

**INTEROFFICE MEMORANDUM**

TO: Trina Vielhauer

THRU: Jeff Koerner *JK*

FROM: Bruce Mitchell *BM*

DATE: March 1, 2006

SUBJECT: JEA  
Northside Generating Station/St. Johns River Power Park/Separation Technologies Inc.  
Preliminary Draft AC and DRAFT Title V Air Operation Permit Revision  
0310045-015-AC/0310045-016-AV

Attached is the Preliminary Draft AC and DRAFT Title V Permit Revision, Project Nos. 0310045-015-AC/0310045-016-AV.

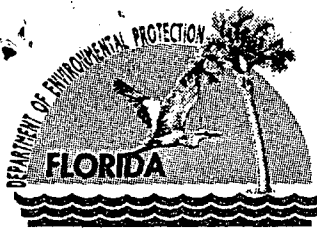
The subject of the AC permit is: (1) revise Table 6 – Part B (PSD-FL-010C), to better describe the fugitive and minor source emissions units/points and to replace the perceived particulate matter (PM/PM<sub>10</sub>) emission standards with visible emission standards, which shall also be used for compliance purposes, and to recognize the same changes to the PSD permit's text contained in the Title V permit; (2) allow the removal of a baghouse control system associated with four minor transfer points within the Rotary Railcar Dumper Building (RRDB) and continue the current practice of using wet suppression to control the fugitive emissions of particulate matter when handling, loading and unloading materials (note: the RRDB is domed and mostly enclosed); (3) modify the excess emissions language related to the JEA's NGS CFB Units Nos. 1 and 2; and, (4) clarify data substitution related to compliance demonstration for SO<sub>2</sub> and NO<sub>x</sub> for JEA's NGS Units Nos. 1 and 2.

The subject of the Title V permit revision is: (1) incorporate the terms and conditions of air construction permit, No. 0310001-002-AC, for the Separation Technologies LLC's Separation Technologies, Inc. (STI) fly ash beneficiation processing operation, which is located adjacent/contiguous to SJRPP and receives the fly ash from the SJRPP operation; (2) incorporate the terms and conditions of air construction permit, No. 0310045-014-AC/PSD-FL-010E, which allowed the SJRPP's Units 1 and 2 to fire up to 30% petroleum coke; (3) incorporate the terms and conditions of air construction permit, No. 0310001-015-AC/PSD-FL-010G, which amended Table 6 – Part B, SJRPP's Materials Handling and Storage Operations; (4) modify the excess emissions terms and conditions related to startups, shutdowns, and malfunctions of JEA's NGS CFB Units 1 and 2; (5) clarify data substitution related to compliance demonstration for SO<sub>2</sub> and NO<sub>x</sub> for JEA's NGS Units Nos. 1 and 2; (6) in Appendix I-1, List of Insignificant Emissions Units and/or Activities, remove the qualifier "Not Federally Enforceable" from the listing of "VII. SJRPP Emergency Diesel Fire Pump", which was placed in the appendix through the PROPOSED Determination and PROPOSED Title V Permit Renewal permit, No. 0310045-011-AV; and, add two diesel-fired emergency generators, which are being removed and brought from the Kennedy Generating Station; (7) in Appendix U-1, List of Unregulated Emissions Units and/or Activities, add a 3,000 gallon diesel storage tank, which is being removed and brought from the Kennedy Generating Station; and, (8) add JEA's NGS CFB Boilers [EUs -026 and -027 (EPA's ID: Nos. 2A and 1A, respectively)] to the Acid Rain Permit.

JEA's representatives are reviewing the projects for comments.

Attachments

TLV/jk/bm



# Department of Environmental Protection

Jeb Bush  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Colleen M. Castille  
Secretary

Month Day, 2006

CERTIFIED MAIL – Return Receipt Requested

Mr. James M. Chansler, P.E., D.P.A.  
V.P., Operations and Maintenance and Responsible Official  
JEA  
21 West Church Street  
Jacksonville, Florida 32202

Re: Draft Air Construction (AC) Permit Project Nos.: 0310045-015-AC/PSD-FL-010G/PSD-FL-265C  
Affected AC Permits Nos.: 0310045-003-AC/PSD-FL-010/PSD-FL-265, PSD-FL-010C, and 0310045-012-AC/  
PSD-FL-010E  
Affected Siting Permit No.: PA 81-13  
JEA: Northside Generating Station and St. Johns River Power Park

Dear Mr. Chansler:

The subject of this permit (letter) is to:

