



# Florida Department of Environmental Protection

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2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

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## PERMITTEE

City of Tallahassee, Electric Utilities  
2602 Jackson Bluff Road  
Tallahassee, FL 32304

Authorized Representative:  
Mr. Triveni Singh, Production Manager

Air Permit No. 0730003-016-AC (PSD-FL-343B)  
Permit Expires: December 31, 2018  
Minor Air Construction Permit  
Arvah B. Hopkins Electric Generating Station  
Concurrent with Renewal

## PROJECT

This is the final air construction permit, which authorizes the revision to air construction permit conditions to remove fuel types that will no longer be used and revise the annual compliance tests required, pursuant to Rule 62-297.3108(b). The proposed work will be conducted at the existing Arvah B. Hopkins Electric Generating Station, which is a power plant categorized under Standard Industrial Classification No. 4911. The existing facility is in Leon County at 1125 Geddie Road in Tallahassee, Florida. The UTM coordinates are Zone 16, 749.5 km East, and 3371.7 km North. Latitude is: 30° 27' 8" North; and, Longitude is: 84° 24' 10" West.

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

## STATEMENT OF BASIS

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

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida

*For:*

Syed Arif, P.E., Program Administrator  
Office of Permitting and Compliance  
Division of Air Resource Management

**CERTIFICATE OF SERVICE**

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

Triveni Singh, City of Tallahassee: [triveni.singh@talgov.com](mailto:triveni.singh@talgov.com)

Russell Wider, City of Tallahassee: [russell.wider@talgov.com](mailto:russell.wider@talgov.com)

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DEP Siting Office: [SCO@dep.state.fl.us](mailto:SCO@dep.state.fl.us)

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Lynn Searce, DEP OPC: [lynn.searce@dep.state.fl.us](mailto:lynn.searce@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.

## SECTION 1. GENERAL INFORMATION

### FACILITY DESCRIPTION

This facility consists of a fossil fuel-fired steam generator (Unit 1), two NSPS regulated General Electric LM 6000 Sprint simple cycle combustion turbines (HC3, HC4), and a General Electric 7FA combined cycle combustion turbine (Unit 2A). Phase II Acid Rain Units include Unit 1, HC3, HC4, and 2A. The total (nominal) combined electrical generating capacity from the facility is 411 megawatts (MW), of which, approximately 133 MW are provided by the two steam generators and 288 MW are provided by the three combustion turbines. The fuels used at this facility are natural gas and fuel oil. The facility also includes an emergency generator and a fire pump.

The existing facility consists of the following emissions units.

EU No.	Emission Unit Description
001	Boiler (Unit 1): 75 MW
031	Combustion Turbine (HC3) 50 MW
032	Combustion Turbine (HC4) 50 MW
033	Combined Cycle Combustion Turbine, (Unit 2A) 188 MW (and Heat Recovery Steam Generator with gas-fired duct burner)
006, 007, 035	RICE affected engines including: Fire pump (006) for the facility, 260 hp installed in 1996 and Emergency Generator for unit startups with no station power

### PROPOSED PROJECT

The applicant is requesting revisions to Permit No. AO37-242825 and Air Construction Permit Nos. 0730003-005-AC and 009-AC. The miscellaneous revisions to the referenced permits include:

- The annual tests required will be changed from each federal fiscal year to each calendar year; and,
- The removal of fuel oil and on-specification used oil from the list of authorized fuels from Boiler Number 1.

### FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility operates units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Office of Permitting and Compliance mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the OPC section.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Northwest District Office at 160 Governmental Center, Suite 308, Pensacola, Florida 32502-5794.
3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and Appendix D (Common Testing Requirements).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Construction and Expiration. The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(3) & (4), 62-4.080 & 62-210.300(1), F.A.C.]

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### A. Emissions Unit 001

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
001	Boiler Number 1 (Phase II Acid Rain unit)

*{Permitting Notes: This unit is regulated under the federal Acid Rain Program for Phase II and Rule 62-296.405(1), F.A.C., Fossil Fuel Steam Generators with More than 250 MMBtu/Hour Heat Input. This boiler also meets the definition of a natural gas-fired electric utility steam generating unit (as defined in 40 CFR 63.10042), therefore, the unit is not subject to NESHAP Subparts DDDDD or UUUUU.}*

#### PERMITS BEING MODIFIED

The following revisions replace the referenced specific conditions in **Permit No. AO37-242825**.

##### 1. Section III, Specific Condition 2

Permitted Capacity: The maximum allowable heat input rate is as follows:

Unit No.	MMBtu/hour Heat Input	Fuel Type
001	903	Natural Gas
	<b>903</b>	<b>Fuel Oil;</b>
		<b>On Specification Used Oil</b>

[Rules 62-4.160(2), ~~62-204.800, &~~ 62-210.200(PTE); and, ~~Permit No. AO37-242825~~ Application No. 0730003-016-AC.]

