

Memorandum

Florida Department of Environmental Protection

TO: Trina L. Vielhauer

THRU: Jeff Koerner *JK*

FROM: Syed Arif *Syed Arif 1/18*

DATE: January 18, 2007

SUBJECT: JEA, St. Johns River Power Park (SJRPP) Facility
0310045-017-AC

Attached is the Public Notice package for a modification at JEA's SJRPP facility located in Jacksonville, Duval County.

The applicant, JEA, submitted a complete minor source application on December 11, 2006 to the Department for installation of selective catalytic reduction in Boilers Nos. 1 and 2 to decrease nitrogen oxides (NO_x) emissions in compliance with EPA's Clean Air Interstate Rule. The addition of SCR will have the co-benefits of reducing emissions of mercury to meet EPA's Clean Air Mercury Rule.

While the addition of SCR will substantially decrease emissions of NO_x, there is the potential for collateral increases in emissions of sulfuric acid mist (SAM) and particulate matter (PM). Potential increases in SAM emissions will be minimized through the injection of ammonia to react with sulfur trioxide (SO₃) prior to the electrostatic precipitator (ESP). The potential increase in PM from the reaction of ammonia and SO₃ will be collected in the ESP and flue gas desulfurization system. There will be no emissions increase over the PSD significant emission rates from the installation of SCR. There are no other planned changes in Units 1 and 2.

An air quality impact analysis was not required. No increase in ambient impacts due to the proposed permit modification is expected. Emissions from the facility will not significantly contribute to or cause a violation of any state or federal ambient air quality standards.

I recommend your approval and signature.

Attachments

/sa



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

P.E. Certification Statement

Permittee:

JEA

St. Johns River Power Park (SJRPP) Facility


DEP File No. 0310045-017-AC

Project type: The applicant, JEA, submitted a minor source application to the Department for installation of selective catalytic reduction in Boilers Nos. 1 and 2 to decrease nitrogen oxides (NO_x) emissions in compliance with EPA's Clean Air Interstate Rule. The addition of SCR will have the co-benefits of reducing emissions of mercury to meet EPA's Clean Air Mercury Rule.

While the addition of SCR will substantially decrease emissions of NO_x, there is the potential for collateral increases in emissions of sulfuric acid mist (SAM) and particulate matter (PM). Potential increases in SAM emissions will be minimized through the injection of ammonia to react with sulfur trioxide (SO₃) prior to the electrostatic precipitator (ESP). The potential increase in PM from the reaction of ammonia and SO₃ will be collected in the ESP and flue gas desulfurization system. There will be no emissions increase over the PSD significant emission rates from the installation of SCR. There are no other planned changes in Units 1 and 2.

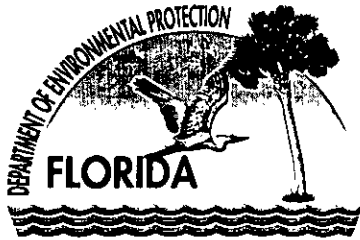
An air quality impact analysis was not required because the project does not result in a significant increase in emissions. No increase in ambient impacts due to the proposed permit modification is expected. Emissions from the facility will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The applicant's name and address is JEA, 21 West Church Street, Jacksonville, Florida 32202. The facility's name and address is SJRPP, 11201 New Berlin Road, Jacksonville, Florida 32226.

I HEREBY CERTIFY that the 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 aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, meteorological and geological features).

 2/1/07
Syed Arif, P.E. Date
Registration Number: 51861

Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Phone (850) 488-0114
Fax (850) 922-6979

JS



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

February 1, 2007

ELECTRONIC MAIL - RECEIVED RECEIPT REQUESTED

Mr. Michael J. Brost, Vice President
Electric System
JEA
21 West Church Street
Jacksonville, Florida 32202

Re: DEP File No. 0310045-017-AC
St. Johns River Power Park (SJRPP) Facility, Duval County
Installation of Selective Catalytic Reduction

Dear Mr. Brost:

Enclosed is one copy of the Draft Air Construction Permit Modification for the SJRPP Facility, located at 11201 New Berlin Road, Jacksonville, Duval County. The Technical Evaluation and Preliminary Determination, the Department's Intent to Issue Air Construction Permit Modification and the "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION" are also included.

The "PUBLIC NOTICE" must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Jeff Koerner, P.E., Permitting Administrator, North Section at the above letterhead address. If you have any other questions, please contact Mr. Syed Arif at 850/921-9528.

Sincerely,

Trina L. Vielhauer, Chief,
Bureau of Air Regulation

TLV/jk/sa

Enclosures

In the Matter of an
Application for Permit by:

Mr. Michael J. Brost, Vice President
Electric System
JEA
21 West Church Street
Jacksonville, Florida 32202

DEP File No. 0310045-017-AC
St. Johns River Power Park
Installation of Selective Catalytic Reduction
Duval County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification (copy of DRAFT Permit attached) for the proposed project, detailed in the application specified above and the attached Technical Evaluation and Preliminary Determination, for the reasons stated below.

The applicant, JEA, submitted a complete application on December 11, 2006 to the Department for installation of selective catalytic reduction in Boilers Nos. 1 and 2 to decrease nitrogen oxides emissions in compliance with EPA's Clean Air Interstate Rule. St. Johns River Power Park is located at 11201 New Berlin Road, Jacksonville, Duval County.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined an air construction permit modification is required for the proposed work.

The Department intends to issue this Air Construction Permit Modification based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION." The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting 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 Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the Final Air Construction Permit Modification in accordance with the conditions of the attached Draft Air Construction Permit Modification unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the Draft Air Construction Permit Modification, the permitting authority shall issue a Revised Draft Air Construction Permit Modification and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

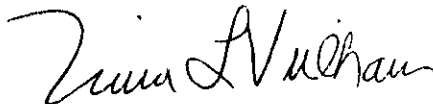
A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen 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 will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department'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 how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (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; and (g) A statement of the relief sought by the petitioner, stating precisely the action 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 Department'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.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. Mediation is not available in this proceeding.

