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JEA
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Authorized Representative:
Mr. Michael J. Brost, V.P., Electric System

Permit No. 0310045-041-AC/PSD-FL-010J
Permit Expires: December 31, 2015
Minor Air Construction Permit
St. Johns River Power Park
Removal of Fabric Filter (DC-3)

PROJECT

This is the final air construction permit, which revises specific conditions of previously issued air construction permit No. PSD-FL-010C, to remove the fabric filter baghouse (DC-3) in the fuel handling building. The proposed work will be conducted at the existing St. Johns River Power Park, which is an electric utility power plant categorized under Standard Industrial Classification No. 4911. The existing facility.is located in Duval County at 4377 Heckscher Drive, Jacksonville, Florida. UTM Coordinates are: Zone 17, 446.90 kilometers (km) East and 3359.150 km North. Latitude is: 30° 21' 52" North; and, Longitude is: 81° 37' 25" West.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes 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 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

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for: Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

Mr. Michael J. Brost, JEA: brosmj@jea.com
Mr. Jay A. Worley, JEA: worlja@jea.com
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Ms. Heather Ceron, EPA Region 4: ceron.heather@epa.gov
Ms. Lynn Scearce, DEP OPC: lynn.scearce@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

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FACILITY DESCRIPTION

JEA operates the existing Northside Generating Station (NGS), St. Johns River Power Park (SJRPP), and the Separations Technology, LLC fly ash processing system. These co-located facilities are considered to be a single contiguous "facility" for air permitting purposes.

NGS and SJRPP:

The Northside Generating Station portion of the combined facility consists of three boilers and four combustion turbines. NGS Boiler No. 3 is an existing, pre-NSPS boiler with a nominal rating of 564 megawatts (MW) and fired by natural gas, landfill gas, No. 6 residual fuel oil, and used oil. Emissions from the NGS Boiler No. 3 are uncontrolled. NGS CFB Boilers No. 1 and No. 2 are circulating fluidized bed (CFB) boilers fired by coal, coal coated with latex, petroleum coke, and landfill gas. Each NGS CFB boiler is equipped with a selective non-catalytic reduction (SNCR) system to reduce nitrogen oxides (NO_X) emissions, limestone injection to reduce sulfur dioxide (SO_2) emissions, fabric filter to reduce particulate matter (PM) and PM with a mean diameter of 10 microns or less (PM_{10}) emissions, while maximizing combustion efficiency and minimizing NO_X formation to limit carbon monoxide (CO) and volatile organic compound (VOC) emissions. The four pre-NSPS distillate fuel oil-fired combustion turbines have a nominal rating of 52.5 MW each and are referred to as NGS Combustion Turbine (CT) Nos. 3, 4, 5 and 6. Emissions from the NGS CT Nos. 3, 4, 5 and 6, are controlled by firing low sulfur fuel oil.

The SJRPP portion of the combined facility consists of two boilers. Boilers No. 1 and No. 2 are fossil fuel-fired steam generators (boilers) which are fired by pulverized coal, a blend of petroleum coke and coal, natural gas, new No. 2 distillate fuel oil (startup and low-load operation), and "on-specification" used oil. Emissions from these boilers are controlled by an electrostatic precipitator, a limestone scrubber, and low-NO_X burners. SJRPP Boiler Nos. 1 and 2 are equipped with a selective catalytic reduction (SCR) systems and ammonia injection systems.

The SJRPP and NGS facilities also include coal, petroleum coke, limestone and fly ash handling activities, of which various control devices, control strategies, and control techniques are required. The material handling and storage operations process ash, limestone, coal, coal coated with latex, and petroleum coke to support the operation of CFB Boiler Nos. 1 and 2. Each materials handling and storage operation employs one or more control strategies to limit emissions of PM to meet specific emission limitations and/or visible emissions limits. The control strategies include the use of best operating/design practices, total or partial enclosures, conditioned materials, wet suppression, water sprays, and dust collection systems.

Separations Technology, LLC:

Separations Technology constructed, owns and operates a fly ash processing system on a portion of leased property at the JEA, SJRPP facility in Duval County, Florida. The purpose of the equipment is to remove the residual carbon and ammonia from the JEA SJRPP fly ash leaving a saleable product. As a result, environmental benefits include a 255,000 ton reduction in the fly ash that would otherwise be sent to a landfill by the JEA SJRPP each year and an overall reduction in the ammonia releases with the recovery and subsequent recycle of ammonia removed from the fly ash.

