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DIVISION OF AIR
RESOURCE MANAGEMENT

October 22, 2012

Mr. Jeff Koerner
Florida Department of Environmental Protection
Division of Air Resource Management
3900 Commonwealth Blvd.
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Tallahassee, FL 32399
Jeff.Koerner@dep.state.fl.us

Via FedEx
Airbill No. 7939-0217-3506

Mr. David Read
Florida Department of Environmental Protection
Division of Air Resource Management
3900 Commonwealth Blvd.
M.S. 49
Tallahassee, FL 32399
David.Read@dep.state.fl.us

Via FedEx
Airbill No. 7939-0221-5804

Re: Tampa Electric Company
Polk Power Station
Permit No. 1050233 – 026 – AV
Permit Comments: 1050233 – 028 – AV,
1050233 – 029 – AC, and 1050233 – 032 – AC

Dear Mr. Koerner and Mr. Read,

On September 27, 2012, Tampa Electric Company (TEC) received email correspondence from the Florida Department of Environmental Protection (Department) announcing its intent to issue draft permit nos. 1050233 – 028 – AV, 1050233 – 029 – AC, and 1050233 – 032 – AC. The draft permit allows the oil to natural gas conversion project on Polk Unit 1 and minor permit revisions to address testing conditions, heat input determination, and administrative errors.

Upon subsequent review of the draft air permits, TEC identified some permit conditions and administrative errors that should be revised prior to finalizing the draft permits. On October 9, 2012, TEC had a teleconference with the Department to discuss these issues. The main issues discussed included the inclusion of an SO₂ continuous emissions monitoring system (CEMS) on the sulfuric acid plant (SAP) stack in permit 1050233 – 029 – AC. Since TEC is not required to operate an SO₂ CEMS on the SAP stack, because the process produces less than 300 tons per day (TPD) of sulfuric acid, the Department agreed with TEC that this was an administrative error and should be deleted in the final permit. Other issues discussed included miscellaneous administrative corrections for consistency, such as temperature units, the language for the testing

conditions for EU-001 and EU-004, etc. The Department indicated that revising minor administrative corrections would not be problem. The Department requested that all other substantive changes required an explanation before the any additional changes are incorporated. Based on this meeting, TEC and Department agreed to publish the Notice of Intent to Issue the Draft Air Permit.

On October 12, 2012, TEC published the Notice of Intent to Issue the Draft Air Permit in the legal section of the Lake Ledger. The proof of publication has been submitted to the Department and the Environmental Protection Agency (EPA) Region 4. During the public comment period, TEC is submitting additional comments to the above referenced permits. TEC's redlines and comments are discussed below. The additions are seen in red and the deletions are seen as a red strikethrough.

1050233 – 026 – AV (Polk Power Station Title V Air Operating Permit)

1. To make the language more specific for our equipment, TEC is requesting that the following language be added to condition A.3.b. of EU – 001.
“This emissions unit fires No. 2 distillate oil or pipeline quality natural gas as backup and startup fuels. The firing of No. 2 fuel oil and natural gas is limited to a 10 percent annual capacity factor to be determined as follows: $[\text{Load}(\%)]/100\% * \text{hours of operation} < 876 \text{ hours}$. Where the percent load is based on the CT rated load of 192 MW.”
2. Footnote ^a of condition A.4. should include the tons per year (TPY) emission factor as well. Both the TPY and lb/MMBtu emission factors include the acid plant in their calculations. In addition, to simplify compliance and confusion TEC requests for compliance purposes EU – 001 will comply with the lb/hr limit (which in most cases for each pollutant is less than the lb/MMBtu and TPY emission limit) Proposed language:
“Syngas lb/MMBtu values are based on heat input (HHV) to the solid fuel gasifier. ~~and~~ The emission rates for lb/MMBtu and TPY includes emissions from the sulfuric acid plant. Pollutant concentrations in ppmvd are corrected to 15% oxygen. Compliance for EU – 001 will be demonstrated with the lb/hr limit”
3. Footnote ^b of condition A.4. TEC requests to clarify the statement by also stating that SO₂ emissions in TPY is calculated by including emissions from the sulfuric acid plant, as well as 10% oil firing and 90% syngas firing. TEC believes this will avoid confusion between the operators, other plant personnel, and environmental personnel.
“Annual emissions limits (TPY) are based on a 10 percent annual capacity factor firing fuel oil. The rate of SO₂ emissions (lb/MMBtu and TPY) are based on emissions from EU – 001 and EU – 004. In addition, they are calculated by assuming 10% firing of oil/natural gas and 90% firing of syngas. NOx emissions are for 10% fuel oil or 10% natural gas firing (fuel oil/natural gas).”