##### 2. Section III, Specific Conditions 4 & 6

~~Sulfur Dioxide. For compliance purposes, the following limit supersedes the higher limit contained in Rule 62-296.405(1)(c)1.h F.A.C.: The SO<sub>2</sub> emission rate shall not exceed 0.75 pound per million Btu heat input, as measured by applicable compliance test methods in Specific Condition A.21 (stack testing) or A.22 (co-firing natural gas). Any calculations used to demonstrate compliance shall be based on the heating value, quantities, and the percent sulfur of gaseous fuels being burned.~~  
~~[AO37-242825 Specific Conditions 4 & 6]~~

~~Sulfur Dioxide. The stack test methods for demonstrating compliance with sulfur dioxide emissions limit shall be EPA Methods 6, 6A, 6B, or 6C, incorporated by reference in Chapter 62-204, F.A.C. Fuel sampling and analysis may be used as an alternate sampling procedure if such a procedure is incorporated into the operation permit for the emissions unit. If the emissions unit obtains an alternate procedure under the provisions of Rule 62-297.620, F.A.C., the procedure shall become a condition of the emissions unit's permit. The Department will retain the authority to require EPA Method 6 or 6C if it has reason to believe that exceedences of the sulfur dioxide emissions limiting standard are occurring. Results of an approved fuel sampling and analysis program shall have the same effect as EPA Method 6 test results for purposes of demonstrating compliance with sulfur dioxide standards. The permittee may use the EPA test methods, referenced above, to demonstrate compliance; however, as an alternate sampling procedure authorized by permit, the permittee elected to demonstrate compliance by using fuel sampling and analysis shown below.~~  
~~[Rules 62-213.440, 62-296.405(1)(c)3., 62-296.405(1)(f)1.b. & 62-297.401, F.A.C.; and, Permit No. AO37-242825 Condition 4 & 6]~~

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### B. Emissions Units 031 and 032

This section of the permit addresses the following emissions units.

EU No.	Emission Unit Description
031	Combustion Turbine – Unit Number HC3 (Phase II Acid Rain Unit)
032	Combustion Turbine – Unit Number HC4 (Phase II Acid Rain Unit)

*{Permitting notes: These emissions units are regulated under New Source Performance Standards (NSPS) - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62 204.800(7)(b)38., F.A.C; Air Construction Permit No. 0730003-005-AC; PSD-FL-343, Prevention of Significant Deterioration (PSD), in Rule 62 212.400, F.A.C.; and, Best Available Control Technology (BACT). Emissions Units 031 and 032 are affected Acid Rain Phase II and CAIR units.}*

#### PERMITS BEING MODIFIED

The following revisions replace the referenced specific condition in **Permit No. 0730003-005-AC [PSD-FL-343]**

1. *Section III, Specific Condition 25.*

Annual Performance Tests. During each federal fiscal calendar year (October/January 1<sup>st</sup> to September 30<sup>th</sup> December 31<sup>st</sup>), each EU shall be tested to demonstrate compliance with the emissions standards for NO<sub>x</sub>, CO, and visible emissions (VE) from the combustion turbine for each fuel. Testing for ammonia slip is required during the first scheduled annual performance tests after the cumulative hours of operation on each combustion turbine exceed 1,500 hours of oil firing or 5,000 hours of gas firing starting from the initial installation of the SCR catalysts. Thereafter, ammonia testing is required during the first scheduled annual performance tests after subsequent cumulative 1,500 hours of oil firing and 5,000 hours of gas firing in each combustion turbine or after regeneration, replacement or addition to the SCR catalyst system. If conducted at permitted capacity, NO<sub>x</sub> emissions data collected during the annual NO<sub>x</sub> continuous monitor RATA required pursuant to 40 CFR 75 may be substituted for the required annual performance test. Tests required on an annual basis shall be conducted at least once during each federal fiscal calendar year (October/January 1<sup>st</sup> to September 30<sup>th</sup> December 31<sup>st</sup>). In the event that the operation of the CT is less than 400 hours per year on natural gas or distillate oil, annual testing is not required for that year and that fuel.  
[Rule 62-297.310(78)(a), F.A.C. and Permit No. 0730003-005-AC / PSD-FL-343 Application No. 0730003-016-AC]

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### C. Emissions Unit 033

This section of the permit addresses the following emissions units.

EU No.	Emission Unit Description
033	Combined Cycle Unit 2A (Phase II Acid Rain Unit)

*{Permitting notes: Unit 2A is regulated under New Source Performance Standards (NSPS) - 40 CFR 60, Subpart KKKK, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62 204.800, F.A.C; Air Construction Permit No. 0730003-009-AC; Prevention of Significant Deterioration (PSD) was not triggered by the original construction of this unit due to netting. Unit 2A is an affected Acid Rain Phase II unit.}*

#### PERMITS BEING MODIFIED

The following revisions replace the referenced specific condition in **Permit No. 0730003-009-AC**.

1. *Section III, Specific Condition 27.*

Annual Compliance Testing. During each federal fiscal calendar year (October/January 1<sup>st</sup> to September 30<sup>th</sup>/December 31<sup>st</sup>), annual compliance tests shall be conducted in accordance with the test method specified in this section.

- a. The HRSG stack shall be tested on natural gas in combined cycle mode to demonstrate compliance with the standards for ammonia slip and visible emissions. For each required test, emissions of CO and NO<sub>x</sub> recorded by the CEMS shall also be reported. If distillate oil is fired for more than 400 hours during the federal fiscal year, the HRSG stack shall also be tested on oil in combined cycle mode to demonstrate compliance with the standards for ammonia slip and visible emissions.
- b. The simple cycle HRSG/SCR bypass operation shall be tested when firing natural gas in simple cycle mode to demonstrate compliance with the permitted CO and NO<sub>x</sub> emissions standards. For this method of operation, tests may be conducted by taking the SCR system out of service and sampling at the HRSG stack. In addition, the installed and certified CO and NO<sub>x</sub> CEMS may be used to provide the compliance test data. These tests shall consist of at least four, 1-hour test runs to determine the 4-hour average.

[Rules 62-4.070(3) and 62-297.310(7)(a) and (8)(b), F.A.C.; 40 CFR 60.8; and Permit No. 0730003-009-AC, Specific Condition 27, Application No. 0730003-016-AC]