

Florida Department of Environmental Protection

Memorandum

To: Trina Vielhauer, Bureau of Air Regulation
Through: Jeff Koerner, New Source Review Section *JK*
From: Bobby Bull, New Source Review Section *RLB*
Date: June 3, 2010
Subject: Project No. 0310045-029-AC
Jacksonville Electric Authority, St. John's River Power Plant (SJRPP)
Units 1 and 2, Continuous Natural Gas Usage

Attached for your review is a draft minor air construction permit package for the existing SJRPP facility, which is located in Duval County at 11201 New Berlin Road in Jacksonville, Florida. Briefly, the draft permit authorizes Units 1 and 2 to continuously fire natural gas in the fuel igniters for normal operations. The maximum heat input rate from firing natural gas represents only 11% of the total maximum heat input rate. Since the units were originally subject to the New Source Performance Standards in Subpart Da, Part 60, Title 40 of the Code of Federal Regulations, the draft permit includes the standard for nitrogen oxides and the method for prorating the standard when firing multiple fuels. The attached Technical Evaluation and Preliminary Determination provides a detailed description of the project and the rationale for permit issuance. The project is considered a new source review reform project; however, there will be no significant increases in actual emissions. Day 90 of the permitting time clock is July 26, 2010. I recommend your approval of the attached draft permit package.

Attachments

TLV/jfk/rlb

P.E. CERTIFICATION STATEMENT

PERMITTEE

Jacksonville Electric Authority
21 West Church Street
Jacksonville, FL 32202

Project No. 0310045-029-AC
Minor Source Air Construction Permit
St. John's River Power Park
Units 1 and 2
Continuous Natural Gas Usage
Duval County, Florida

PROJECT DESCRIPTION

The applicant requested authorization to continuously fire natural gas through the igniters for Units 1 and 2. The heat input from natural gas will be used to replace heat input from other permitted fuels under normal operations. The proposed project will not change the applicability of any existing state or federal requirements which apply to the existing authorized fuels. The draft permit will include the original standard for nitrogen oxides (NO_x) in the federal New Source Performance Standards, Subpart Da, Part 60, Title 40 of the Code of Federal Regulations, since natural gas will be authorized for continuous use. Actual emissions increases from the project will not exceed the PSD significant emissions rates; therefore, the project is not subject to PSD preconstruction review.

***I HEREBY CERTIFY** that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify any other aspects of the proposal (including, but not limited to, the electrical, mechanical, structural, hydrological, geological, and meteorological features).*



Jeffery F. Koerner

Jeffery F. Koerner, P.E.
Registration Number 49441

6-3-10

(Date)



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

June 3, 2010

Sent by Electronic Mail – Received Receipt Requested

Mr. Michael J. Brost, Authorized Representative
V.P., Electric System
Jacksonville Electric Authority (JEA)
21 West Church Street
Jacksonville, Florida 32202

Re: Project No. 0310045-029-AC
JEA, St. Johns River Power Park
Boiler Units 1 and 2, Continuous Natural Gas Usage

Dear Mr. Brost:

On February 9, 2010, you submitted an application requesting authorization to fire natural gas continuously during normal operations of electric utility steam generating Units 1 and 2 at the existing JEA, St. Johns River Power Park. This existing power plant is located in Duval County at 11201 New Berlin Road, Jacksonville, Florida. Enclosed are the following documents: the Written Notice of Intent to Issue Air Permit; the Public Notice of Intent to Issue Air Permit; the Technical Evaluation and Preliminary Determination; and the Draft Permit with Appendices. The Public Notice of Intent to Issue Air Permit is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project. If you have any questions, please contact the project engineer, Bobby Bull, P.E., at 850/921-7744.

Sincerely,

A handwritten signature in black ink that reads "Trina Vielhauser".

Trina Vielhauser, Chief
Bureau of Air Regulation

Enclosures

TLV/jfk/rlb

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

*In the Matter of an
Application for Air Permit by:*

Jacksonville Electric Authority (JEA)
21 West Church Street
Jacksonville, Florida 32202

Project No. 0310045-029-AC
St. Johns River Power Park
Units 1 and 2
Continuous Natural Gas Usage
Duval County, Florida

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

Facility Location: JEA operates the existing St. Johns River Power Park (SJRPP), which is located in Duval County at 11201 New Berlin Road, Jacksonville, Florida.

