <sup>3</sup> Reference: AP-42, Section 1.4		7. Emissions Method Code: 3	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From:                      To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table 2 for emissions calculation.			
11. Potential, Fugitive, and Actual Emissions Comment: These emissions only represent the components for natural gas firing in the igniters without controls listed in Section A of this application. Distillate oil usage is currently authorized. Each boiler's overall emissions are primarily a result of coal/pet coke firing.			

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
 SJRPP Units 1 and 2

Page [2] of [6]  
 Carbon Monoxide - CO

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -  
 ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): <b>No changes in allowable emissions result from the project.</b>	

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
 SJRPP Units 1 and 2

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 Sulfur Dioxide - SO<sub>2</sub>

**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>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>0.8 lb/hour                      0.3 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>0.6 lb/10<sup>6</sup> ft<sup>3</sup></b> Reference: <b>AP-42, Section 1.4</b>		7. Emissions Method Code: <b>3</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>See Table 2 for emissions calculation.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>These emissions only represent the components for natural gas firing in the igniters without controls listed in Section A of this application. Distillate oil usage is currently authorized. Each boiler's overall emissions are primarily a result of coal/pet coke firing.</b>			

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
 SJRPP Units 1 and 2

Page [3] of [6]  
 Sulfur Dioxide - SO<sub>2</sub>

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -  
 ALLOWABLE EMISSIONS**

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): <b>No changes in allowable emissions result from the project.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
SJRPP Units 1 and 2

Page [4] of [6]  
Volatile Organic Compounds - VOC

**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>VOC</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 7.5 lb/hour                      2.3 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>5.5 lb/10<sup>6</sup> ft<sup>3</sup></b> Reference: <b>AP-42, Section 1.4</b>		7. Emissions Method Code: <b>3</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>See Table 2 for emissions calculation.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>These emissions only represent the components for natural gas firing in the igniters without controls listed in Section A of this application. Distillate oil usage is currently authorized. Each boiler's overall emissions are primarily a result of coal/pet coke firing.</b>			

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
 SJRPP Units 1 and 2

Page [4] of [6]  
 Volatile Organic Compounds - VOC

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -  
 ALLOWABLE EMISSIONS**

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): <b>No changes in allowable emissions result from the project.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
SJRPP Units 1 and 2

Page [5] of [6]  
Particulate Matter - PM

**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>PM</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 2.6 lb/hour                      0.8 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>1.9 lb/10<sup>6</sup> ft<sup>3</sup></b> Reference: <b>AP-42, Section 1.4</b>		7. Emissions Method Code: <b>3</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>See Table 2 for emissions calculation.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>These emissions only represent the components for natural gas firing in the igniters without controls listed in Section A of this application. Distillate oil usage is currently authorized. Each boiler's overall emissions are primarily a result of coal/pet coke firing.</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 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): <b>No changes in allowable emissions result from the project.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**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>PM<sub>10</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 2.6 lb/hour                      0.8 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>1.9 lb/10<sup>6</sup> ft<sup>3</sup></b>  Reference: <b>AP-42, Section 1.4</b>		7. Emissions Method Code: <b>3</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>See Table 2 for emissions calculation.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>These emissions only represent the components for natural gas firing in the igniters without controls listed in Section A of this application. Distillate oil usage is currently authorized. Each boiler's overall emissions are primarily a result of coal/pet coke firing.</b>			

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
 SJRPP Units 1 and 2

Page [6] of [6]  
 Particulate Matter - PM<sub>10</sub>

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -  
 ALLOWABLE EMISSIONS**

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): <b>No changes in allowable emissions result from the project.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [1]  
SJRPP Units 1 and 2

**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: <b>27 %</b> Maximum Period of Excess Opacity Allowed: <b>6 min/hour</b>	
4. Method of Compliance: <b>COMS</b>	
5. Visible Emissions Comment: <b>40 CFR 60.42a(b)</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: <b>%</b> Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>60 min/hour</b>	
4. Method of Compliance: <b>COMS</b>	
5. Visible Emissions Comment: <b>Excess emissions resulting from startup, shutdown, and malfunction for no more than 2 hours in any 24 hour period. Rule 62-210.700(1)</b>	

**EMISSIONS UNIT INFORMATION**

Section [1]  
SJRPP Units 1 and 2

**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:	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: Units 1 and 2 have continuous opacity monitors (COMS) and continuous emissions monitors (CEMS) for sulfur dioxide and nitrogen oxides. There will be no changes in the existing COMS and CEMS as a result of the project.	