Executed in Tallahassee, Florida.



Trina L. Vielhauer, Chief
Bureau of Air Regulation

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP File No. 0310045-017-AC
JEA
St. Johns River Power Park
Duval County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to St. Johns River Power Park (SJRPP), an electric utility steam generating facility, located in Jacksonville, Florida. The applicant's name and address is JEA, 21 West Church Street, Jacksonville, Florida 32202. SJRPP is located at 11201 New Berlin Road, Jacksonville, Duval County.

The applicant, JEA, submitted a complete application on December 11, 2006 to the Department for installation of selective catalytic reduction in Boilers Nos. 1 and 2 to decrease nitrogen oxides (NO_x) emissions in compliance with EPA's Clean Air Interstate Rule. The addition of SCR will have the co-benefits of reducing emissions of mercury to meet EPA's Clean Air Mercury Rule.

While the addition of SCR will substantially decrease emissions of NO_x, there is the potential for collateral increases in emissions of sulfuric acid mist (SAM) and particulate matter (PM). Potential increases in SAM emissions will be minimized through the injection of ammonia to react with sulfur trioxide (SO₃) prior to the electrostatic precipitator (ESP). The potential increase in PM from the reaction of ammonia and SO₃ will be collected in the ESP and flue gas desulfurization system. There will be no emissions increase over the PSD significant emission rates from the installation of SCR. There are no other planned changes in Units 1 and 2.

An air quality impact analysis was not required. No increase in ambient impacts due to the proposed permit modification is expected. Emissions from the facility will not significantly contribute to or cause a violation of any state or federal ambient air quality standards.

The Department will issue the Final Air Construction Permit Modification in accordance with the conditions of the Draft Air Construction Permit Modification unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The permitting authority has determined that an Air Construction Permit Modification is required.

The Department will accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen 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 will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department'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 how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (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; and (g) A statement of the relief sought by the petitioner, stating precisely the action 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 Department'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 Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Protection Bureau of Air Regulation Suite 4, 111 S. Magnolia Drive Tallahassee, Florida, 32301 Telephone: 850/488-0114 Fax: 850/922-6979	Dept. of Environmental Protection Northeast District 7825 Baymeadows Way, Suite 200B Jacksonville, Florida 32256-7590 Telephone: 904/807-3300 Fax: 904/448-4362	Environmental Resource Management Department 117 West Duval Street, Suite 225 Jacksonville, Florida 32202 Telephone: 904/630-4900 Fax: 904/630-3638
--	--	--

The complete project file includes the application, technical evaluations, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, Air Permitting North Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

JEA

St. Johns River Power Park
Boilers Nos. 1 and 2
Duval County, Florida

DEP File Number
0310045-017-AC

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation

January 18, 2007

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

I. APPLICATION INFORMATION

A. Applicant

JEA
21 West Church Street
Jacksonville, Florida 32202

Authorized Representative: Mr. Michael J. Brost, Vice President Electric System

B. Facility Location

The applicant's facility, St. Johns River Power Park, is located at 11201 New Berlin Road, Jacksonville, Duval County, Florida. Latitude and Longitude are 30° 21' 52" North and 81° 37' 25" West respectively. UTM coordinates of the site are: Zone 17, 446.9 km E and 3359.15 km N. This location is approximately 60 km from the nearest Class I area, the Okefenokee Wilderness Area.

Facility Identification Code (SIC): Major Group No. 49, Industry Group No. 4911.

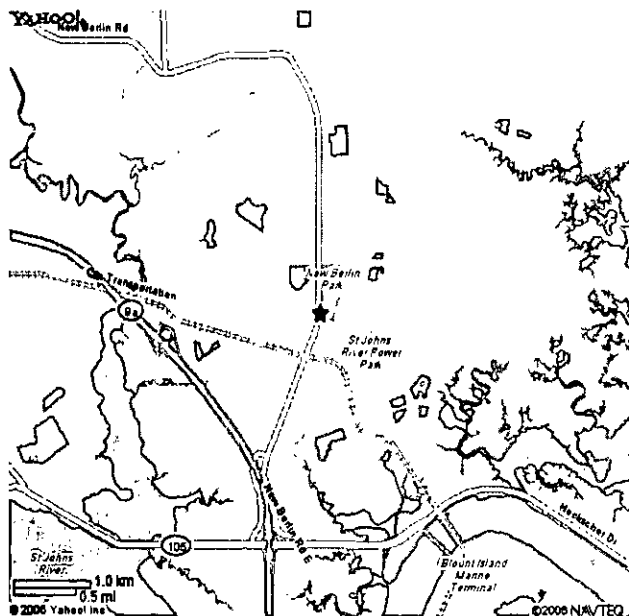


Figure 1- Location of Facility

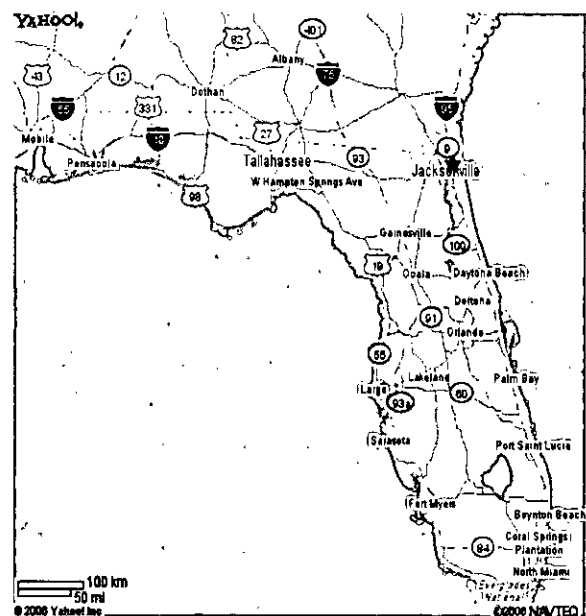


Figure 2 – Regional Location

C. Regulatory Classification

Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the existing facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), and volatile organic compounds (VOC).

The existing facility is major source of hazardous air pollutants (HAPs).