1. Revise "Revised Table 6 – Part B" (PSD-FL-010C), as follows:
  - a. Better describe the fugitive and minor source emissions units/points and to remove the emissions limits for PM/PM<sub>10</sub>, including those controlled by a baghouse control system, because they were imposed from values established for the modeling evaluation, in addition and due to this direction, changes will be made to some conditions established in AC permit No. 0310045-012-AC/PSD-FL-010E;
  - b. Change the visible emission limit from "10% opacity" to "5% opacity" for those minor emissions units/points controlled by a baghouse control system;
  - c. Add minor emission units/points to the table that have been identified by the applicant that were built and exist in these operations, but had not yet been identified in previous permits (in the table, see those emission units/points identified in "*Italics*");
  - d. Allow a change to the Rotary Railcar Unloader & Transfer Points operation within the Rotary Railcar Dumper Building (RRDB) at the JEA's St. Johns River Power Park (SJRPP) [specifically, allow the removal of a baghouse associated with the four transfer points within the RRDB and continue the current practice of using wet suppression to control emissions of particulate matter when handling, loading and unloading materials; in addition, the RRDB is domed and mostly enclosed]; and,
  - e. Establish that the visible emission limits established in Revised Table 6 – Part B, SJRPP: Materials Handling and Storage Operations shall be used for compliance purposes.
2. Recognize the opacity changes related to the emissions units in the permit, No. PSD-FL-010, and the Revised Table 6 – Part B (PSD-FL-010C); also, the specific condition (#3) will establish that the visible emissions tests shall be used for compliance purposes.
3. Change the excess emissions language related to the JEA's NGS CFB Units Nos. 1 and 2 that was established in the AC permit No. 0310045-003-AC/PSD-FL-265 (see condition No. 26); and,
4. Change the specific conditions related to compliance demonstration for SO<sub>2</sub> and NO<sub>x</sub> for the JEA's NGS CFB Units Nos. 1 and 2, specifically remove the use of missing data substitution, which is acceptable for purposes for Acid Rain allowances, to avoid the conflict when determining the compliance average with the emission limit and the associated timeframe that was established in AC permit, No. 0310045-003-AC/PSD-FL-265 [see conditions Nos. 31.(a) and 32.(a), respectively].

"More Protection, Less Process"

Printed on recycled paper.

Therefore, the following are changed:

**1. PSD-FL-010C: Table 6 – Part B (SJRPP) and associated text in 0310045-011-AV pursuant to PSD-FL-010.**

The Department finds the following requests acceptable because there are no apparent changes in actual emissions and the changes that are being recommended are more reflective of what actually exists at the JEA's SJRPP facility for the materials handling and storage operations:

- a. Change the title of the table from "Table 6 – Part B" to "Revised Table 6 – Part B, SJRPP: Materials Handling and Storage Operations" (attached) and adding other minor emission units/points to the table that have been identified by the applicant that were built and exist in these operations, but had not yet been identified in previous permits (in the table, see those emission units/points identified in "*Italics*");
- b. Removal of the PM/PM<sub>10</sub> emissions limits for the emissions units/points 4 thru 19 [Revised Table 6: PSD-FL-010 (10/28/86)], including those controlled by a baghouse control system, because they were imposed from values established for a modeling evaluation;
- c. Change the allowable visible emissions limits from "10% opacity" to "5% opacity" for those minor emissions units/points controlled by a baghouse control system;
- d. Continue the air quality control system requirement of "wet suppression" for fugitive PM emissions control from the Rotary Railcar Unloader – Fuel Transfer Points (formerly DC-1) [see Emissions Unit No. -023a (formerly #19 (Revised Table 6: PSD-FL-010 (10/28/86))]. In addition, the "Railcar Rotary Dumper – Building Emissions" and the "Rotary Railcar Unloader – Fuel Transfer Points (formerly DC-1)" will be combined and be considered as one emissions unit operation (EU No. -023a) and renamed as the "Rotary Railcar Dumper Building – Unloading and Transfer Points"; and,
- e. Establish that the visible emission limits are to be used for compliance purposes (see foot notes).

Therefore, the following are changed:

**FROM:**

Table 6 – Part B (SJRPP PSD Permit: PSD-FL-010C). (attached)

**TO:**

Revised Table 6 – Part B. SJRPP: Materials Handling and Storage Operations. (attached)

In addition and for purposes of continuity, the Department is also going to reflect changes of Title V specific conditions that are due to the miscellaneous changes requested for the table and are derived from PSD permit, No. PSD-FL-010, as follows:

**FROM:**

1. SC E.1. of 0310045-011-AV.

E.1. Revised Tables 2 and 6, PSD-FL-010, amended October 28, 1986, are incorporated by reference (attached) for emissions units 1 thru 16 and 4 thru 17, respectively.  
[PSD-FL-010, amended October 28, 1986]

2. SC E.3. of 0310045-011-AV.

E.3. Controls. The permittee shall maintain and continue to use the control systems and control techniques established to minimize particulate matter emissions from emissions units 4 thru 17 in Revised Table 2, PSD-FL-010, amended October 28, 1986.  
[Rules 62-4.070 and 62-212.400(6), F.A.C.; Part IV, Rule 2.401, JEPB; PSD-FL-010; and, PSD-FL-010, amended October 28, 1986]