**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]  
SJRPP Units 1 and 2

**I. EMISSIONS UNIT ADDITIONAL INFORMATION**

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

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>07/03/2008</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>07/03/2008</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>07/03/2008</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 type="checkbox"/> Previously Submitted, Date _____ <input checked="" 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 checked="" type="checkbox"/> Previously Submitted, Date <u>07/03/2008</u> <input 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>07/03/2008</u> Test Date(s)/Pollutant(s) Tested: _____ <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 checked="" type="checkbox"/> Attached, Document ID: <u>Part II</u> <input type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

**Section [1]  
SJRPP Units 1 and 2**

**I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)**

**Additional Requirements for Air Construction Permit Applications**

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): <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**

See Part II.
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**PART II**



**APPLICATION FOR MINOR SOURCE AIR CONSTRUCTION PERMIT  
FOR THE ADDITION OF NATURAL GAS FUEL  
IN SJRPP BOILERS 1 & 2 (EU IDS 016 & 017)**

JEA is seeking authorization from the Florida Department of Environmental Protection (FDEP) to install new fuel igniters in Boiler Nos. 1 and 2 for the purpose of adding natural gas as startup fuel. Currently, Boiler Nos. 1 and 2 are authorized to utilize distillate oil, which is used for startup and flame stabilization. The new igniters would fire natural gas for startup and flame stabilization. Igniters using distillate oil would remain as a capability. The addition of natural gas as a startup/flame stabilization fuel will result in lower nitrogen oxide (NO<sub>x</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and particulate matter/particulate matter less than 10 microns (PM/PM<sub>10</sub>) emissions than the current use of distillate oil. Volatile organic compound (VOC) emissions may increase if used at the same annual heat input rate as distillate oil, but the net increase of emissions will be below the prevention of significant deterioration (PSD) significant emission rates. Based on the most recent 5 years of annual operating reports, the emissions due to distillate oil are less than 1 percent of the total emissions. There are no other changes in Units 1 and 2 as a result of this project.

St. Johns River Power Park (SJRPP) is located at 11201 New Berlin Road, Jacksonville, Duval County, Florida, and is adjacent to the JEA Northside Generating Station. Both facilities are covered under one Title V Permit (Final Title V Permit No. 0310045-016-AV).

Golder Associates Inc. (Golder) was contracted to prepare the necessary air permit application seeking authorization to install new natural gas igniters in SJRPP Boiler Nos. 1 and 2. The air permit application consists of the appropriate applications form [Part I; DEP Form 62-210.900(1)], a technical description of the project, and rule applicability for the project.

The new igniters will be rated at 25 million British thermal units per hour (MMBtu/hr) for natural gas. A total of 28 igniters are needed for each boiler unit. The distillate oil igniters are rated at 35 MMBtu/hr. The project includes installation of natural gas piping and instrumentation, igniter gas header, igniter gas header junction box, and igniter group control cabinet.

### **Rule 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 at Rule 62-212.400, Florida Administrative Code.

A "major facility" is defined as any 1 of 28 named source categories that have the potential to emit 100 tons per year (TPY) or more, or any other stationary facility that has the potential to emit 250 TPY 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 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 significant emission rates.

PSD review is used to determine whether significant air quality deterioration will result from the new or modified facility. Federal PSD requirements are contained in Title 40, Part 52.21 of the Code of Federal Regulations (40 CFR 52.21), *Prevention of Significant Deterioration of Air Quality*. The State of Florida has adopted the federal PSD regulations by reference [Rule 62-212.400, Florida Administrative Code (F.A.C.)]. Major facilities and major modifications are required to undergo the following analysis related to PSD for each pollutant emitted in significant amounts:

- Control technology review;
- Source impact analysis;
- Air quality analysis (monitoring);
- Source information; and
- Additional impact analyses.

SJRPP is part of the JEA Northside Generating Station/SJRPP complex, which is a major facility under FDEP Rules. Because there is a physical change with the addition of natural gas igniters, the project is a potential modification as defined in the FDEP Rules in 62-210.200 and under the PSD

rules in 62-212.400, F.A.C. PSD review would be required for the project if there were a significant net increase in emissions.

Since natural gas will be used in addition to currently permitted distillate oil, the comparison is made based on the projected future actual emissions due to natural gas-firing and the baseline actual emissions due to distillate oil-firing. The baseline actual emissions for distillate oil-firing are the emissions over a consecutive 24-month period within the 5 years immediately preceding the date that a complete application is submitted. The use of different consecutive 24-month periods for each pollutant is allowed. For an existing facility 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 significant emission rates for any applicable pollutant. The net emissions increase is determined using the baseline-to-projected actual test. In this comparison, if the projected actual emissions minus the baseline actual emissions equal or exceed the PSD significant emission rates, then PSD review would apply.

