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Authorized Representative:
Karen Sheffield, Director Polk Power Station

Air Permit No. 1050233-035-AC (PSD-FL-194K)
Permit Expires: December 31, 2014
Polk Power Station
Removal of Visible Emission Testing Requirement
For the Solid Fuel Handling System (EU 005)

PROJECT

This is the final air construction permit which authorizes the removal of the visible emission (VE) annual testing requirement for the dust suppression systems associated with the solid fuel handling system (EU 005) of Unit 1 at the existing Polk Power Station (PPS). The PPS is an electrical generating plant categorized under Standard Industrial Classification No. 4911. This existing facility is located in Polk County at 9995 State Route 37 South in Mulberry, Florida. The UTM coordinates are Zone 17, 402.45 kilometers (km) East, and 3067.35 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices).

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is a revision of the original air construction permit issued pursuant to Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. A copy of this permit modification shall be filed with the referenced permit and shall become part of the permit.

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

Executed in Tallahassee, Florida

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CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) 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.

Ms. Karen Sheffield, TEC: kasheffield@tecoenergy.com
Mr. Paul L. Carpinone, TEC: plcarpinone@tecoenergy.com
Ms. Lyndsey Baldyga, TEC: LBaldyga@tecoenergy.com
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Ms. Barbara Friday, DEP Reading File: barbara.friday@dep.state.fl.us

Clerk Stamp

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

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FACILITY DESCRIPTION

TEC operates the existing PPS, which is an electric power plant consisting of five key electrical generating units (Units 1 to 5). This permit only addresses Unit 1, the integrated gasification combined-cycle (IGCC) plant. Unit 1 is comprised of a 250 megawatt (MW – net, electrical) combined cycle CCCT designated Emission Unit No. 1 (EU 001). This CCCT fires synthetic gas (syngas) produced from the gasification of solid fuels including coal and petroleum coke (petcoke) and natural gas as an augmentation, backup and startup fuel. In addition, Unit 1 consists of: a heat recovery steam generator (HRSG); a nominal 123 MW (gross) steam turbine-electrical generator (STEG); an oxygen plant; a synthetic gas (syngas) cleanup and sulfur recovery system; an auxiliary boiler (EU 003), which fires natural gas; a sulfuric acid plant (EU 004); a solid fuel handling system (EU 005); and a solid fuel gasification system (EU 006).

PROPOSED PROJECT

This project involves the removal of the visible emission (VE) annual testing requirement for the dust suppression systems associated with the solid fuel handling system (EU 005) of Unit 1. According to TEC, the solid fuel used at PPS does not have any VE; therefore the dust suppression systems have never been needed. For dust control the solid fuel is sprayed with a water/surfactant spray before arriving at PPS and this level of control is sufficient to prevent VE. In addition, according to TEC, VE testing of the dust suppression systems used for the storage silos and bins associated with this emission unit would result in an administrative burden while having no environmental benefit due to negligible VE.

Unit 1 at the PPS consists of the following emission units.

EU No.	Description
001	260 MW Combined Cycle Gas Turbine No. 1
003	120 Million Btu per Hour Auxiliary Boiler
004	Sulfuric Acid Plant
005	Solid Fuel Handling System
006	Solid Fuel Gasification System

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility operates units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the PSD of Air Quality.
- The facility operates units subject to the New Source Performance Standards (NSPS) in Part 60, Title 40 of the Code of Federal Regulations (CFR).
- The facility operates units subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) in Part 63, Title 40 of the CFR.

PREVIOUS APPLICABLE REQUIREMENTS

The conditions of this permit supplement the previously issued air construction permit No. 01050223-029-AC (PSD-FL-194J). Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations for Unit 1. Previous permits for all other emission units at the Polk Power Station are still applicable and enforce. [Rule 62-4.070, F.A.C.]

Changes are highlighted in yellow with additions denoted with double-underline and deletions denoted with ~~strikethrough~~.

SECTION 2. ADMINISTRATIVE REQUIRMENTS

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. The telephone number is 850/717-9000 and the fax number is 850/717-9001.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resource Section of the Department's Southwest District Office at: 13051 North Telecom Parkway, Temple Terrace, Florida 33637. The telephone number is 813/632-7600 and the fax number is 813/632-7665.

3. Appendices: The following Appendices are included in Section 4 of this permit:
   a. Appendix CC. Common Conditions;
   b. Appendix CF. Citation Formats and Glossary of Common Terms;
   c. Appendix CTR. Common Testing Requirements;
   d. Appendix GC. General Conditions;
   e. Appendix GP. NSPS General Provisions; and
   f. Appendix Y. NSPS Subpart Y - for Coal Preparation and Processing Plants.

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. Source Obligation:

   (a) 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 virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   (b) 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 exceeding 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 had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C.]