3. SC E.4. of 0310045-011-AV.

E.4. Visible Emissions. An owner or operator shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, visible emissions greater than 10 percent opacity, as established in Revised Table 6, PSD-FL-010, amended October 28, 1986.  
[PSD-FL-010 and BACT; PA 81-13; and, PSD-FL-010, amended October 28, 1986]

4. SC E.5. of 0310045-011-AV.

E.5. Particulate Matter. Particulate matter emissions shall not exceed the limits established in Revised Table 6, PSD-FL-010, amended October 28, 1986.  
[Rules 62-4.070 and 62-212.400(6), F.A.C.; Part IV, Rule 2.401, JEPB; and, PSD-FL-010, amended October 28, 1986]

5. SC E.9. of 0310045-011-AV.

E.9. Visible Emissions. EPA Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity compliance pursuant to Chapter 62-297, F.A.C., and 40 CFR 60, Appendix A. If the opacity limits are not met for those emissions units that exhaust through a stack, permit compliance shall be determined on the basis of mass emission rate tests. See specific condition E.10.  
[40 CFR 60.252(c); and, PSD-FL-010 and PA 81-13]

6. SC E.10. of 0310045-011-AV.

E.10. Particulate Matter. In accordance with Chapter 62-297, F.A.C., EPA Method 5 shall be used to determine compliance with the particulate matter emission limitations established in Revised Table 6, PSD-FL-010, for emissions units 4 thru 17 that exhaust through a stack. If the opacity limits are not met for those emissions units that exhaust through a stack, permit compliance shall be determined on the basis of mass emission rate tests. See specific condition E.9.  
[Rules 62-4.070 and 62-213.440, F.A.C.; Part V, Rule 2.501, JEPB; and, PSD-FL-010, amended October 28, 1986]

7. SC F.1. of 0310045-011-AV.

F.1. Revised Tables 2 and 6, PSD-FL-010, amended October 28, 1986, are incorporated by reference (attached) for emissions unit 18 (Table 2) and emissions unit 19 (Table 6).  
[PSD-FL-010; PSD-FL-010, amended 10/28/1986; and, 0310045-012-AC/PSD-FL-010E]

8. SC F.3. of 0310045-011-AV.

F.3. Controls. The permittee shall maintain and continue to use the control systems and control techniques established to minimize particulate matter emissions from emissions unit 18 in Revised Table 2, PSD-FL-010, amended October 28, 1986.  
[Rules 62-4.070 and 62-212.400(6), F.A.C.; Part IV, Rule 2.401, JEPB; PSD-FL-010; PSD-FL-010, amended 10/28/1986; and, 0310045-012-AC/PSD-FL-010E]

9. SC F.4. of 0310045-011-AV.

F.4. Visible Emissions. Visible emissions shall not exceed the following:

- a. Limestone and flyash handling systems 10% opacity
- b. Limestone transfer points 10% opacity
- c. Limestone silo 10% opacity
- d. Reserved.
- e. Flyash silos 10% opacity

[PSD-FL-010 and PA 81-13; and, 0310045-012-AC/PSD-FL-010E]

10. SC F.5. of 0310045-011-AV.

F.5. Particulate Matter. Particulate matter emissions shall not exceed the following:

- a. Limestone silo 0.05 lb/hr
- b. Limestone hopper/transfer conveyors 0.65 lb/hr
- c. Limestone transfer points 0.4 lb/hr
- d. Reserved.
- e. Flyash handling system 0.2 lb/hr

[Rule 62-212.400(6), F.A.C.; Part IV, Rule 2.401, JEPB; PSD-FL-010 and PA 81-13; and, 0310045-012-AC/PSD-FL-010E]

11. SC F.9. of 0310045-011-AV.

F.9. Visible Emissions. EPA Method 9 shall be used to determine opacity compliance pursuant to Chapter 62-297, F.A.C., and 40 CFR 60, Appendix A.  
[Rule 62-213.440, F.A.C.; Part V, Rule 2.501, JEPB; and, PSD-FL-010 and PA 81-13]

12. SC F.10. of 0310045-011-AV.

F.10. Particulate Matter. In accordance with Chapter 62-297, F.A.C., EPA Method 5 shall be used to determine compliance with the particulate matter emission limitations established in Revised Table 6, PSD-FL-010, amended October 28, 1986, for emissions unit 19 that exhaust through a stack. If the opacity limits are not met for those emissions units that exhaust through a stack, permit compliance shall be determined on the basis of mass emission rate tests.  
[Rules 62-4.070 and 62-213.440, F.A.C.; Part V, Rule 2.501, JEPB; PSD-FL-010; PSD-FL-010, amended October 28, 1986; and, 0310045-012-AC/PSD-FL-010E]