Presented in Table 1 is the heat input from distillate oil-firing reported in the Annual Operating Report (AOR) for the period 2003 through 2007. This table also presents the total actual heat input from all fuels for Units 1 and 2, as well as the percentage of distillate oil-firing of the total heat input, which is less than 1 percent.

Table 2 presents the projected actual annual emissions due to natural gas-firing, which is based on the maximum annual heat input from distillate oil-firing for the period 2003 through 2007. Table 2 also presents the potential hourly emissions due to natural gas-firing, which is based on potential hourly heat input of all 28 igniters, each rated at 25 MMBtu/hr. Emission factors used are from AP-42. Table 3 presents each calendar year emissions from oil firing for the period 2003 through 2007 and Table 4 presents the average emissions for each consecutive 2-year period based on the calendar year emissions in Table 3. The use of calendar year dates from the AOR is representative of historic normal operation. The annual average emissions for each consecutive 2-year period are consistent with the definition of baseline actual emissions for fossil fuel fired steam electric generating units. The highest consecutive 2 years for emissions in Tables 4 are proposed as the basis for future comparisons.

The maximum 2-year average baseline emissions from Table 4 are compared to the future projected actual emissions and the increases or decreases in emissions are compared to the PSD significant emission rates. As shown in Table 5, the use of natural gas instead of distillate oil will result in

decrease in NO<sub>x</sub>, CO, SO<sub>2</sub>, and PM/PM<sub>10</sub> emissions. The slight increase in VOC emissions will be much lower than the PSD significant emission rate for VOC. The emissions in Table 5 are based on emission factors without consideration of control equipment that may be operating. As a result, the projected actual emissions are conservatively estimated. It should be noted that since the maximum heat input for natural gas is less than distillate oil, the future projected emissions are likely to be less than those shown in Table 5 if natural gas is used instead of distillate oil. This is because the duration of startup or flame stabilization would not change with the use of natural gas. Rather these durations are dictated by the unit's startup procedure and coal condition.

The proposed conditions for the addition of natural gas fuel for startup/flame stabilization are presented below:

Current Title V Permit Condition:

D.3. Methods of Operation.

- a. The only fuels allowed to be fired are coal, a coal blend with a maximum of 30 percent petroleum coke (by weight), new No. 2 distillate fuel oil, and "on-specification" used oil.
- b. The new No. 2 fuel oil shall be used for startup and low load operation.

Requested Change (change shown in bold):

D.3. Methods of Operation.

- a. The only fuels allowed to be fired are coal, a coal blend with a maximum of 30 percent petroleum coke (by weight), new No. 2 distillate fuel oil, **natural gas** and "on-specification" used oil.
- b. The new No. 2 fuel oil **and/or natural gas** shall be used for startup, **and** low load operation **and flame stabilization**.

**TABLE 1**  
**SJRPP UNITS 1 & 2 ANNUAL HEAT INPUTS, 2003-2007**

Year	Heat Input from Distillate Oil (MMBtu/yr)			Total Actual Heat Input (MMBtu/yr)			Distillate Oil Percentage of the Total		
	Unit 1	Unit 2	Total	Unit 1	Unit 2	Total	Unit 1	Unit 2	Average
2007	122,889	119,053	241,942	46,564,836	47,370,460	93,935,296	0.26%	0.25%	0.26%
2006	173,742	173,328	347,070	49,590,566	44,057,428	93,647,994	0.35%	0.39%	0.37%
2005	323,886	208,104	531,990	40,576,121	44,879,935	85,456,056	0.80%	0.46%	0.62%
2004	507,564	365,286	872,850	51,559,458	39,381,272	90,940,730	0.98%	0.93%	0.96%
2003	349,692	107,640	457,332	46,416,440	48,376,056	94,792,496	0.75%	0.22%	0.48%

**TABLE 2**  
**FUTURE PROJECTED ACTUAL EMISSIONS FOR UNITS 1 & 2 DUE TO NATURAL GAS FIRING**

Pollutant	Potential Hourly	Annual	Natural Gas	Natural Gas Consumption		Emission	Hourly	Annual
	Heat Input <sup>a</sup> (MMBtu/hr)	Heat Input <sup>b</sup> (MMBtu/yr)	Heat Content <sup>c</sup> (MMBtu/10 <sup>6</sup> scf)	Hourly (10 <sup>6</sup> scf/hr)	Annual (10 <sup>6</sup> scf/yr)	Factor <sup>d</sup> (lb/10 <sup>6</sup> scf)	Emissions (lb/hr)	Emissions (TPY)
NO <sub>x</sub>	1,400.0	872,850	1,022	1.37	854.1	280	383.6	119.6
CO	1,400.0	872,850	1,022	1.37	854.1	84	115.1	35.9
SO <sub>2</sub>	1,400.0	872,850	1,022	1.37	854.1	0.6	0.8	0.3
VOC	1,400.0	872,850	1,022	1.37	854.1	5.5	7.5	2.3
PM	1,400.0	872,850	1,022	1.37	854.1	1.9	2.6	0.8
PM <sub>10</sub>	1,400.0	872,850	1,022	1.37	854.1	1.9	2.6	0.8

<sup>a</sup> Hourly heat input based on 28 igniters for each unit, each igniter rated at 25 MMBtu/hr.