The facility operates emissions units subject to the acid rain provisions of the Clean Air Act.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The facility is considered a “fossil fuel fired steam electric plant of more than 250 million BTU per hour of heat input”. This kind of facility is one of the 28 source categories with the lower applicability threshold of 100 tons per year with respect to the Rule 62-210.200, Prevention of Significant Deterioration of Air Quality (PSD). Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source.

Units 1 and 2 were certified pursuant to Electrical Power Plant Siting in accordance with Chapter 62-17, F.A.C. and Chapter 403, Part II, F.S.

D. Modification Request

St. Johns River Power Park (SJRPP) submitted an application for a minor source air construction permit to install selective catalytic reduction (SCR) in Boilers Nos. 1 and 2 (Units 1 and 2) in order to comply with the requirements of EPA’s Clean Air Interstate Rule (CAIR) as implemented by the Department in Rule 62-296.470, F.A.C. The addition of SCR will have the co-benefits of reducing emissions of mercury to meet EPA’s Clean Air Mercury Rule (CAMR) implemented by the Department in Rule 62-296.480, F.A.C.

The primary purpose of the project will be to decrease nitrogen oxides (NO_x) emissions from Units 1 and 2 to meet the annual and ozone season NO_x CAIR allocations. While the addition of SCR will substantially decrease emissions of NO_x, there is the potential for collateral increases in emissions of sulfuric acid mist (SAM) and particulate matter (PM). The potential increase of SAM emissions is a result of the oxidation of sulfur dioxide (SO₂) to sulfur trioxide (SO₃) that is emitted as SAM after the flue gas desulfurization (FGD) system. Potential increases in SAM emissions will be minimized through the injection of ammonia to react with SO₃ prior to the electrostatic precipitator (ESP). The reactants, primarily ammonium sulfate, will be collected in the ESP. The potential increase in PM from the reaction of ammonia and SO₃ will be collected in the ESP and FGD system. There will be no emissions increase over the PSD significant emission rates from the installation of SCR. There are no other planned changes in Units 1 and 2.

E. Reviewing and Process Schedule

10-17-06: Date of Receipt of Application
11-15-06: DEP’s 1st Completeness Request
12-11-06: Applicant’s response to DEP’s 1st Completeness Request. Application complete.

F. Project Description

SCR is a process that uses catalyst to promote the conversion of NO_x to nitrogen and water in the flue gas. The conversion occurs between the boiler economizer and the air heaters in a specially designed ductwork section called the SCR Reactor, which contains the catalyst. Ammonia vapor mixed with dilution air is injected into the flue gas upstream of the catalyst and is thoroughly mixed with the flue gas prior to the catalyst. As the flue gas passes over the catalyst, the nitrogen monoxide and nitrogen dioxide combine with the ammonia to form nitrogen and water.

Each unit will have two SCR reactors. Each SCR reactor will consist of a steel reactor box designed to support the SCR catalyst modules and to properly distribute flue gas through the catalyst layers. Flue gas flow will be vertically downward through the catalyst. Flue gas ductwork will be provided from the economizer outlet to the air heater inlet including a SCR bypass duct and associated dampers. Bypass dampers are installed primarily for startup and maintenance. The SCR inlet duct will include a large particle ash (LPA) screen, static flue gas mixer, and ammonia injection grid. Ash hoppers will be located below the inlet diverter damper and LPA screen.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The new SCR system will be designed for operation over load ranges of 50 percent of full load (approximately 300 MW) and higher. The minimum temperature required for injected ammonia vapor to react with the NO_x in the SCR reactor is approximately 630°F. The minimum temperature corresponds to the lowest expected temperature at low load. Ammonia is introduced in the SCR as a mixture of anhydrous ammonia and air. Anhydrous ammonia will be delivered to the site by tank truck and unloaded into one of two bulk storage tanks. In addition, provisions for delivery by rail will be provided. Liquid anhydrous ammonia will be transferred from the storage tanks to ammonia vaporizers. After vaporization, the ammonia gas will be mixed with ambient air and distributed into the flue gas through the ammonia injection grids (AIG) located upstream of the reactor. The air/ammonia vapor mixture is distributed across the entire duct cross section using the ammonia injection grid (AIG). The AIG consists of a series of stacked layers of parallel pipes, each with nozzles that inject the mixture into a particular section of the SCR reactor inlet duct. The pipes will extend the entire width of the ductwork and contain a sufficient number of nozzles with orifices sized for the particular ammonia distribution requirement. If necessary, as determined by the physical flow model test of the SCR reactor and associated ductwork, a static mixer may be required upstream of the AIG to help reduce the stratification of temperature and chemical composition of the flue gas flow out of the economizers.

The catalyst used for NO_x reduction primarily consists of a vanadium and titanium mixture. Titanium dioxide is used as the base material that disperses and supports vanadium pentoxide (V₂O₅) which is the active catalyst material. V₂O₅ is widely used in the SCR industry due to its resistance to sulfur poisoning. The vanadium content controls the reactivity of the catalyst, but also catalyzes the oxidation of SO₂ to SO₃. For moderate to high sulfur coal applications, it is necessary to minimize the vanadium content to reduce SO₂ oxidation. Additionally, the vanadium already present in the petcoke fuel will deposit on the catalyst, potentially increasing the oxidation of SO₂ to SO₃. Tungsten oxide also provides thermal and mechanical stability to the catalyst. The concentrations of vanadium pentoxide, titanium dioxide and tungsten oxide will be customized to meet the specific requirements for Units 1 and 2 SCR system installations.

Each SCR reactor will include soot blowers and sonic horns to keep the catalyst free of fly ash buildup. Provisions for catalyst loading into the reactors will be included. The SCR reactors will be designed for three initial layers of catalyst and a spare level for future additional layer of catalyst. To minimize potential catalyst poisoning, the units will be equipped with limestone addition in the combustion process. Limestone will be fed on to the coal conveyor when transporting fuel to the silos. A limestone system to receive, store and feed limestone to the coal conveyors will be provided.