Project: The applicant proposes to fire natural gas continuously in Units 1 and 2 during normal operations at the existing SJRPP. Details of the project are provided in the application and the enclosed Technical Evaluation and Preliminary Determination.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida 32301. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S., or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S., and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the attached Public Notice or within 14 days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

Executed in Tallahassee, Florida.

Trina Vielhauer

Trina Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Written Notice of Intent to Issue Air Permit package (including the Written Notice of Intent to Issue Air Permit, the Public Notice of Intent to Issue Air Permit, the Technical Evaluation and Preliminary Determination and the Draft Permit) 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 6/7/10 to the persons listed below.

- Mr. Michael J. Brost, P.E., D.P.A., JEA (brosmj@jea.com)
- Mr. Bert Gianazza, Application Contact, JEA (giannb@jea.com)
- Mr. Kennard F. Kosky, P.E., Golder Associates, Inc. (ken_kosky@golder.com)
- Mr. Chris Kirts, DEP-NED (christopher.kirts@dep.state.fl.us)
- Mr. Richard Robinson, Jacksonville EQD (robinson@coj.net)
- Mr. Mike Halpin, DEP Site Certification (mike.halpin@dep.state.fl.us)
- Ms. Heather Abrams, EPA Region 4 (abrams.heather@epa.gov)
- Ms. Kathleen Forney, EPA Region 4 (forney.kathleen@epa.gov)
- Ms. Vickie Gibson, DEP BAR Reading File (victoria.gibson@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.

Ji Ji

(Clerk)

6/7/10

(Date)

**TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION**

PROJECT

Project No. 0310045-029-AC
Jacksonville Electric Authority
St. Johns River Power Park
Facility ID No. 0310045
Natural Gas Usage in Units 1 and 2

COUNTY

Duval County, Florida

APPLICANT

Jacksonville Electric Authority
St. Johns River Power Park
21 West Church Street
Jacksonville, FL 32202

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation – New Source Review Section
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400



June 3, 2010

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Facility Description and Location

The St. Johns River Power Park (SJRPP) is an electric services facility, which is categorized under Standard Industrial Classification Code No. 4911. The existing facility is located in Duval County at 11201 New Berlin Road in Jacksonville, Florida. The UTM coordinates are Zone 17, 446.90 km East, and 3359.15 km North. This site is in an area that is in attainment or designated as unclassifiable or maintenance for all air pollutants subject to a state and federal Ambient Air Quality Standard (AAQS).

Facility Regulatory Categories

- The existing facility is a major source of hazardous air pollutants (HAP).
- The existing facility operates units subject to the acid rain provisions of the Clean Air Act.
- The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The existing facility is a major source of air pollution in accordance with Rule 62-212.400, F.A.C., for the Prevention of Significant Deterioration (PSD) of Air Quality.
- Existing electric utility steam generating Units 1 and 2 are subject to the New Source Performance Standards (NSPS) in Subpart Da of Part 60 in Title 40 of the Code of Federal Regulations.
- Existing electric utility steam generating Units 1 and 2 are subject to the Clean Air Interstate Rule (CAIR) in accordance with 40 CFR 96.

2. PROJECT DESCRIPTION

On February 9, 2010, the Department received an application requesting authorization to fire natural gas continuously in electric utility steam generating Units 1 and 2 during normal operations at the existing SJRPP. Currently, the units are permitted to fire pulverized coal, petroleum coke and coal, new No. 2 distillate fuel oil, “on-specification” used oil and natural gas is authorized for start up, shutdown, low load operation and flame stabilization. Heat input from natural gas will replace the heat input from other authorized fuels under normal operation. The proposed project will not change the applicability of any existing state or federal requirements which apply to the existing fuels. However, the units are subject to the original standard for nitrogen oxides (NO_x) in the federal New Source Performance Standards, Subpart Da, Part 60, Title 40 of the Code of Federal Regulations, since natural gas will be authorized for continuous use.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The following table summarizes the baseline and projected actual emissions from the proposed project, based on the replacement of the heat input from other fuels by natural gas as provided by the applicant.