**TO:**

1. SC E.1. of 0310045-011-AV.

E.1. Revised Table 6 – Part B, SJRPP: Materials Handling and Storage Operations, is incorporated by reference (attached).  
[PSD-FL-010; BACT; PA 81-13; PSD-FL-010, amended 10/28/1986; PSD-FL-010C, clerked July 29, 1999; 0310045-012-AC/PSD-FL-010E; and, 0310045-015-AC/PSD-FL-010G]

2. SC E.3. of 0310045-011-AV.

E.3. Air Quality Control Systems (AQCS). The permittee shall maintain and continue to use the AQCS established in Revised Table 6 – Part B, SJRPP: Materials Handling and Storage Operations, to minimize particulate matter emissions.  
[Rules 62-4.070(3) and 62-212.400(6), F.A.C.; Part IV, Rule 2.401, JEPB; PSD-FL-010; BACT; PA 81-13; PSD-FL-010, amended October 28, 1986; PSD-FL-010C, clerked July 29, 1999; 0310045-012-AC/PSD-FL-010E; and, 0310045-015-AC/PSD-FL-010G]

3. SC E.4. of 0310045-011-AV.

E.4. Visible Emissions. Visible emissions shall be used for compliance purposes and not exceed the opacity limits established in Revised Table 6 – Part B, SJRPP: Materials Handling and Storage Operations.  
[PSD-FL-010; BACT; PA 81-13; PSD-FL-010, amended October 28, 1986; PSD-FL-010C, clerked July 29, 1999; 0310045-012-AC/PSD-FL-010E; and, 0310045-015-AC/PSD-FL-010G]

4. SC E.5. of 0310045-011-AV.

E.5. Reserved.  
[0310045-015-AC/PSD-FL-010G]

5. SC E.9. of 0310045-011-AV.

E.9. Visible Emissions. Visible emissions tests shall be performed for the affected emissions points in Revised Table 6 - Part B, SJRPP: Materials Handling and Storage Operations for compliance purposes, in accordance with the testing frequency established in the table, and while using EPA Method 9, 40 CFR 60, Appendix A, and Chapter 62-297, F.A.C.  
[PSD-FL-010; PA 81-13; Part V, Rule 2.501, JEPB; and, 0310045-015-AC/PSD-FL-010G]

6. SC E.10. of 0310045-011-AV.

E.10. Reserved.  
[0310045-015-AC/PSD-FL-010G]

7. SC F.1. of 0310045-011-AV.

F.1. Revised Table 6 – Part B, SJRPP: Materials Handling and Storage Operations, is incorporated by reference (attached). [PSD-FL-010; BACT; PA 81-13; PSD-FL-010, amended October 28, 1986; PSD-FL-010C, clerked July 29, 1999; 0310045-012-AC/PSD-FL-010E; and, 0310045-015-AC/PSD-FL-010G]

8. SC F.3. of 0310045-011-AV.

F.3. Air Quality Control Systems (AQCS). The permittee shall maintain and continue to use the AQCS established in Revised Table 6 – Part B, SJRPP: Materials Handling and Storage Operations, to minimize particulate matter emissions. [Rules 62-4.070(3) and 62-212.400(6), F.A.C.; Part IV, Rule 2.401, JEPB; PSD-FL-010; BACT; PA 81-13; PSD-FL-010, amended October 28, 1986; PSD-FL-010C, clerked July 29, 1999; 0310045-012-AC/PSD-FL-010E; and, 0310045-015-AC/PSD-FL-010G]

9. SC F.4. of 0310045-011-AV.

F.4. Visible Emissions. Visible emissions shall be used for compliance purposes and not exceed the opacity limits established in Revised Table 6 – Part B, SJRPP: Materials Handling and Storage Operations. [PSD-FL-010; BACT; PA 81-13; PSD-FL-010, amended October 28, 1986; PSD-FL-010C, clerked July 29, 1999; 0310045-012-AC/PSD-FL-010E; and, 0310045-015-AC/PSD-FL-010G]

10. SC F.5. of 0310045-011-AV.

F.5. Reserved.  
[0310045-015-AC/PSD-FL-010G]

11. SC F.9. of 0310045-011-AV.

F.9. Visible Emissions. Visible emissions tests shall be performed for the affected emissions points in Revised Table 6 - Part B, SJRPP: Materials Handling and Storage Operations for compliance purposes, in accordance with the testing frequency established in the table, and while using EPA Method 9, 40 CFR 60, Appendix A, and Chapter 62-297, F.A.C. [PSD-FL-010; PA 81-13; Part V, Rule 2.501, JEPB; and, 0310045-015-AC/PSD-FL-010G]

12. SC F.10. of 0310045-011-AV.

F.10. Reserved.  
[0310045-015-AC/PSD-FL-010G]

2. PSD-FL-010 & PSD-FL-010C: Condition 3.

(1) 1<sup>st</sup> Paragraph: no change.