An additional ammonia injection grid will be designed and located within the duct work leading to the ESP. The system will be designed to remove up to 90 percent of the SAM after the air heater. The ammonia injection system will be controlled by proprietary software from PECO-FGC, Inc. The control system regulating the amount of ammonia injected to control SAM will be integrated into the plant digital control system (DCS). The design of the injection grids, including the locations and sizes of the nozzles regulating the amount of ammonia, was performed using the computerized modeling of the ductwork leading to the ESP. The amount of ammonia injected through the injection grid into the flue gas conditioning system will be regulated based on load and SO₂ content of flue gas. A control algorithm will regulate the system within the DCS to remove up to 90 percent of SAM from the flue gas. On an annual basis, the permittee will demonstrate that SAM emissions as a result of this project do not exceed the baseline annual emissions (1317 tons/year) by the PSD significant emission rate (7 tons/year or more). The permittee shall install and operate the ammonia injection system at a frequency and injection rate for SAM control to satisfy this requirement. An automated control system will be used to adjust the ammonia flow rate for the given set of operating conditions based on the most recent performance test results.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Ammonia slip after the ESP is expected to be 2 parts per million or less. Annual testing of ammonia slip will be conducted and corrective measures taken if this target level is exceeded.

Figure 3 below is a diagram of a typical SCR installation in a power plant. This configuration is known as dusty or hot side SCR meaning it is placed before the electrostatic precipitator.

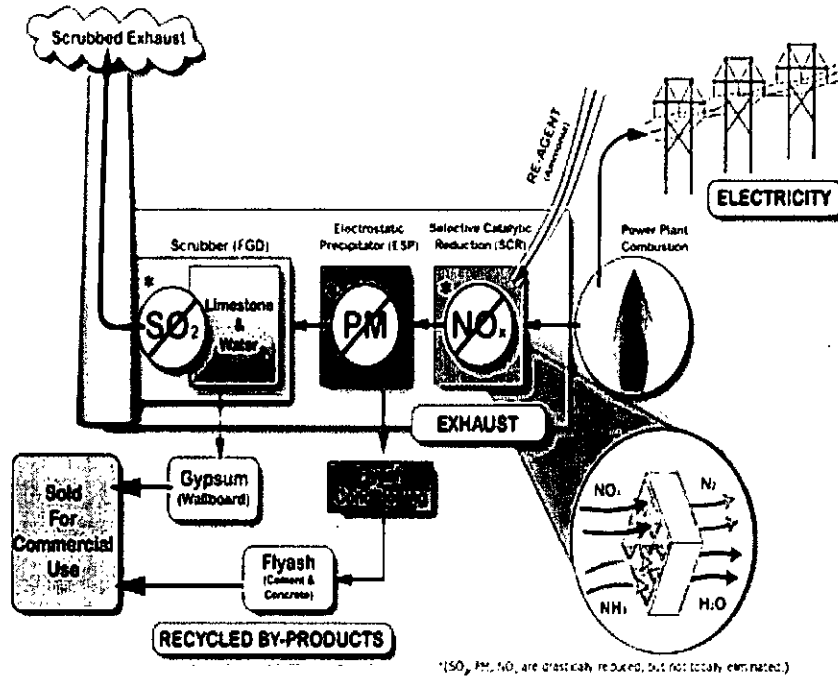


Figure 3. Diagram of a typical SCR Installation

G. Project Emissions

Presented in Table 1 is the heat input reported in the Annual Operating Report (AOR) for the period 2001 through 2005. This table also presents the capacity factor for Units 1 and 2, as well as the average for both units during the period 2001 through 2005. During the period 2001 through 2005, the average capacity factor based on heat input for Units 1 and 2 ranged from 79.4 percent in 2005 to 89.8 percent in 2002. The average capacity factors for the years 2005, 2004, 2003, 2002, and 2001 were 79.4, 84.5, 88.1, 89.8 and 89.0 percent, respectively. The average two-year capacity factors based on heat input were 81.9, 86.3, 88.9, and 89.4 percent for the periods 2005-2004, 2004-2003, 2003-2002, and 2002-2001, respectively. The average 5-year capacity factor was 86.2 percent.

Table 2 presents the annual emissions reported in the AORs for the years 2001 through 2005 for PM and SAM. Table 3 presents the average calendar year emissions for each consecutive 2-year period from 2001 through 2005 based on the average calendar year emissions in Table 2. The annual average emissions for each consecutive 2-year period are consistent with the definition of baseline actual emissions for fossil fuel fired steam electric generating units. The highest two consecutive 2-year emissions for the period 2001-2002 are proposed as the basis for future comparisons. This 2-year period also has the highest heat input.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

TABLE 1 – OPERATING HISTORY

Year	Heat Input (MMBtu/hr)			Capacity Factor		
	Unit 1	Unit 2	Total	Unit 1	Unit 2	Average
2005	40,576,121	44,879,935	85,456,056	75.4	83.4	79.4
2004	51,559,458	39,381,272	90,940,730	95.8	73.2	84.5
2003	46,416,440	48,376,056	94,792,496	86.2	89.9	88.1
2002	51,497,802	45,166,544	96,664,346	95.7	83.9	89.8
2001	46,245,091	49,554,215	95,799,306	85.9	92.1	89.0

TABLE 2 – PAST ACTUAL EMISSIONS

Year	Pollutant	Unit 1 (tons)	Unit 2 (tons)	Total (tons)
2005	PM	34.5	71.8	106.3
	SAM	273.9	327.6	601.5
2004	PM	170.5	132.2	302.7
	SAM	705.6	538.9	1244.5
2003	PM	70.5	74.8	145.3
	SAM	635.2	662.0	1297.2
2002	PM	170.3	155.9	326.2
	SAM	704.8	618.1	1322.9
2001	PM	154.1	163.2	317.3
	SAM	632.9	678.2	1311.1

TABLE 3 – PAST ACTUAL EMISSIONS, 2-YEAR AVERAGES

Pollutant	2005-2004 (tons)	2004-2003 (tons)	2003-2002 (tons)	2002-2001 (tons)
PM	204.5	224	235.8	321.8
SAM	923.0	1270.9	1310.1	1317.0

The Department will require the applicant to maintain and submit to the Department on an annual basis for a period of five years from the date the SCR systems are initially operated, information demonstrating in accordance with Rule 62-212.300(1)(e), F.A.C., that the installation of SCR did not result in significant emissions increases of PM ($322 + 14 = 336$ tons per year) and SAM ($1317 + 6 = 1323$ tons per year) when compared with the baseline actual emissions for the period 2001-2002.