Pollutant	Baseline Actual Emission Factors lb/MMBtu	Baseline Actual Emissions ^{4,5} tons/year	Projected Actual Emission Factors ³	Projected Actual Emissions ⁵ tons/year	Net Change tons/year	PSD Significant Emissions Rates TPY	Subject to PSD?
CO	0.17 ¹	1042.4	84 lb/10 ⁶ scf	526.4	-516	100	No
NO _x	0.42 ¹	2,575.4	0.20 lb/MMBtu	1,226.4	-1349	40	No
PM	0.0035 ¹	21.5	1.9 lb/10 ⁶ scf	11.9	-9.6	25	No
PM ₁₀	0.0029 ²	17.8	1.9 lb/10 ⁶ scf	11.9	-5.9	15	No
SO ₂	0.24 ¹	1471.7	0.6 lb/10 ⁶ scf	3.8	-1467.9	40	No
VOC	0.0026 ¹	15.9	5.5 lb/10 ⁶ scf	34.5	+18.6	40	No
SAM	NA ³	NA	0.046 lb/10 ⁶ scf	0.29	+0.28	7	No

¹ Based on actual emission factors provided by the applicant.

² Based on 85% of PM is considered PM₁₀.

³ No baseline SAM emissions were available from the Annual Operating Report (AOR) data. Projected actual emissions are based on the AP-42 factors provided by the applicant. The net change in SAM emissions is based on the full SAM emissions estimated for firing natural gas.

⁴ Based on AOR data from 2003-2008 except for SAM emissions.

⁵ Actual emissions based on a maximum annual natural gas heat input rate of 12,264,000 MMBtu/year, which is equivalent to 12,533.8 million standard cubic feet (MMscf)/year (based on a heating value of 1022 MMBtu/MMscf of natural gas).

The two-year baseline periods selected for the calculation of the PSD pollutants are years 2007 and 2008 for CO, NO_x, PM, PM₁₀, SO₂ and VOC. No SAM data is available in the Annual Operating Report (AOR) since it is not a regulated pollutant; therefore, SAM emissions are based on an AP-42 emission factor for firing natural gas. The predicted emissions are based on the amount of heat input from the current fuels being replaced by natural gas, which is 12,264,000 MMBtu/year (12,533.8 MMscf/year based on a heat content of 1022 Btu/scf for natural gas).

3. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric,

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the “significant emission rates” defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_x); sulfur dioxide (SO₂); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM₁₀); volatile organic compounds (VOC); lead (Pb); fluorides (Fl); sulfuric acid mist (SAM); hydrogen sulfide (H₂S); total reduced sulfur (TRS), including H₂S; reduced sulfur compounds, including H₂S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO₂ and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 µg/m³, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered “significant” for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several “significant” regulated pollutants.

PSD Applicability to Project

The project is located in Jacksonville, which is in an area that is currently in attainment with the state and federal Ambient Air Quality Standards or otherwise designated as unclassifiable. The existing facility is an existing PSD major stationary source. Units 1 and 2 were subject to the PSD preconstruction new source review requirements (PSD-FL-010), which included BACT determinations for NO_x, SO₂, CO and PM. Since the actual emissions increases from firing natural gas are less than the PSD significant emissions rates, this project is not subject to PSD preconstruction review.

4. DEPARTMENT REVIEW

Full use of natural gas (700 MMBtu/hour/unit) represents only a fraction (approximately 11%) of the overall total heat input rate (6144 MMBtu/hour) for each unit. Other authorized fuels must be co-fired with natural gas to achieve base load operation. As shown in the following table, emissions from firing natural gas will be less than the baseline emissions from other authorized fuels except for VOC emissions. Nevertheless, the VOC emissions increase will be less than half of the PSD significant emissions rate of 40 tons/year. In addition, natural gas contains a negligible amount of sulfur, which will be much less than coal, petcoke or oil.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Pollutant	Baseline Actual Emission Factors lb/MMBtu	Projected Actual Emission Factors lb/MMBtu
CO	0.17	0.082
NO _x	0.42	0.020
PM	0.0035	0.0019
PM ₁₀	0.0029	0.0019
SO ₂	0.24	0.00059
VOC	0.0026	0.0054
SAM	NA	0.000045

The project is not an NSPS modification because the existing units are already subject to NSPS Subpart Da and there will be no increase in the hourly emissions rates of NO_x, PM or SO₂. However, both units can currently accommodate natural gas through the fuel igniters. Therefore, the draft permit will include the original NO_x standard (0.20 lb/MMBtu) in NSPS Subpart Da for the continuous firing of gaseous fuels. The draft permit also includes the NSPS provision for prorating the NO_x emissions standard when two or more fuels are fired simultaneously.