(2) 2<sup>nd</sup> Paragraph: The additional new condition will establish that the visible emissions standard will be used for compliance purposes and the compliance test method to be used is EPA Method 9, in accordance with 40 CFR 60, Appendix A, and Chapter 62-297, F.A.C. Therefore, the following is changed:

**FROM:**

Opacity tests shall be performed for the emissions points in Part C of revised Table 6 for compliance purposes, initial only using a Method 9 test. If the opacity limits are not met for those sources that exhaust through a stack, permit compliance shall be determined on the basis of mass emission rate test. In addition to these initial tests, a Method 9 test shall be conducted annually for the limestone silos, nonsaleable ash silos, and saleable ash silos.

**TO:**

Visible emissions tests shall be performed for the emissions points in Revised Table 6 - Part B, SJRPP: Materials Handling and Storage Operations for compliance purposes, in accordance with the testing frequency established in the table, and while using EPA Method 9, 40 CFR 60, Appendix A, and Chapter 62-297, F.A.C. The air quality control system requirements established in the table for each emissions point shall be used to minimize particulate matter emissions. See the following tables, which are attached: 1) PSD-FL-010: Tables 2 and 6. Allowable Emission Limits [Revised: From PSD Permit (dated October 28, 1986)]; 2) PSD-FL-010C: Table 6 - Part B (clerked July 29, 1999); and, 3) Revised Table 6 - Part B, SJRPP: Materials Handling and Storage Operations.

Visible emissions tests shall be performed for the emissions points in Part C of Revised Table 6 for compliance purposes, initial only using EPA Method 9, 40 CFR 60, Appendix A. If the opacity limits are not met for those sources that exhaust through a stack, permit compliance shall be determined on the basis of mass emission rate test using EPA Methods 1 - 5, 40 CFR 60, Appendix A. See the following table, which is attached: PSD-FL-010C: Table 6 - Part C (clerked July 29, 1999).

**3. 0310045-003-AC/PSD-FL-265: Condition 26. (SC H.21.: 0310045-011-AV).**

The Department finds the request to revise the excess emissions terms and conditions related to startups, shutdowns, and upsets/malfunctions of the JEA's Northside Generating Station (NGS) CFB Units 1 and 2 acceptable. The issue relates to the inertia associated with the large mass of bed material (typically on the order of 300 tons) that results in a longer response time than a traditional solid fuel unit. Both Excess Emissions regulations at Rules 62-210.700(1) and (5), F.A.C., allows the Department to evaluate emissions units on a case-by-case basis and consider operational variations in types of industrial equipment operations and to adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interests. Therefore, the following changes are made:

**FROM:**

26. Authorized Emissions. Notwithstanding other emission limits and standards established by this permit, excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized but in no case exceed twelve (12) hours in any 24-hour period for a startup on CFB Boilers Nos. 1 and 2 (which shall not be started up at the same time) or two (2) hours in any 24-hour period for other reasons unless specifically authorized by DEP or the ERMD-EQD for longer duration. The permittee shall submit a written procedure summarizing the current best operational practices to be followed and the anticipated emissions for startup and shutdown conditions within one year after initial startup of CFB Boiler No. 2, and shall update this document every 5 years (at operating permit renewal). The twelve (12) hours duration of excess emissions may be reduced through a permit revision based on the operating experience on CFB Boilers Nos. 1 and 2.  
[Rule 62-210.700, F.A.C.; and, 0310045-003-AC/PSD-FL-265]

**TO:**

26. Authorized Emissions. Notwithstanding other emission limits and standards established by this permit, excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided (1) that best operational practices are adhered to and (2) the duration of excess emissions shall be minimized but not exceed sixty (60) hours in any calendar month per emissions unit (CFBs Units Nos. 1 and 2). The permittee shall keep operational records necessary to demonstrate compliance with this restriction. Emissions data collected during periods of startup, shutdown, and malfunction shall be included when determining compliance with annual emission limits. The CFB Units shall not be started up at the same time. The permittee shall update the written procedure summarizing the current best operational practices to be followed every 5 years (at operating permit renewal).

Pursuant to Rule 62-210.200, F.A.C., Definitions, the following are defined:

- a. Startup: The commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.
- b. Shutdown: The cessation of the operation of an emissions unit for any purpose.

c. **Malfunction:** Any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department or appropriate Local Program.

[Rules 62-210.200 and 62-210.700(1), (5) & (6), F.A.C.; and, 0310045-015-AC/PSD-FL-265C]

**4. 0310045-003-AC/PSD-FL-265. Conditions 31.(a) and 32.(a) (SCs of H.28.a. and H.29.a., respectively: 0310045-011-AV).**

The Department finds the request acceptable to change the specific conditions related to compliance demonstration for SO<sub>2</sub> and NO<sub>x</sub> for the JEA's NGS CFB Units Nos. 1 and 2, specifically remove the use of missing data substitution, which is acceptable for purposes for Acid Rain allowances, to avoid the conflict when determining the compliance average with the emission limit and the associated timeframe that was established.