II. RULE APPLICABILITY

A. Prevention of Significant Deterioration

New Source Review under PSD regulations is not applicable to the proposed project as the net increase in emissions due to this modification is less than the PSD significant emission rates (15 TPY for PM₁₀ and 7 TPY for SAM) listed in Rule 62-210.200, Florida Administrative Code (F.A.C.). The net increase in emissions is determined based on the difference between the projected future actual emissions and the baseline actual emissions.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

B. Federal and State Emission Standards

The proposed project is subject to the applicable provisions of Chapter 403, Florida Statutes, Chapters 62-4, 62-210, 62-212 and 62-296, Florida Administrative Code (F.A.C.). The facility is located in an area designated attainment or maintenance for all criteria pollutants in accordance with F.A.C. Rule 62-275.400.

The emission units are regulated under Acid Rain, Phase II and Phase I; NSPS – 40 CFR 60 Subpart Da, Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978, adopted and incorporated by reference in Rule 62.204-800, F.A.C.

III. AIR QUALITY ANALYSIS

According to the application and our review, the proposed project will not require an air quality analysis.

IV. CONCLUSION

Based on the foregoing technical evaluation of the application and information submitted by JEA/SJRPP, the Department has made a preliminary determination that the proposed project will comply with all applicable federal and state air pollution regulations.

DRAFT PERMIT

PERMITTEE

JEA - St. Johns River Power Park
21 West Church Street
Jacksonville, Florida 32202

Authorized Representative:
Mr. Michael J. Brost, Vice President
Electric System

Permit No.:	0310045-017-AC
Facility ID No.:	0310045
Project:	Installation of Selective Catalytic Reduction
Expires:	June 30, 2009

PROJECT AND LOCATION

This permit authorizes the installation of Selective Catalytic Reduction (SCR) systems and ammonia injection systems on existing Boilers 1 and 2 at the St. Johns River Power Park. The St. Johns River Power Park is an existing electrical generating plant (SIC No. 4911) located at 11201 New Berlin Road in Jacksonville, Duval County, Florida. The UTM coordinates are: Zone 17; 446.9 km E; 3359.15 km N.

STATEMENT OF BASIS

Installation of the ammonia injection system is required to ensure that the SCR project will not result in an increase of sulfuric acid mist emissions above the PSD-significant emission rate of 7 tons per year. The applicant elects to install the SCR systems to provide full flexibility in implementing the federal cap and trade program for nitrogen oxides under the Clean Air Interstate Rule (CAIR). Because CAIR affords a regulated facility the flexibility to evaluate market conditions to determine whether it will install controls, operate existing controls, or purchase allowances generated by other plants, the Department does not require the installation of this equipment nor its operation. This 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.) and Title 40, Part 60 of the Code of Federal Regulations. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

APPENDICES

The following appendices are attached as a part of this permit.

Appendix GC. Construction Permit General Conditions

Executed in Tallahassee, Florida

Joseph Kahn, Director
Division of Air Resource Management

(Date)

SECTION 1. GENERAL INFORMATION

FACILITY DESCRIPTION

The Jacksonville Electric Authority operates an existing electrical generating plant at the St. Johns River Power Park (SJRPP). This plant includes Boilers 1 and 2 (Emissions Units 016 and 017), which are fossil fuel-fired steam generators fired with pulverized coal and a blend of petroleum coke and coal. Each boiler has a nominal nameplate rating of 679.6 megawatts (electric). Emissions from each boiler are currently controlled with an electrostatic precipitator (ESP), a limestone scrubber and low-NOx burners.

PROJECT DESCRIPTION

This permit authorizes the installation of Selective Catalytic Reduction (SCR) systems on Boilers 1 and 2. The permittee elects to install these controls as part of its plan to comply with the Clean Air Interstate Rule (Rule 62-296.470(CAIR), F.A.C.) and the Clean Air Mercury Rule (Rule 62-296.480(CAMR), F.A.C.). When operating, the SCR systems will decrease nitrogen oxides (NOx) emissions from Boilers 1 and 2, which will allow the plant to meet the annual and ozone season NOx CAIR allocations.

Installation of the SCR systems will result in collateral increases in emissions of sulfuric acid mist (SAM) and particulate matter (PM/PM₁₀). The potential increase of SAM emissions is a result of the oxidation of sulfur dioxide (SO₂) to sulfur trioxide (SO₃) that is emitted as SAM after the flue gas desulfurization (FGD) system. The permit requires the installation of additional ammonia injection systems on Boilers 1 and 2 to reduce SAM emissions. Ammonia will be injected downstream of the SCR reactor and upstream of the existing electrostatic precipitator (ESP). The ammonia reacts with SO₃ to form salts (e.g. ammonium sulfate), which will be collected in the ESP. With the additional ammonia injection systems, there will be no PSD-significant emissions increases due to the installation of SCR systems on Boilers 1 and 2. There are no other planned changes in Boilers 1 and 2.

The applicant elects to install the SCR systems to provide full flexibility in implementing the federal cap and trade program for nitrogen oxides under the Clean Air Interstate Rule (CAIR). Because CAIR affords a regulated facility the flexibility to evaluate market conditions to determine whether it will install controls, operate existing controls, or purchase allowances generated by other plants, the Department does not require the installation of this equipment nor its operation.

REGULATORY CLASSIFICATION

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

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

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

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

NSPS: The existing facility operates units subject to the New Source Performance Standards of 40 CFR 60.