The project is determined to be minor based on a comparison of projected actual emissions to baseline actual emissions. The only pollutant that may increase as result of firing natural gas is VOC emissions. However, even at full natural gas firing capacity, the estimated VOC emissions increase would be less than half of the PSD significant emissions rate of 40 tons/year. Therefore, the Department will not require any reporting of the annual emissions increases pursuant to Rule 62-212.300(1)(e), F.A.C.

5. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project does not trigger preconstruction new source review under PSD, and will remain in compliance with the terms and conditions contained in the current Title V operation permit. This determination is based on a technical review of the request, reasonable assurances provided by the applicant and the conditions contained in their current Title V operation permit. Bobby Bull, P.E. is the project engineer responsible for reviewing the application and drafting the permit documents. Jeff Koerner, P.E. is the Air Permitting Supervisor responsible for reviewing and editing the proposed modification. 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.

DRAFT PERMIT

PERMITTEE

Jacksonville Electric Authority (JEA)
21 West Church Street
Jacksonville, Florida 32202

Authorized Representative:

Mr. Michael J. Brost
Vice President – Electric System

Air Permit No. 0310045-029-AC
Permit Expires: June 30, 2011
Minor Air Construction Permit
St. Johns River Power Park (SJRPP)
Units 1 and 2
Continuous Use of Natural Gas

PROJECT

This is the final air construction permit, which authorizes Units 1 and 2 to fire natural gas on a continuous basis during normal operations. The proposed project will be conducted at the existing SJRPP, which is an electrical generating facility categorized under Standard Industrial Classification No. 4911. The existing facility is located in Duval County at 11201 New Berlin Road, Jacksonville, Florida. The UTM coordinates are Zone 17, 446.90 km East and 3359.15 km North.

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).

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, 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 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

(DRAFT)

Joseph Kahn, Director
Division of Air Resource Management

Effective Date

DRAFT PERMIT

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) 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 _____(DRAFT)_____ to the persons listed below.

- Mr. Michael J. Brost, P.E., D.P.A., JEA (brosmj@jea.com)
- Mr. Bert Gianazza, P.E., JEA (giannb@jea.com)
- Mr. Kennard F. Kosky, P.E., Golder Associates, Inc. (ken_kosky@golder.com)
- Mr. Chris Kirts, DEP NED (christopher.kirts@dep.state.fl.us)
- Mr. Richard Robinson, Jacksonville EQD (robinson@coj.net)
- Mr. Mike Halpin, DEP Site Certification (mike.halpin@dep.state.fl.us)
- Ms. Heather Abrams, EPA Region 4 (abrams.heather@epa.gov)
- Ms. Kathleen Forney, EPA Region 4 (forney.kathleen@epa.gov)
- Ms. Vickie Gibson, DEP BAR Reading File (victoria.gibson@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.

(DRAFT)

(Clerk)

(Date)

SECTION 1. GENERAL INFORMATION (DRAFT)

FACILITY DESCRIPTION

The existing facility consists of the following emissions units.

Facility ID No. 0310045	
ID No.	Emission Unit Description
<i>SJRPP Regulated Emissions Units</i>	
016	Unit 1
017	Unit 2
022	Bottom Ash, Fly Ash and Gypsum Handling and Storage Operations
023	Fuel and Limestone Handling and Storage Operations
024	Cooling Towers
<i>Unregulated Emissions Units</i>	
019-021	Diesel and Gasoline Storage Tanks

PROJECT DESCRIPTION

This project authorizes the continuous firing of natural gas in existing Units 1 and 2 during normal operations. The project is not subject to PSD preconstruction review because there will be no significant emissions increases for any pollutant. The proposed project will not change the applicability of any existing state or federal requirements which apply to the existing authorized fuels. The units were originally subject to the federal New Source Performance Standards in Subpart Da, Part 60, Title 40 of the Code of Federal Regulations; therefore, the permit specifies the original standard for nitrogen oxides (NO_x) for firing natural gas as well as the method for prorating the NO_x standard when firing multiple fuels.

This project will modify the following emissions units.