The fly ash processing system includes two fly ash receiving bins, a carbon separation unit, a clean-up vacuum, a fly ash surge bin, a mineral additive storage bin, and a gas-fired dryer. The particulate emissions generated from handling of the fly ash are collected from each source using pulse jet fabric filters. Separations Technology turboelectric carbon separation technology partitions fly ash into mineral-rich and carbon-rich fractions. The mineral-rich fly ash can then be sold as a usable product. The carbon-rich fly ash is returned to the JEA SJRPP fly ash storage silos for eventual disposal at the onsite landfill.

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

PROPOSED PROJECT

On September 16, 2014, JEA submitted an application requesting authorization to remove the fabric filter baghouse (DC-3) on the fuel handling building, which is associated with the SJRPP fuel and limestone handling and storage operations, emissions unit (EU) 023. JEA has determined that this baghouse is not needed to control emissions of PM since the transfer points in the building are partially enclosed and the characteristics of the coal

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do not generate large quantities of fugitive dust. Also, the baghouse is located on the top of the building and difficult to service and does not draw significant PM emissions. To control emissions of PM, JEA is proposing to install water mist spray bars at several transfer points within the building, employ regular house cleaning measures and best management practices to minimize the generation of fugitive dust.

This project will modify the following emissions unit:

Facility ID No. 0310045

EU No.	Emission Unit Description
023	SJRPP: Fuel and Limestone Handling and Storage Operations

FACILITY REGULATORY CLASSIFICATION

- This facility is a major source of hazardous air pollutants (HAP).
- This facility operates units subject to the acid rain provisions of the Clean Air Act (CAA).
- This facility operates units subject to Clean Air Interstate Rule (CAIR).
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility does operate units subject to the New Source Performance Standards (NSPS) of 40 CFR 60.
- The facility does operate units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

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SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Office of Permitting and Compliance mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District, Compliance and Enforcement at: 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256. Telephone (904) 256-1700, Fax (904) 256-1588.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Northeast District, Compliance and Enforcement at: 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256.

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and Appendix D (Common Testing Requirements).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Construction and Expiration. The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(4), 62-4.080 & 62-210.300(1), F.A.C.]

8. Title V Air Operation Permit: The permittee shall remove the fabric filter baghouse (DC-3) from Title V air operation permit when it is next re-opened for some other cause. [Rule 62-4.070(3) and Chapter 62-213, F.A.C.]

9. Existing Permits: This permit does not authorize any new construction or increases in allowable operating limitations or emissions limits. This permit supplements all existing valid air permits. Except as specified in this permit, the permittee shall continue to comply with all applicable conditions from valid air construction and operation permits. [Rule 62-4.070(3), F.A.C.]

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A. EU 023: SJRPP: Fuel and Limestone Handling and Storage Operations

This section of the permit addresses the following emissions unit:

EU No.	Emission Unit Description
023	SJRPP: Fuel and Limestone Handling and Storage Operations

The coal receiving, storage and transfer systems at the coal and petroleum coke storage yard support the operation of the two power boilers. Fugitive PM emissions are generated from fuel and limestone handling and storage systems. The emissions units/points depicted in Table 6 (Revised) - Part B, SJRPP Identify emissions of PM (Permit PSD-FL-010C) are controlled using fabric filter baghouse systems, water sprays, wetting agents, and full enclosures or partial enclosures, covers and wind screens, where appropriate and required by permit. Visible emissions limits shall be used for compliance purposes.

{Permitting Notes: This emissions unit/points are regulated under NSPS-40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants, adopted and incorporated by reference in Rule 62-204.800(8)(b)31., F.A.C.; Rule 62-212.400(5), F.A.C., Prevention of Significant Deterioration (PSD) New Source Review: PSD-FL-010, and as amended (A) thru (E); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated 07/07/1981; PPSA: PA 81-13, and as amended; and, 0310045-015-AC/PSD-FL-010(G).}

MODIFICATION OF EXISTING PERMIT CONDITION

1. Fabric Filter Baghouse (DC-3): To remove the fabric filter baghouse (DC-3) in the fuel handling building (EU 023l). The affected excerpts of Table 6 Part B from Permit No. PSD-FL-010C is hereby changed as follows:

The following condition of previous permit are revised as indicated below. ~~Strikethrough~~ is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with yellow highlight for ease of location.

PERMIT BEING MODIFIED: PSD-FL-010C, Table 6 Part B.

Affected Emissions Units: SJRPP: Fuel and Limestone Handling and Storage Operations, EU 023.
The remainder of the permit remains unchanged as a result of this permitting action.