RELEVANT DOCUMENTS

The permit request and additional information received to make it complete are not a part of this permit; however, the information is listed in the technical evaluation which is issued concurrently with this permit.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits regarding construction and operation shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all such documents shall also be sent to the Department's Northeast District Office and the Environmental Resource Management Department, Environmental Quality Division, Air Quality Branch (ERMD/EQD/AQB) of Duval County.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to Northeast District Office.
3. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated 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 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and Title 40, Part 60 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. 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. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
4. 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.]
5. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. 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. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
6. Title V Permit: This permit authorizes modification of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V 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.]
7. Source Obligation: At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by increasing its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction has not yet commenced on the source or modification. [Rule 62-212.400(12)(c), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

The specific conditions listed in this section apply to the following emission units:

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
016	SJRPP Boiler No. 1
017	SJRPP Boiler No. 2

SJRPP Boilers 1 and 2 are fossil fuel-fired steam generators, each with a nominal nameplate rating of 679.6 MW. Authorized fuels include pulverized coal, petroleum coke/coal blends, new 2 distillate oil (startup and low-load operation) and "on-specification" used oil. The maximum heat input to each unit is 6144 MMBtu/hour. Each unit is a dry bottom, wall-fired boiler with the following controls: an electrostatic precipitator (ESP) to control particulate matter (PM/PM₁₀), a wet limestone flue gas desulfurization (FGD) unit to control sulfur dioxide (SO₂), low-NO_x burners and low excess-air firing to control nitrogen oxides (NO_x), and good combustion to control carbon monoxide (CO). Each boiler exhausts through a separate stack that is 640 feet above grade. SJRPP Boiler 1 began commercial operation in December of 1986. SJRPP Boiler 2 began commercial operation in March of 1988.

PREVIOUS APPLICABLE REQUIREMENTS

1. Permit Determination: This permit authorizes the installation of SCR and ammonia injection systems for Boilers 1 and 2. Unless otherwise specified, these conditions are in addition to all existing applicable permit conditions and regulatory requirements. The permittee shall continue to comply with the conditions of the original permit PSD-FL-010 (as modified), which includes restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, record keeping, reporting, etc. for these units. The facility remains subject to all of the requirements specified in the current Title V Operation Permit (No. 0310045-016-AY) [Rule 62-4.070(3), F.A.C.]

AUTHORIZED WORK

2. SCR Systems: The permittee is authorized to construct, tune, operate and maintain new SCR systems for SJRPP Boilers 1 and 2 to reduce emissions of nitrogen oxides (NO_x) as described in the application. In general, the SCR systems will include the following equipment: ammonia storage; ammonia flow control unit (AFCU); ammonia injection grid (AIG); vanadium pentoxide catalyst; an SCR reactor chamber; an SCR bypass system; and other ancillary equipment. [Application; Rules 62-296.470(CAIR) and 62-210.200(PTE), F.A.C.]
3. Ammonia Injection Systems: The permittee shall construct, tune, operate and maintain new ammonia injection systems on SJRPP Boilers 1 and 2 to mitigate the formation of sulfuric acid mist (SAM) due to the increased oxidation of SO₂ to SO₃ across the new SCR reactors. Ammonia will be injected downstream of the SCR reactor and upstream of the existing electrostatic precipitator (ESP). The control system regulating the amount of ammonia injected to control SAM will be integrated into the plant digital control system. The ammonia will react with SO₃ to form salts (e.g., ammonium sulfate), which will be collected in the ESP. With the additional ammonia injection systems, there will be no PSD-significant emissions increases due to the installation of SCR systems on Boilers 1 and 2. The proposed equipment includes storage tanks, piping, injectors, a control system and other ancillary equipment. The ammonia injection systems shall be operable when the SCR system is initially available for service. [Application; and Rule 62-212.400(12), F.A.C.]
4. Circumvention: No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. Operation of the SCR is not required by this permit. As necessary, the permittee shall operate the ammonia injection system for SAM emissions control to ensure the project does not result in a PSD-significant emissions increase (7

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

tons/year) of sulfuric acid mist emissions above baseline actual emissions (1317 tons/year). [Rules 62-210.650 and 62-212.400(12), F.A.C.]

PERFORMANCE REQUIREMENTS

5. Annual PM/PM₁₀ and SAM Emissions Projections: For this project, the permittee projected that actual annual emissions due to the project would not exceed the PM/PM₁₀ annual emissions (322 + 14 = 336 tons/year); and would not exceed the SAM annual emissions (1317 + 6 = 1323 tons/year). The permittee shall demonstrate this by compiling and submitting the reports required by this permit. For the purposes of this reporting, all PM emissions are considered to be PM₁₀ emissions. [Application; and Rules 62-212.300 and 62-210.370, F.A.C.]
6. Ammonia Injection for SAM Emissions Control: On an annual basis, the permittee must demonstrate that SAM emissions as a result of this project do not exceed 1323 tons per year. The permittee shall install and operate the ammonia injection system at a frequency and injection rate for SAM control to satisfy this requirement. An automated control system will be used to adjust the ammonia flow rate for the given set of operating conditions based on the most recent performance test results. [Rules 62-4.070(3) and 62-212.300(1)(e), F.A.C.]
7. Ammonia Slip: Ammonia slip measured at the stack downstream of all emission control systems shall not exceed 5 parts per million by volume (ppmv). Annual testing of ammonia shall be conducted and corrective measures taken if measured values exceed 2 ppmv. [Design; and Rule 62-4.070(3), F.A.C.]