Facility ID No. 0310045	
ID No.	Emission Unit Description
016	Unit 1
017	Unit 2

REGULATORY CLASSIFICATION

- The existing facility is a major source of hazardous air pollutants (HAP).
- The existing facility operates units subject to the acid rain provisions of the Clean Air Act.
- The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The existing facility is a major source of air pollution in accordance with Rule 62-212.400(PSD), F.A.C.
- Units 1 and 2 are subject to applicable provisions in NSPS Subpart Da of 40 CFR 60.
- The facility operates existing Boilers Units 1 and 2, which are subject to the Clean Air Interstate Rule (CAIR) in accordance with 40 CFR 96.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

1. Permitting Authority: All documents related to applications for permits to construct, operate or modify emissions unit shall be submitted to the Bureau of Air Regulation, Florida Department of Environmental Protection (Department), at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all such documents shall also be submitted to the Compliance Authority.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Duval County Environmental and Compliance Department, Environmental Quality Division, 407 North Laura Street, 3rd Floor, Jacksonville, Florida 32202 and Telephone Number 904-255-7100 and Telephone Number 904-630-3484.
3. Appendices: The following appendices are attached as part of this permit: Appendix A (Citation Formats and Glossary of Common Terms) and Appendix B (General Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions unit 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, 62-214, 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. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C., and follow the application procedures in Chapter 62-4, F.A.C. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. Construction and Expiration: The Department may extend the expiration date upon a satisfactory showing that an extension is justified. Such a request shall be submitted to the Department's Bureau of Air Regulation at least 60 days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, 62-210.300(1) and 62-212.400(12), F.A.C.]
6. 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.]
7. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. This permit authorizes construction of the referenced facilities. [Chapters 62-210 and 62-212, F.A.C.]
8. Title V Air Operation Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

SECTION 3. EMISSIONS UNITS SPECIFIC CONDITIONS (DRAFT)

Boiler Units 1 and 2 (EU-016 and EU-017)

The specific conditions of this subsection apply to the following emissions units after the authorized work is completed:

EU ID	Emissions Unit Description
016	Boiler Unit 1
017	Boiler Unit 2

EXISTING PERMITS

1. Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for these emissions units. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulatory requirements. The permittee shall continue to comply with the conditions of those permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, recordkeeping, reporting, etc. [Rule 62-4.070(3), F.A.C.]

METHODS OF OPERATION

2. Natural Gas Firing: The permittee is authorized to continuously fire natural gas in Units 1 and 2 during normal operations. For each unit, there are 28 natural gas burners rated at 25 MMBtu/hour per burner. The maximum total heat input to each unit from firing natural gas is 700 million British thermal units per hour (MMBtu/hour).

{Permitting Note: Natural gas firing will only achieve approximately 11% of full load operation. Other authorized fuels will be co-fired with natural gas to achieve full load operation.}

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EMISSION LIMITATIONS AND STANDARDS

3. Nitrogen Oxides (NO_x): On and after the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility (emissions unit) any gases that contain NO_x (expressed as NO₂) in excess of the following emission limit, based on a 30-day rolling average basis, and NO_x reduction requirement:
 - (1) 0.20 lb/million Btu [40 CFR 60.44a(b)(1)], and
 - (2) 25 percent reduction [40 CFR 60.44a(b)(2)]. Compliance with the NO_x emission limitation under 40 CFR 60.44Da(a)(1) constitutes compliance with the percent reduction requirements under §60.44Da(a)(2). [40 CFR 60.48d(b)]
4. Nitrogen Oxides (NO_x): When two or more fuels are combusted simultaneously, the applicable standard is determined by proration using the following formula:

$$E_{\text{NO}_x} = (0.20w + 0.30x + 0.60z)/100$$

Where:

E_{NO_x} = Applicable standard for NO_x when multiple fuels are combusted simultaneously (lb/MMBtu of heat input);

w = Percentage of total heat input derived from the combustion of fuels subject to the standard of 0.20 lb/MMBtu of heat input for authorized gaseous fuels;

x = Percentage of total heat input derived from the combustion of fuels subject to the standard of 0.30 lb/MMBtu of heat input for authorized liquid fuels;

SECTION 3. EMISSIONS UNITS SPECIFIC CONDITIONS (DRAFT)

Boiler Units 1 and 2 (EU-016 and EU-017)

- z = Percentage of total heat input derived from the combustion of fuels subject to the standard of 0.60 lb/MMBtu of heat input for authorized bituminous coal or a blend of bituminous coal with petcoke.

[40 CFR 60.44a(c)]

COMPLIANCE PROVISIONS

5. Compliance Demonstrations: The owner or operator of an affected facility subject to emission limitations in this subpart shall determine compliance as follows: Compliance with applicable 30-day rolling average NO_x emission limitations is determined by calculating the arithmetic average of all hourly emission rates for NO_x for the 30 successive boiler operating days, except for data obtained during startup, shutdown, or malfunction. [40 CFR 60.48a(g)]
6. Natural Gas Firing: The permittee shall maintain sufficient records to document the firing of natural gas. [Rule 62-4.070(3), F.A.C.]