EU No.	Existing Materials Handling Operations Emission	PM/PM_{10} (lb/hr)	Opacity (%)
023	SJRPP: Fuel and Limestone Handling and Storage Operations		
023a	Rotary Railcar Dumper Building	0.15/0.07	10
023b	Conveyor C-3 Tunnel Ventilation - 6,400 cfm	0.32/0.02	5
023b	Conveyor C-3 Tunnel Ventilation - 6,400 cfm	0.32/0.02	5
023b	Conveyor C-3 Tunnel Ventilation - 21,600 cfm	0.32/0.02	5
023c	Ship-hold Operations	0.54/0.26	10
023d	Ship Unloader Hopper and Spillage Collector Transfers	0.28/0.13	10
023d	Ship Unloader Hopper to Transfer CT-1, Spillage Conveyor	1.0/0.48	10
023e	Transfer Station No. 1	0.04/0.02	5
023e	Transfer Station No. 2	0.04/0.02	5
023e	Transfer Station No. 3	0.04/0.02	5
023e	Transfer Station No. 4	0.04/0.02	5
023e	Transfer Station No. 5	0.04/0.02	5
023e	Transfer Station No. 6	0.04	5

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A. EU 023: SJRPP: Fuel and Limestone Handling and Storage Operations

EU No.	Existing Materials Handling Operations Emission	PM/PM_{10} (lb/hr)	Opacity (%)
023e	Transfer Station No. 7	0.04	5
023e	Transfer Point 9GC-04 to 9GC-05	0.007	5
023f	Stacker/Reclaimer (Stacker Mode)	2.29	10
023f	Stacker	1.15	10
023f	Reclaimer	0.43	10
023g	Emergency Reclaim Hoppers – Load-out	0.29	10
023j	Limestone Truck Load-out & Transfer	0.1	10
023k	Limestone Storage Pile #1 - Existing	0.26/0.26	10
023k	Limestone Storage Pile #2 - Fuel Yard	0.12	10
023k	Limestone Reclaim Load-out - Grizzley	0.005	10
023k	Coal Pile	0.26/0.26	10
023k	Petroleum Coke Pile	0.71/0.71	10
023l	Limestone Reclaim Hopper with Fabric Filter (3DC-01)	0.14	5
023l	Limestone Silos with Fabric Filters (2: 1DC-01 and 2DC-01)	0.05	5
023l	Quick Lime Silo with Filter Vent (used for water treatment)	None	5
023l	Fuel Handling Building ~~with Fabric Filter (DC-3)~~	~~0.24~~ None	5
023l	Unit #1 Fuel Storage Bins with Fabric Filter (DC-4)	0.009	5
023l	Unit #2 Fuel Storage Bins with Fabric Filter (DC-5)	0.009	5

NEW PERMIT CONDITIONS

2. Fuel Handling Building with Fabric Filter: The permittee is authorized to remove the fabric filter baghouse (DC-3) in the fuel handling building EU 023l. [Application No. 0310045-041-AC/PSD-FL-010J]

PERFORMANCE RESTRICTIONS

3. Restricted Operation: The hours of operation are not limited (8,760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

4. Fuel Handling Building: The permittee shall install and operate water mist spray bars at the transfer points to control fugitive dust with the building. [Design; Application 0310045-041-AC/PSD-FL-010J]

5. Fugitive Dust Control Plan: To minimize dust emissions from fugitive sources, JEA shall revise and include in the Fugitive Dust Control Plan, the installation of water mist spray bars at several transfer points to control fugitive emissions from the fuel handling building. In addition, JEA must employ regular house cleaning measures and best management practices (BMP) plan to minimize generation of fugitive dust within the building. The house cleaning measures and BMP plan shall be submitted to the Compliance Authority within 60 days of the removal of the baghouse. The Compliance Authority shall be notified within 30 days of the completion of the installation of the water spray bars. [Application No. 0310045-041-AC/PSD-FL-010J]

EMISSION LIMITS

6. Visible Emissions: Visible Emission (VE) shall not exceed 5% from the fuel handling building (EU 023l). [Rule 62-4.070(3), F.A.C.]

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TESTING REQUIREMENTS

7. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the fuel handling building shall be tested to demonstrate compliance visible emission limit given in **Specific Condition 6** above in accordance with Method 22. [Rule 62-297.310(7)(a)4, F.A.C.]

8. Test Requirements: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]

9. Test Methods: Required tests shall be performed in accordance with the following reference methods:

Method	Description of Methods and Comments
22	Visual Determination of Fugitive Emissions from Stationary Sources

The above method are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

RECORDS AND REPORTS

10. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. For each test run, the report shall also indicate all the transfer points within the fuel handling building EU 023l. [Rule 62-297.310(8), F.A.C.]

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