EMISSIONS PERFORMANCE TESTING

8. Initial Performance Tests – Ammonia Injection for SAM Emissions Control: Within 90 days of completing construction of both Boilers 1 and 2 SCR systems, the permittee shall conduct a series of initial performance tests on either Boiler 1 or 2 to determine the SAM emissions rate under a variety of operating scenarios that documents the impact of ammonia injection on reducing SAM emissions and results in the development of correlation/curves between injection rates, operating conditions and emissions.
 - a. For each set of operating conditions being evaluated, the permittee shall conduct at least a 1-hour test run to determine SAM emissions. At least nine such test runs shall be conducted to evaluate the effect of SAM emissions on such parameters as the SO₂ emission rate prior to the SCR catalyst (and FGD system), the unit load, the flue gas flow rate, the ammonia injection rate and the current catalyst oxidation rate.
 - b. Tests shall be conducted under a variety of fuel blends and load rates that are representative of the actual operating conditions intended for Boilers 1 and 2. Sufficient tests shall be conducted to establish the SAM emissions rates for the following scenarios: bypass of the SCR reactor, SCR reactor in service without ammonia injection, and SCR reactor in service under varying operating conditions and levels of ammonia injection.
 - c. At least 15 days prior to initiating the performance tests, the permittee shall submit a test notification, preliminary test schedule and test protocol to the Bureau of Air Regulation and the Compliance Authority.
 - d. Within 45 days following the last test run conducted, the permittee shall provide a report summarizing the emissions tests and results. All SAM emissions test data shall be provided with this report.
 - e. Within 45 days following the submittal of the emissions test report and no later than 90 days following the last test run conducted, the permittee shall submit a project report summarizing the following: identify each set of operating conditions evaluated, identify each operating parameter evaluated, identify the relative influence of each operating parameter, describe how the automated control system will adjust the ammonia injection rate based on the selected parameters, identify the frequency with

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

which operational parameters will be reevaluated and adjusted within the automated control system, provide the algorithm used for the automated control system or a series of related performance curves, and provide details for calculating and estimating the SAM emissions rate based on the level of ammonia injection and operating conditions. The test results shall be used to adjust the ammonia injection control system and estimate SAM emissions.

[Rules 62-4.070(3) and 62-212.300(1)(e), F.A.C.]

9. **Annual Tests – Ammonia Injection for SAM Emissions Control:** During each federal fiscal year, the permittee shall conduct performance tests to determine the SAM emission rates and adjust the ammonia injection rates as necessary. At least six representative 1-hour test runs shall be conducted on either Boiler 1 or 2. Annual performance tests shall be alternated between the boilers such that testing is conducted on a boiler at least twice during each 5-year period. Within 45 days following the last test run conducted, the permittee shall provide a report summarizing the emissions tests conducted, the results of the tests, the catalyst oxidation rate, how the automated control system was adjusted, and the updated algorithm used for the automated control system or the updated series of related performance curves. [Rules 62-4.070(3) and 62-212.300(1)(e), F.A.C.]
10. **Test Notification:** The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. [Rule 62-297.310(7)(a)9, F.A.C.]
11. **Test Methods:** Required tests shall be performed in accordance with the following reference methods:

EPA Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5B	Determination of PM/PM ₁₀ Emissions
8	Determination of Sulfuric Acid Mist Emissions
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)

Compliance with the ammonia slip limit shall be determined using EPA conditional test method (CTM-027), EPA method 320, or other methods approved by the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60 Appendix A]

NOTIFICATIONS, RECORDS AND REPORTS

12. **Test Reports:** The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Rule 62-297.310, F.A.C. For each sulfuric acid mist test run, the report shall also indicate the ammonia injection rate for SAM emissions control, unit load, unit heat input rate, and total secondary power input to the electrostatic precipitator. [Rule 62-297.310(8), F.A.C.]
13. **Operational Data:** For each unit, the permittee shall continuously monitor and record the ammonia injection rate for SAM emissions control and the hours of SCR bypass. [Rule 62-4.070(3), F.A.C.]
14. **Annual PM/PM₁₀ and SAM Emissions Reports:** In accordance with Rule 62-212.300(1)(e), F.A.C., the permittee shall comply with the following monitoring, reporting and recordkeeping provisions:
- The permittee shall monitor the PM/PM₁₀ and SAM emissions using the most reliable information available. On a calendar year basis, the permittee shall calculate and maintain a record of the annual emissions (tons per year) for a period of 5 years after completing construction on each unit's control system. Emissions shall be computed in accordance with Rule 62-210.370, F.A.C.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

- b. Within 60 days after each calendar year following completion of construction on each new control system, the permittee shall report to the Compliance Authority the annual emissions for each unit for the preceding calendar year. The report shall contain the following:
 - a. Name, address and telephone number of the owner or operator of the major stationary source;
 - b. Annual emissions as calculated pursuant to subparagraph 62-212.300(1)(e)1., F.A.C.;
 - c. If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and
 - d. Any other information that the owner or operator wishes to include in the report.
- c. The information required to be documented and maintained shall be submitted to the Compliance Authority, where it will be available for review to the general public.

[Rule 62-212.300(1)(e), F.A.C.]

15. PM/PM₁₀ and SAM Emissions Computation and Reporting: The permittee shall compute PM/PM₁₀ and SAM emissions in accordance with the following requirements.
 - a. For each year of reporting required, emissions shall be computed based on the controlled and uncontrolled emissions factors determined during the required annual emissions test. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.
 - b. With appropriate supporting test data, multiple emission factors may be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.
 - c. The permittee shall compute emissions by multiplying the appropriate controlled or uncontrolled emission factor by the annual heat input rate for the period over which the emissions are computed. The uncontrolled emissions factor shall be used if the minimum ammonia injection rate established for the latest test is not met.
 - d. The permittee shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the Department or Compliance Authority for any regulatory purpose.

[Rule 62-210.370, F.A.C.]

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4-160]

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to sections 403.161, 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.
- G.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.
- G.3 As provided in Subsections 403.087(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 the permit.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does 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.
- G.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.
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or 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.
- G.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 a reasonable time, 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 the 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.

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4-160]

- G.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 non-compliance; and
 - b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.
- 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.
- G.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 403.73 and 403.111, 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.
- G.10 The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Rules 62-4.120, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
- () Determination of Best Available Control Technology (BACT)
 - () Determination of Prevention of Significant Deterioration (PSD)
 - () Compliance with New Source Performance Standards (NSPS)
- G.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:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4-160]

- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

G.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.