SECTION 4. APPENDICES (DRAFT)

Contents

Appendix A. Citation Formats and Glossary of Common Terms

Appendix B. General Conditions

SECTION 4. APPENDIX A (DRAFT)

Citation Formats and Glossary of Common Terms

CITATION FORMATS

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

Old Permit Numbers

Example: Permit No. AC50-123456 or Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit

“AO” identifies the permit as an Air Operation Permit

“123456” identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located

“2222” represents the specific facility ID number for that county

“001” identifies the specific permit project number

“AC” identifies the permit as an air construction permit

“AF” identifies the permit as a minor source federally enforceable state operation permit

“AO” identifies the permit as a minor source air operation permit

“AV” identifies the permit as a major Title V air operation permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality

“FL” means that the permit was issued by the State of Florida

“317” identifies the specific permit project number

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

GLOSSARY OF COMMON TERMS

° F: degrees Fahrenheit

AAQS: Ambient Air Quality Standard

acf: actual cubic feet

acfm: actual cubic feet per minute

ARMS: Air Resource Management System (DEP database)

BACT: best available control technology

bhp: brake horsepower

Btu: British thermal units

CAM: compliance assurance monitoring

CEMS: continuous emissions monitoring system

cfm: cubic feet per minute

SECTION 4. APPENDIX A (DRAFT)

Citation Formats and Glossary of Common Terms

CFR: Code of Federal Regulations	NESHAP: National Emissions Standards for Hazardous Air Pollutants
CAA: Clean Air Act	NO_x: nitrogen oxides
CMS: continuous monitoring system	NSPS: New Source Performance Standards
CO: carbon monoxide	O&M: operation and maintenance
CO₂: carbon dioxide	O₂: oxygen
COMS: continuous opacity monitoring system	Pb: lead
DARM: Division of Air Resource Management	PM: particulate matter
DEP: Department of Environmental Protection	PM₁₀: particulate matter with a mean aerodynamic diameter of 10 microns or less
Department: Department of Environmental Protection	ppm: parts per million
dscf: dry standard cubic feet	ppmv: parts per million by volume
dscfm: dry standard cubic feet per minute	ppmvd: parts per million by volume, dry basis
EPA: Environmental Protection Agency	QA: quality assurance
ESP: electrostatic precipitator (control system for reducing particulate matter)	QC: quality control
EU: emissions unit	PSD: prevention of significant deterioration
F.A.C.: Florida Administrative Code	psi: pounds per square inch
F.A.W.: Florida Administrative Weekly	PTE: potential to emit
F.D.: forced draft	RACT: reasonably available control technology
F.S.: Florida Statutes	RATA: relative accuracy test audit
FGD: flue gas desulfurization	RBLC: EPA's RACT/BACT/LAER Clearinghouse
FGR: flue gas recirculation	SAM: sulfuric acid mist
Fl: fluoride	scf: standard cubic feet
ft²: square feet	scfm: standard cubic feet per minute
ft³: cubic feet	SIC: standard industrial classification code
gpm: gallons per minute	SIP: State Implementation Plan
gr: grains	SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
HAP: hazardous air pollutant	SO₂: sulfur dioxide
Hg: mercury	TPD: tons/day
I.D.: induced draft	TPH: tons per hour
ID: identification	TPY: tons per year
kPa: kilopascals	TRS: total reduced sulfur
lb: pound	UTM: Universal Transverse Mercator coordinate system
MACT: maximum achievable technology	VE: visible emissions
MMBtu: million British thermal units	VOC: volatile organic compounds
MSDS: material safety data sheets	
MW: megawatt	

SECTION 4. APPENDIX B (DRAFT)

General Conditions

The permittee shall comply with the following general conditions from Rule 624.160, F.A.C.

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are “permit conditions” and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.987(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - a. Have access to and copy any records that must be kept under conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of noncompliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

SECTION 4. APPENDIX B (DRAFT)

General Conditions

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.
11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology (not applicable);
 - b. Determination of Prevention of Significant Deterioration (not applicable); and
 - c. Compliance with New Source Performance Standards (applicable).
14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - (a) The date, exact place, and time of sampling or measurements;
 - (b) The person responsible for performing the sampling or measurements;
 - (c) The dates analyses were performed;
 - (d) The person responsible for performing the analyses;
 - (e) The analytical techniques or methods used;
 - (f) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.