8. Objectionable Odors Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]

   {Note: An objectionable odor is defined in Rule 62-210.200(Definitions), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to

human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.}

9. Unconfined Emissions of Particulate Matter: No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter. General reasonable precautions include the following, as applicable:
   (a) Paving and maintenance of roads, parking areas and yards;
   (b) Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing;
   (c) Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities;
   (d) Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne;
   (e) Landscaping or planting of vegetation;
   (f) Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter;
   (g) Confining abrasive blasting where possible; and
   (h) Enclosure or covering of conveyor systems. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

   Additional reasonable precautions, as needed, applicable to this facility are:
   (a) All materials, except tires, coal and petroleum coke, at the plant shall be stored under roof on compacted clay or concrete, or in enclosed vessels.
   (b) Water supply lines, hoses and sprinklers shall be located near all materials, coal and petroleum coke stockpiles.
   (c) All plant operators shall be trained in basic environmental compliance and shall perform visual inspections of materials, coal and petroleum coke regularly and before handling. If the visual inspections indicate a lack of surface moisture, the materials, coal and petroleum coke shall be wetted with sprinklers. Such wetting shall continue until the potential for unconfined particulate matter emissions are minimized.
   (d) Water spray shall be used to wet the materials and fuel if inherent moisture and moisture from wetting the storage piles are not sufficient to prevent unconfined particulate matter emissions.
   (e) The manufacturing area and the access roadways for the facility shall be paved with asphalt or concrete.
   (f) Vacuum Sweeper shall be used on paved roads.
   (g) In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

   [Rule 62-296.320(4)(c), F.A.C.]

10. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation

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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.

{Permitting Note: A Title V revision was issued concurrently with this permit.}

[Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

11. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than 20 percent opacity. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C. [Rule 62-296.320(4)(b)1, F.A.C.]

12. Excess Emissions: The following excess emissions provisions cannot be used to vary any NSPS or NESHAP requirements from any subpart of 40 CFR 60 or 40 CFR 63. Unless otherwise specified in this permit, the following conditions apply.

    a. *Excess Emissions Allowed - Startup, Shutdown or Malfunction*. Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited.

    b. *Best Operational Practices to Minimize Excess Emissions*. The permittee shall follow the best operational practices to minimize excess emissions during startup and shutdown.

    c. *Excess Emissions Prohibited*. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

    [Rule 62-210.700 and 62-213.440(1), Operational Requirements that Assure Compliance, F.A.C. and Applicant's Request]

13. Annual Operating Report for Air Pollutant Emitting Facility: The Annual Operating Report for Air Pollutant Emitting Facility shall be completed each year and shall be submitted to the Compliance Authority by April 1st of the following year. [Rule 62-210.370(3), F.A.C.]

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D. Solid Fuel Handling System (EU 005)

The specific conditions in this section apply to the following emissions unit:

EU ID No.	Brief Description
005	Solid Fuel Handling System: The solid fuel handling system consists of a bottom unloading station. Solid fuel is received by truck and is unloaded to the fuel unloading bin. Fuel is conveyed via an enclosed or covered conveyor from the unloading bin to the fuel storage silos. The transfer points from the bin to the belts are rubber skirted. Fuel is then reclaimed from the silos via enclosed or covered conveyors to the surge bin inside the slurry preparation building. Fuel and water are then mixed in the rod mill crushers to produce coal slurry.

POLLUTION CONTROL TECHNOLOGIES

1. Dust Suppression Systems. PM emissions from the two fuel silos (Silo Nos. 1 and 2), the silo feed to belt conveyor and the fuel surge bin are controlled by dust suppression systems. [Rules 62-4.070(3); and 62-4.160(2); 62-210.200(PTE), F.A.C]

2. Best Management Practices: PM emissions from the handling of solid fuels shall be controlled by enclosing or covering all solid fuel storage, conveyors and conveyor transfer points. Water sprays or chemical wetting agents and stabilizers shall be applied to uncovered storage piles, roads, handling equipment, etc. during dry periods, as necessary, to all facilities to maintain the opacity standard.
[Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]

NSPS APPLICABILITY

3. NSPS Subpart Y: The solid fuel handling system is an affected unit subject to the provisions of 40 CFR 60, NSPS Subpart Y for Coal Preparation Plants. The owner or operator of the affected unit must comply with all the applicable requirements of this subpart. [Rule 62-204.800, F.A.C.; and 40 CFR 60, Subpart Y]

4. NSPS Subpart A: This emissions unit is subject to the applicable General Provisions of NSPS Subpart A. [Rule 62-204.800, F.A.C.; and 40 CFR 60, Subpart A]

PERFORMANCE AND OPERATIONAL RESTRICTIONS

5. Hours of Operation: This emissions unit may operate continuously (8,760 hours/year). [Rule 62-210.200 (Definitions - Potential to Emit (PTE), F.A.C.]

EMISSIONS STANDARDS

~~6. Visible Emissions (VE). Visible emissions shall be less than or equal to 5% opacity. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]~~

TESTING AND MONITORING REQUIREMENTS

~~7. Test Methods: Visible emissions tests shall be performed in accordance EPA Method 9. This method is described in Chapter 62-297, F.A.C. and/or 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Chapter 62-297, F.A.C.]~~

~~8. Annual Compliance Tests: Unless otherwise specified by this permit, during each federal fiscal year (October 1st to September 30th), the dust suppression systems shall be tested to demonstrate compliance with the emission limitations and standards for VE.~~

NOTIFICATIONS, RECORDS AND REPORTS

6. ~~9.~~ ~~Test~~ Reports: The permittee shall prepare and submit reports ~~for all required tests~~ in accordance with the requirements of § 60.258, "Reporting and Recordkeeping" per 40 CFR 60, NSPS Subpart Y for Coal Preparation Plants ~~specified in Appendix CTR (Common Testing Requirements) of this permit~~.
[~~Rule 62-297.310(8), F.A.C.~~ NSPS 40 CFR 60, Subpart Y]