**FROM:**

**31. Sulfur Dioxide:**

(a) Compliance with sulfur dioxide (SO<sub>2</sub>) emissions limits in Conditions 14(a) and 14(c) shall be demonstrated with Continuous Emissions Monitoring Systems (CEMS's) installed, certified, operated and maintained in accordance with 40 CFR Part 75, based on 24-hour block and 30-day rolling averages, as applicable, and excluding periods of startup, shutdown, and malfunction. When monitoring data are not available, substitution for missing data shall be handled as required by the federal Acid Rain Program. Emissions recorded in parts per million shall be converted to lb/MMBtu using an appropriate F-factor for purposes of determining compliance with the emission limits in Conditions 14(a) and 14(c).

{Permitting Note: At least three (3) hours of data are required to establish a 24-hour average for CEMS data.}

[Applicant request; 0310045-003-AC/PSD-FL-265; and, 0310045-012-AC/PSD-FL-265B]

**32. Oxides of Nitrogen:**

(a) Compliance with the oxides of nitrogen (NO<sub>x</sub>) emissions limit in Condition 15(a) shall be demonstrated with a CEMS's installed, certified, operated and maintained in accordance with 40 CFR Part 75, based on a 30-day rolling average and excluding periods of startup, shutdown and malfunction. When monitoring data are not available, substitution for missing data shall be handled as required by the federal Acid Rain Program to calculate the 30-day rolling average.

[Applicant request; and, 0310045-003-AC/PSD-FL-265]

**TO:**

**31. Sulfur Dioxide:**

(a) Compliance with sulfur dioxide (SO<sub>2</sub>) emissions limits in Conditions 14(a) and 14(c) shall be demonstrated with Continuous Emissions Monitoring Systems (CEMSs) installed, certified, operated and maintained in accordance with 40 CFR Part 75, based on 24-hour block and 30-day rolling averages, as applicable, and excluding periods of startup, shutdown, and malfunction. Emissions recorded in parts per million shall be converted to lb/MMBtu using an appropriate F-factor for purposes of determining compliance with the emission limits in Conditions 14(a) and 14(c).

{Permitting Note: At least three (3) hours of data are required to establish a 24-hour average for CEMS data.}

[Applicant's request; 0310045-012-AC/PSD-FL-265B; and, 0310045-015-AC/PSD-FL-265C]



Mr. James M. Chansler  
JEA: Northside Generating Station and St. Johns River Power Park  
0310045-015-AC/PSD-FL-010G/PSD-FL-265C  
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32. Oxides of Nitrogen:

(a) Compliance with the oxides of nitrogen (NO<sub>x</sub>) emissions limit in Condition 15(a) shall be demonstrated with a CEMS's installed, certified, operated and maintained in accordance with 40 CFR Part 75, based on a 30-day rolling average and excluding periods of startup, shutdown and malfunction. The 30-day rolling averages will be determined based on hourly values calculated in accordance with Appendix F of 40 CFR Part 75.  
[Applicant's request; and, 0310045-015-AC/PSD-FL-265C]

This permit (letter) is issued pursuant to Chapter 403, Florida Statutes (F.S.). Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Sincerely,

Michael G. Cooke  
Director  
Division of Air Resource Management

MGC/sms/bm

cc: Mr. Bert Gianazza, P.E., JEA, Application Contact  
Mr. Frank Hrach, Project Manager, STI, Application Contact  
Mr. Richard Robinson, ERMD-EQD  
Mr. Hamilton Owen, DEP-SCO  
Mr. Gregg Worley, U.S. EPA, Region 4

TECHNICAL EVALUATION  
AND  
PRELIMINARY DETERMINATION

Northside Generating Station/St. Johns River Power Park/Separation Technologies, Inc.  
(NGS/SJRPP/STI)

Duval County

DEP File No.: 0310045-015-AC/PSD-FL-010G/PSD-FL-265C

Permitting Authority

Department of Environmental Protection  
Division of Air Resource Management  
Bureau of Air Regulation  
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Compliance and Enforcement Authority

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**A. Application Information**

**1. Applicant Name and Address**

JEA  
 21 West Church Street  
 Jacksonville, Florida 32202

R.O. and Authorized Representative: Mr. James M. Chansler, P.E., D.P.A.  
 V.P. - Operations and Maintenance

**2. Reviewing and Process Schedule**

- 03-18-2005: Date of Receipt of Application for Title V Permit Revision.
- 04-08-2005: E-mail from Bert Gianazza received.
- 04-25-2005: E-mail from Bert Gianazza received.
- 08-29-1005: Supplemental request from Mr. James M. Chansler received.
- 09-11-2005: E-mail with attachment from Bruce Kofler received.
- 10-14-2005: Supplemental information received.
- 10-28-2005: E-mail from Bert Gianazza received.
- 12-01-2005: Supplemental request from Mr. Bert Gianazza received.