Adams, Patty

From: Harvey, Mary
Sent: Friday, February 02, 2007 9:29 AM
To: Adams, Patty
Subject: FW: Electric - JEA - FAcility #0310045-017-AC-DRAFT

From: Worley, Jay A. - Supt BM Lab & Environment Comp [mailto:WorlJA@jea.com]
Sent: Friday, February 02, 2007 7:53 AM
To: Harvey, Mary
Cc: Brost, Mike J. - VP, Electric Systems; Worley, Jay A. - Supt BM Lab & Environment Comp
Subject: RE: Electric - JEA - FAcility #0310045-017-AC-DRAFT

Ms. Harvey, Pursuant to your request, the email and attached documents have been received. Please do not hesitate to contact me at (904) 591-2595 if you require any additional information.
Thanks, Jay

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Thursday, February 01, 2007 3:50 PM
To: Brost, Mike J. - VP, Electric Systems; Worley, Jay A. - Supt BM Lab & Environment Comp; worley.gregg@epa.gov; Dee_Morse@nps.gov; Kirts, Christopher; robinson@coj.net; Halpin, Mike; kkosky@golder.com
Cc: Arif, Syed; Adams, Patty; Gibson, Victoria
Subject: Electric - JEA - FAcility #0310045-017-AC-DRAFT

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <http://www.adobe.com/products/acrobat/readstep.html>.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

Adams, Patty

From: Harvey, Mary
Sent: Friday, February 02, 2007 9:31 AM
To: Adams, Patty; Arif, Syed
Subject: FW: Electric - JEA - FAcility #0310045-017-AC-DRAFT

From: Brost, Mike J. - VP, Electric Systems [mailto:Brosmj@jea.com]
Sent: Thursday, February 01, 2007 4:44 PM
To: Harvey, Mary
Subject: RE: Electric - JEA - FAcility #0310045-017-AC-DRAFT

Received. Mike Brost

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Thursday, February 01, 2007 3:50 PM
To: Brost, Mike J. - VP, Electric Systems; Worley, Jay A. - Supt BM Lab & Environment Comp; worley.gregg@epa.gov; Dee_Morse@nps.gov; Kirts, Christopher; robinson@coj.net; Halpin, Mike; kkosky@golder.com
Cc: Arif, Syed; Adams, Patty; Gibson, Victoria
Subject: Electric - JEA - FAcility #0310045-017-AC-DRAFT

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <http://www.adobe.com/products/acrobat/readstep.html>.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

Adams, Patty

From: Harvey, Mary
Sent: Friday, February 02, 2007 9:31 AM
To: Adams, Patty
Subject: FW: Electric - JEA - Facility #0310045-017-AC-DRAFT

From: Robinson, Richard [<mailto:ROBINSON@coj.net>]
Sent: Thursday, February 01, 2007 4:22 PM
To: Harvey, Mary
Subject: Read: Electric - JEA - Facility #0310045-017-AC-DRAFT

Your message

To: ROBINSON@coj.net
Subject:

was read on 2/1/2007 4:22 PM.

Adams, Patty

From: Harvey, Mary
Sent: Friday, February 02, 2007 9:31 AM
To: Adams, Patty; Arif, Syed
Subject: FW: Electric - JEA - Facility #0310045-017-AC-DRAFT

From: Halpin, Mike
Sent: Thursday, February 01, 2007 4:15 PM
To: Harvey, Mary
Subject: Read: Electric - JEA - Facility #0310045-017-AC-DRAFT

Your message

To: 'brosmj@jea.com'; 'wortja@jea.com'; 'worley.gregg@epa.gov'; 'Dee_Morse@nps.gov'; Kirts, Christopher; 'robinson@coj.net'; Halpin, Mike; 'kkosky@golder.com'
Cc: Arif, Syed; Adams, Patty; Gibson, Victoria
Subject: Electric - JEA - Facility #0310045-017-AC-DRAFT
Sent: 2/1/2007 3:50 PM

was read on 2/1/2007 4:15 PM.

Adams, Patty

From: Harvey, Mary
Sent: Friday, February 02, 2007 9:32 AM
To: Adams, Patty
Subject: FW: Electric - JEA - Facility #0310045-017-AC-DRAFT

-----Original Message-----

From: Dee_Morse@nps.gov [mailto:Dee_Morse@nps.gov]
Sent: Thursday, February 01, 2007 4:06 PM
To: Harvey, Mary
Subject: Electric - JEA - Facility #0310045-017-AC-DRAFT

Return Receipt

Your Electric - JEA - Facility #0310045-017-AC-DRAFT
document:

was Dee Morse/DENVER/NPS
received
by:

at: 02/01/2007 02:05:46 PM

Adams, Patty

From: Harvey, Mary
Sent: Thursday, February 01, 2007 3:50 PM
To: 'brosmj@jea.com'; 'worlja@jea.com'; 'worley.gregg@epa.gov'; 'Dee_Morse@nps.gov'; Kirts, Christopher; 'robinson@coj.net'; Halpin, Mike; 'kkosky@golder.com'
Cc: Arif, Syed; Adams, Patty; Gibson, Victoria
Subject: Electric - JEA - FAcility #0310045-017-AC-DRAFT
Attachments: 0310045.017.AC.D_pdf.zip

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <http://www.adobe.com/products/acrobat/readstep.html>.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

Adams, Patty

From: Harvey, Mary
Sent: Tuesday, February 06, 2007 11:22 AM
To: Adams, Patty
Subject: FW: Electric - JEA - FAcility #0310045-017-AC-DRAFT

From: Kirts, Christopher
Sent: Tuesday, February 06, 2007 11:14 AM
To: Harvey, Mary
Subject: Read: Electric - JEA - FAcility #0310045-017-AC-DRAFT

Your message

To: 'brosmj@jea.com'; 'worlja@jea.com'; 'worley.gregg@epa.gov'; 'Dee_Morse@nps.gov'; Kirts, Christopher; 'robinson@coj.net'; Halpin, Mike; 'kkosky@golder.com'
Cc: Arif, Syed; Adams, Patty; Gibson, Victoria
Subject: Electric - JEA - FAcility #0310045-017-AC-DRAFT
Sent: 2/1/2007 3:50 PM

was read on 2/6/2007 11:14 AM.