JEA
Northside Generating Station and St. Johns River Power Park (NGS/SJRPP)
Separations Technology, LLC (ST) Facility

Title V Air Operation Permit Revision
Permit No. 0310045-030-AV

APPLICANT

The applicant for this project is JEA. The applicant's responsible official and mailing address are: Mr. James M. Chansler, P.E., D.P.A., Chief Operating Officer, JEA, NGS/SJRPP/ST, 21 West Church Street, Jacksonville, Florida 32202.

FACILITY DESCRIPTION

The applicant operates the NGS/SJRPP/ST facility, which is located in Duval County at 4377 Heckscher Drive, Jacksonville.

The existing facility consists of the Northside Generating Station (NGS) and St. Johns River Power Park (SJRPP) facilities and the Separations Technology, LLC (ST) fly ash processing system.

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

PROJECT DESCRIPTION

The purpose of this permitting project is for the revision of the existing Title V air operation permit for the above referenced facility to incorporate the provisions of air construction permit No. 0310045-026-AC, in particular specific condition No. 3 which requires the annual reporting of PSD pollutant emissions for a period of 5 years. The AC permit authorized the repair, replacement and maintenance of various equipment and components on the existing NGS Boiler No. 3 (EU003).

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Application for a Title V Air Operation Permit Revision received in hard copy on February 17, 2011.
Draft/Proposed Title V air operation permit revision issued on April 19, 2011.
Public Notice published April 29, 2011.

PRIMARY REGULATORY REQUIREMENTS

Title III: This facility is a major source of hazardous air pollutants (HAP), based on the Title V air operation permit renewal application received July 3, 2008.

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

Title V: This facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: This facility is a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: This facility operates units subject to the Standards of Performance for New Stationary Sources (NSPS) of 40 Code of Federal Regulations (CFR) 60.

CAIR: This facility operates units subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

Siting: Several of the emissions units were originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) applies to units at this facility. CAM applies to particulate matter emissions from the NGS Circulating Fluidized Bed Boiler Nos. 1 and 2 (Emission Unit ID Nos. -026 and -027) and SJRPP Boiler Nos. 1 and 2 (Emission Unit ID Nos. -016 and -017).

PROJECT REVIEW

The purpose of this Title V Air Operating Permit Revision is to incorporate the applicable specific conditions from previously issued air construction permit No. 0310045-026-AC. The AC permit authorized the permittee to conduct repairs, replacement and maintenance on various equipment and components related to Boiler No. 3 (EU003), including (but not limited to) the following:

- Electric generator rotor and assembly;
- Handcuff replacement on the primary superheater elements;
- Condenser structural assessment and repairs;
- Fiberglass circulating piping assessment and repairs;
- Feed water and heater drains piping flow corrosion inspection and repairs;
- Fuel oil piping condition assessment and repairs;
- Boiler soot-blowing system piping replacement;
- No. 4 feed water heater replacement;
- Furnace left and right water-wall replacement;
- Boiler waterside chemical cleaning;
- Replacement of Distributed Control System (DCS) and field devices;
- 480 Volt motor control center (MCC) refurbishment;
- Boiler duct work repair and replacement;
- Rebuild water rack;
- East air heater to wind-box expansion joint replacement;
- Induced draft fans A and B rotor replacements;
- Upgrade drum level transmitters;
- Closed cooling strainer cabinet replacement;
- Feed water heater and boiler feed water pump valve inspection and repair;
- Force draft fan motor replacement;
- Main steam line and cold reheat line elevation sag correction;
- Boiler feed pump turbine blade replacement; and
- Other changes as appropriate to ensure safe, reliable operations of the unit will be required.

Changes to the permit made as part of this revision are shown below:

1. A cross reference to the new reporting requirement was added to Specific Condition A.32.

2. To reflect the reporting requirements imposed by permit No. 0310045-026-AC, Specific Condition A.39. is added.

   A.39. Actual Emissions Reporting. Based on analysis that compared baseline actual emissions with projected actual emissions and the project, and pursuant to Rule 62-212.300(1)(e), F.A.C., the permittee is subject to the following monitoring, reporting and recordkeeping provisions:

   a. The permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change. Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C., which are provided in Appendix C of this permit.

   b. The permittee shall report to the Department within 60 days after the end of each calendar year during the 5-year period setting out the unit's annual emissions during the calendar year that preceded

submission of the report. The report shall contain the following:

(1) The name, address and telephone number of the owner or operator of the major stationary source;

(2) The annual emissions as calculated pursuant to the provisions of 62-210.370, F.A.C., which are provided in Appendix C of this permit;

(3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and

(4) Any other information that the owner or operator wishes to include in the report.

c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1 and 2, F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

d. For this project, the permittee estimated the following baseline actual emissions: 243 tons/year of carbon monoxide (CO); 1,916 tons/year of nitrogen oxides (NO_X); 6,791 tons/year of sulfur dioxide (SO_2); 232 tons/year of particulate matter (PM); 232 tons/year particulate matter of 10 microns or less (PM_{10}); and 29 tons/year of volatile organic compounds (VOC).

e. The permittee shall compute and report annual emissions in accordance with Rule 62-210.370(2), F.A.C. as provided by Appendix C of this permit. For this project, the permittee shall use the following methods in reporting the actual annual emissions for Unit 3:

(1) The permittee shall use data collected from the continuous emissions monitoring systems (CEMS) to determine and report the actual annual emissions of SO_2 and NO_X.

(2) The permittee shall use the data collected from the required stack tests to determine and report the actual annual emissions of PM/PM_{10}. The permittee shall follow the stack test methods, test procedures and test frequencies specified in this permit.

(3) Unless otherwise approved by the Department, the permittee shall use the same emissions factors for reporting the actual annual emissions of CO and VOC as used in the application to establish baseline emissions.

(4) As defined in Rule 62-210.370(2), F.A.C., the permittee shall use a more accurate methodology if it becomes available.

[Permit No. 0310045-026-AC, Specific Condition, 3.A.3.**]**

3. Specific Condition **A.39** was renamed to **A.40.**

4. Appendix C, Common Conditions, was added to Section V of the permit.

CONCLUSION

This project revises Title V air operation permit No. 0310045-020-AV, which was effective January 1, 2009. This Title V air operation permit revision is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210, 62-212, 62-213 and 62-214, Florida Administrative Code, (F.A.C.).