**B. Facility Information**

**1. Facility Location**

Refer to Figures 1 and 2 below. The Northside Generating Station (NGS), the St. Johns River Power Park (SJRPP), and the Separation Technologies, Inc. (STI) operations are located approximately 1.5 miles north of the intersection of Highway 9A and 105 in Jacksonville, Duval County. The NGS facility is located adjacent to and contiguous with the SJRPP facility; and, the STI operations are located within the SJRPP property on leased land. The entire facility is approximately 60 kilometers and 97 kilometers from the Okefenokee and Wolf Island National Wilderness Areas, respectively; and, both of these areas are designated Class I PSD Areas. UTM coordinates for this facility are Zone 17; 446.9 km E; 3359.15 km N. This facility is located in an area that is in attainment (or designated as unclassifiable or maintenance) for all pollutants subject to a National Ambient Air Quality Standard (NAAQS).

**2. Standard Industrial Classification Codes (SIC)**

Industry Group No.	49	Electric, Gas, and Sanitary Services
Industry No.	4911	Electric Services

**3. Facility Category**

NGS, SJRPP and STI are collectively classified as a major facility under the Prevention of Significant Deterioration (PSD) program; and, the STI facility part will be considered part of the SJRPP facility for the purpose of PSD applicability. NGS, SJRPP and STI are also considered a single major source under the Title V Operating Permit program and have been assigned the facility identification number 310045 in the Department database (ARMS system). STI, by itself, is considered a minor source of operation. NGS and SJRPP are both subject to the Acid Rain program and have been assigned ORIS Codes 0067 and 0207, respectively. NGS and SJRPP are identified within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C.

#### 4. Regulatory Categories

Title III: The facility is a major source of hazardous air pollutants (HAPs).

Title IV: The facility operates units subject to the acid rain provisions of the Clean Air Act.

Title V: The facility is a Title V major source of air pollutants in accordance with Chapter 62-213, F.A.C.

PSD: The facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility operates units subject to the Standards of Performance for New Stationary Sources in 40 CFR Part 60.

NESHAP: The facility operates no units subject to the National Emissions Standards for Hazardous Air Pollutants in 40 CFR Part 63.

#### C. Project Description(s)

##### 1. SJRPP: Materials and Storage Operations - Rotary Dumper Activity Associated with the Rail Car Unloading.

Originally, JEA installed a baghouse control system associated with the Rail Car Unloading – Rotary Dumper operation for purposes of minimizing PM emissions at four (4) transfer points. Please note that the original Table 2 and subsequent Revised Table 2s, including Part B (PSD-FL-010C), already required “wet suppression” as a control technique for reducing fugitive PM emissions from the “Rail Car Unloading (Rotary Dumper)” operation. The request is to allow the removal of the rotary dumper baghouse control system at the transfer points because the materials being handled at these locations are also being controlled by wet suppression. Based on site inspections, there is very little fugitive particulate matter (PM) emissions being emitted from this operation due to the use of wet suppression spray and because the operation is located underneath a protective dome, which minimizes wind intrusion and weathering. Consequently, it doesn't seem appropriate to doubly control this small fugitive PM emissions activity with both wet suppression and a baghouse system. Therefore, the Department supports the removal of the baghouse control system associated with the Rail Car Unloading – Rotary Dumper operation (EU -023a) within the Rotary Railcar Dumper Building (RRDB) while continuing the use of wet suppression to minimize fugitive PM emissions from the affected emission units/points. Also, the Local Program (EQD) may require additional fugitive PM controls on the transfer points, if the operation ever becomes dusty. In addition, the RRDB and the Rail Car Unloading – Rotary Dumper will be combined into one emissions unit operation and be designated as “Rotary Railcar Dumper Building – Unloading and Transfer Points” (EU -023a).

##### 2. SJRPP: Materials and Storage Operations - Amend Revised Table 6 – Part B (see project PSD-FL-010C) for Particulate Matter/Particulate Matter with an Aerodynamic Diameter Less Than 10 Microns (PM/PM10) Emissions and Visible Emissions.

In Revised Table 6 – Part B (PSD-FL-010C), JEA requested that we remove the PM/PM<sub>10</sub> emission limits associated with the fuel, limestone, fly ash, bottom ash and gypsum materials handling and storage operations [Emission Units (EUs) Nos. 4 thru 19 in the original and “Revised” Table 6 (10/28/86)]. The potential PM/PM<sub>10</sub> emissions are mostly fugitive type and were used in a modeling evaluation in the original air construction/PSD permitting project, specifically PSD-FL-010, and ultimately ended up as limitations in the permit. All but eleven of the identified emission units/points (Nos. 4 thru 19) use the following air quality control systems, or combinations thereof, to minimize fugitive PM/PM<sub>10</sub> emissions from the material handling and storage operations: conditioned materials, wet suppression, water sprays, enclosures (total, partial, covers & wind screens), and best operating practices; and, the other eleven emission units/points have associated fabric filter control systems (baghouses) for controlling PM/PM<sub>10</sub> emissions.