<sup>b</sup> Annual heat input based on maximum heat input due to distillate oil firing during the period 2003-2007, see Table 1.

<sup>c</sup> Based on natural gas heat content of 1,022 Btu/scf.

<sup>d</sup> Tables 1.4-1 and 1.4-2, Section 1.4, AP-42.

**TABLE 3**  
**ANNUAL EMISSIONS REPORTED**  
**IN 2003-2007 ANNUAL OPERATING REPORTS**  
**FOR DISTILLATE OIL FIRING**

<b>Year</b>	<b>Pollutant</b>	<b>Unit 1 (tons)</b>	<b>Unit 2 (tons)</b>	<b>Total (tons)</b>
2007	NO <sub>x</sub>	26.0	26.5	52.5
	CO	15.5	11.9	27.4
	SO <sub>2</sub>	0.9	0.5	1.4
	VOC	0.090	0.087	0.18
	PM	3.50	0.16	3.66
	PM <sub>10</sub>	0.00099	0.00096	0.0019
2006	NO <sub>x</sub>	35.3	38.6	73.9
	CO	18.3	16.5	34.8
	SO <sub>2</sub>	0.86	0.74	1.60
	VOC	0.13	0.13	0.25
	PM	0.0028	0.0028	0.0055
	PM <sub>10</sub>	0.0014	0.0014	0.0028
2005	NO <sub>x</sub>	70.1	44.4	114.5
	CO	28.2	16.5	44.7
	SO <sub>2</sub>	1.74	1.18	2.92
	VOC	0.23	0.15	0.39
	PM	0.0052	0.0033	0.0085
	PM <sub>10</sub>	0.0026	0.0017	0.0042
2004	NO <sub>x</sub>	127.5	84.7	212.2
	CO	46.5	45.6	92.1
	SO <sub>2</sub>	3.40	2.80	6.20
	VOC	0.37	0.25	0.62
	PM	0.0081	0.0058	0.0139
	PM <sub>10</sub>	0.0040	0.0029	0.0070
2003	NO <sub>x</sub>	90.5	28.0	118.5
	CO	42.8	13.5	56.3
	SO <sub>2</sub>	1.84	0.60	2.44
	VOC	0.25	0.08	0.33
	PM	2.5340	0.7800	3.3140
	PM <sub>10</sub>	1.2670	0.3900	1.6570

**TABLE 4**  
**ANNUAL AVERAGE EMISSIONS**  
**FOR UNITS 1 & 2 DUE TO DISTILLATE OIL FIRING**  
**FOR EACH CONSECUTIVE TWO-YEAR PERIOD, 2003-2007**

<b>Pollutant</b>	<b>2007-2006 (tons)</b>	<b>2006-2005 (tons)</b>	<b>2005-2004 (tons)</b>	<b>2004-2003 (tons)</b>
NO <sub>x</sub>	63.2	94.2	163.4	165.4
CO	31.1	39.8	68.4	74.2
SO <sub>2</sub>	1.50	2.26	4.56	4.32
VOC	0.21	0.32	0.50	0.47
PM	1.83	0.0070	0.0112	1.66
PM <sub>10</sub>	0.0024	0.0035	0.0056	0.83



**TABLE 5**  
**PSD APPLICABILITY - SJRPP UNITS 1 & 2**  
**NATURAL GAS FIRING DURING STARTUP**

<b>Pollutant</b>	<b>Maximum 2-Year Average Emissions<sup>a</sup> (TPY)</b>	<b>Future Projected Actual Emissions<sup>b</sup> (TPY)</b>	<b>Increase/Decrease in Emissions (Future - Current Actual) (TPY)</b>	<b>PSD Significant Emission Rates (TPY)</b>
NO <sub>x</sub>	165.35	119.57	-45.8	40
CO	74.2	35.87	-38.3	100
SO <sub>2</sub>	4.56	0.26	-4.3	40
VOC	0.50	2.35	1.8	40
PM	1.83	0.81	-1.0	25
PM <sub>10</sub>	0.83	0.81	-0.02	15

<sup>a</sup> See Table 4.

<sup>b</sup> See Table 2.