4. To better represent plant operation, TEC would requests to re – phrase the testing requirements. Once a fuel is blended and used at Polk Power Station it is difficult to stay within the narrow range of 10% of 4.7% sulfur in the fuel blend. For this reason, if this section was rephrased to allow for the plant to operate as they normally do but stay within the limits of the fuel composition this would be more representative of actual operation. If the plant were to test at less than 90% of 4.7% then the plant would be restricted to within 110% of that testing period until another test was completed.

“Emissions testing shall be conducted while gasifying and firing a blend of coal/petroleum coke within ~~10% of the 4.7% sulfur by weight and within~~ fuel consumption constraints specified in this permit. Initial and annual tests shall be conducted at 90% or greater of the permitted heat input rate provided in the emissions unit description and corrected as described therein and the permitted sulfur content of the fuel, not to exceed 4.7%. If it is impracticable to test within the described range, the unit may be tested at less than the described range; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate or sulfur content until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. “

5. TEC requests in addition that condition C.18 also be changed to reflect the above.

“Emissions testing shall be conducted while gasifying and firing a coal/petroleum coke blend within fuel consumption constraints specified in this permit. Annual tests shall be conducted at 90% or greater of the permitted sulfur content of the fuel, not to exceed 4.7%. If it is impracticable to test within the described range, the unit may be tested at less than the described range; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. Containing the highest blended fuel ratio at which that the plant wishes to be allowed to operate (up to 85% petroleum coke / 15% coal and 4.7% sulfur, by weight).”

6. In conditions D.7 and D.8 the word exhausts is used to describe the annual and renewal testing on the dust suppression system. TEC requests the removal of “exhausts” since all dust suppression systems do not have exhausts.

1050233 – 029 – AC (PSD – FL – 194)

1. Footnote 2 on Page 9, condition 10, should include the tons per year (TPY) emission factor as well. Both the TPY and pound per million British thermal unit (lb/MMBtu) emission factors include the acid plant in their calculations. In addition, to simplify

compliance and confusion TEC requests for compliance purposes EU – 001 will comply with the lb/hr limit (which in most cases for each pollutant is less than the lb/MMBtu and TPY emission limit) Proposed language:

“Syngas emission limits in pounds per million British thermal units (lb/MMBtu) values are based on heat input (HHV) to the solid fuel gasifier. and The emission rates for lb/MMBtu and tons per year (TPY) includes emissions from the sulfuric acid plant. Pollutant concentrations in ppmvd are corrected to 15% oxygen. Compliance for EU – 001 will be demonstrated with the lb/hr limit”

2. Footnote 4 on Page 9, condition 10, should include the following language so the footnote is clarified.
“Annual emissions limits in tons per year (TPY) are based on syngas firing with a 10% annual capacity factor firing fuel oil. The NOx limits are for fuel oil/natural gas firing. The SO₂ TPY limit also includes the sulfuric acid plant.”
3. On page 10, condition 16, TEC would requests to re – phrase the testing requirements to better represent. Once a fuel is blended and used at Polk Power Station it is difficult to stay within the narrow range of 10% of 4.7% sulfur in the fuel blend. For this reason, if this section was rephrased to allow for the plant to operate as they normally do but stay within the limits of the fuel composition this would be more representative of actual operation. If the plant were to test at less than 90% of 4.7% then the plant would be restricted to within 110% of that testing period until another test was completed. A similar condition can also be seen on page 17 and 18, condition 12, this should also be changed accordingly.
“Emissions testing shall be conducted while gasifying and firing a blend of coal/petroleum coke ~~within 10% of 4.7% sulfur by weight and~~ within fuel consumption constraints specified in this permit. Initial and annual tests shall be conducted at 90% or greater of the permitted heat input rate provided in emissions unit description and corrected as described therein and the permitted sulfur percentage of the blended fuel, not to exceed 4.7% sulfur. If it is impracticable to test within the described range, the unit may be tested at less than the described range; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.”