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Besides having limitations for PM/PM<sub>10</sub> emissions, all of the emission units/points (EUs Nos. 4 thru 19) have visible emission limits, ranging from 5% to 10% opacity. All of the emission units/points with fabric filter control systems have a 10% opacity limit; and, for these emission units/points, the applicant requested that the 10% opacity limit be replaced with a 5% opacity limit as an offering for reasonable assurances of minimizing visible and fugitive PM/PM<sub>10</sub> emissions and to remove the PM/PM<sub>10</sub> mass emission limits (each emission unit/point operation has the potential to emit PM/PM<sub>10</sub> at less than 1 TPY). In addition, the applicant requested that the visible emissions limit be used for compliance purposes.

Based on the above discussion, the Department supports the requests for: 1) removing the PM/PM<sub>10</sub> emission limits from the affected emission units/points (EUs Nos. 4 thru 19) identified in the Revised Table 6 (10/28/86); 2) changing the visible emissions limit to 5% opacity for those emission units/points that are controlled by a fabric filter control system identified in the Revised Table 6 – Part B (PSD-FL-010C) and establish that the visible emissions limit be used for compliance purposes; and, 3) adding other emission units/points to the table that have been identified by the applicant that were built and exist in these operations, but had not yet been identified in previous permits (in the table, see those emission units/points identified in “*Italics*”). Therefore, an amended Revised Table 6 – Part B (PSD-FL-010G) will be proposed to incorporate the above noted and acceptable changes.

### **3. NGS: CFB Units Nos. 1 and 2 - Excess Emissions Issue Related to Rules 62-210.700(1) and (5), F.A.C.**

The circulating fluidized bed (CFB) boilers are state-of-the-art, low-emitting, clean coal technology units and are the largest CFBs in the world. Currently, NGS's Units 1 and 2 are allowed 2 hours of excess emissions for startup, shutdown, and malfunction in any 24-hour period. During a shutdown or in the event of a malfunction resulting in a loss of limestone feed to these units, the inertia associated with the large mass of bed material (typically on the order of 300 tons) results in a longer response time to bring the emissions unit under control than what is allowed by the rule. Since the initial startup of the CFBs, the frequency of malfunctions and outage time has been reduced dramatically per unit due to major capital investments and operating experience. Consequently, JEA is requesting some relief from the 2-hour per 24-hour regulation at Rules 62-210.700(1) and (5), F.A.C.

The Department has seen the statistical analyses of the predicted excess emissions related to the CFB Units Nos. 1 and 2 during shutdown and malfunction, which supports some type of change in the excess emissions timeframe allowed for these potential events. The inertia associated with the large mass bed of materials is recognized as a potential problem just based on the dynamics of the operation. Consequently, the Department supports a change in the excess emissions timeframe for each CFB unit for startup, shutdown and malfunction, and will propose that the “2 hours per 24-hour period per CFB” be changed to “60 hours per calendar month per CFB”. This change provides flexibility for these unique emissions units while maintaining allowable excess emissions for periods of startup, shutdown, and malfunction to less than 5% of maximum operation. Therefore, these changes will be proposed for the SIP air construction permit, No. 0310045-003-AC/PSD-FL-265, where the initial excess emissions limits were established.

### **4. 0310045-003-AC/PSD-FL-265. Conditions 31.(a) and 32.(a) (SCs of H.28.a. and H.29.a., respectively, of 0310045-011-AV).**

The Department finds the request acceptable to change the specific conditions related to compliance demonstration for SO<sub>2</sub> and NO<sub>x</sub> for the JEA's NGS Units Nos. 1 and 2, specifically remove the use of missing data substitution to avoid the conflict when determining the compliance average with the emission limit and the associated timeframe that was established. Only valid data can be used for

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determining compliance with an emissions standard. However, the use of missing data substitution is acceptable and required under Part 75 for Acid Rain allowance purposes.

### **D. Conclusion.**

The proposed changes will not result in an increase in actual pollutant emissions from any emissions unit/point than what has been emitted in the past. The changes are mostly cosmetic in nature and reflect an understanding of the operations.

Based on the foregoing technical evaluation of the application and additional information submitted by the applicant, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit (letter). No air quality analysis is required because there is no increase allowed in actual emissions of any pollutant by the changes made.

Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

Jeffery F. Koerner, P.E.

Bruce Mitchell, Review Engineer, Telephone #: 850/413-9198, Facsimile #: 850/921-9533