“Emissions testing shall be conducted while gasifying and firing a petroleum coke/coal blend containing ~~within 10% of the representative blended fuel sulfur content of 4.7% by weight and~~ the permitted fuel consumption restraints. Annual tests shall be conducted at 90% or greater of the permitted sulfur percentage of the fuel (4.7%). If it is impracticable to test within the described range, the unit may be tested at less than the described range; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted.

Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain authority to operate at the permitted capacity.”

4. On Page 16, condition 6, the SO₂ emission standard states that we will show compliance by using a CEMS. This should be changed to stack test (ST), as it has always been stated in the permit. Polk Power Station EU – 004 does not require an SO₂ CEMS because the sulfuric acid plant produces less than 300 tons per day (TPD) of sulfuric acid. The sulfuric acid plant is currently permitted to produce a limit of 299 TPD of sulfuric acid.
5. On page 20 condition 8, TEC requests the deletion of the term “exhausts”. Although our current dust suppression system has exhausts, not all dust suppression systems have exhausts. On the same page, condition 1, TEC requests the addition of “as needed” at the end of the sentence. TEC’s previous PSD permit had this language.
6. On page 21 in the brief unit description, there is only one startup burner not multiple startup burners.

In addition, there are several administrative corrections in each permit that should be corrected prior to finalizing the permits. The permit redlines include corrections to Table 1 and 2 are shown attached.

Thank you,



Lyndsey Baldyga
Engineer – Air Programs
Environmental Health and Safety
Tampa Electric Company



Florida Department of Environmental Protection

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

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

PERMITTEE

Tampa Electric Company
P.O. Box 111
Tampa, FL 33601-0111

Authorized Representative:
Karen Sheffield, Director Polk Power Station

Air Permit No. 1050233-032-AC
PSD-FL-263B & PSD-FL-363C
Permit Expires: December 31, 2013
Polk Power Station
Changes to Conditions for Simple Cycle
Combustion Turbines (Units 2 to 5)

PROJECT

This project revises the nitrogen oxides (NOx) emissions reporting requirements in Units 2 and 3 and the tuning requirements for Units 4 and 5 at the existing Polk Power Station, which is an electrical generating plant categorized under Standard Industrial Classification No. 4911. The 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). As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft 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 a minor modification of the original air construction permits that were subject 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
(Electronic Signature)

(DRAFT)

PERMIT REVISION (DRAFT)

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, TECO: kasheffield@tecoenergy.com
Mr. Paul L. Carpinone, TECO: plcarpinone@tecoenergy.com
Mr. Byron Burrows, TECO: btburrows@tecoenergy.com
Mr. Robert A. Velasco, P.E., TECO: ravelasco@tecoenergy.com
Mr. Robert Wong, DEP SWD: robert.wong@dep.state.fl.us
Ms. Cindy Mulkey, DEP Siting Office: cindy.mulkey@dep.state.fl.us
Ms. Ana Oquendo, EPA Region 4: Oquendo.ana@epa.gov
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Ms. Heather Ceron, EPA Region 4: ceron.heather@epa.gov
Ms. Lynn Searce, DEP PC Reading File: lynn.searce@dep.state.fl.us
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.

(Electronic Signature)

(DRAFT)

SECTION 1. GENERAL INFORMATION (DRAFT)

FACILITY DESCRIPTION

The Polk Power Station is an existing electric power plant, consisting of the following.

Unit 1 (EU 001), a 260 megawatt (MW) integrated gasification combined-cycle (IGCC) unit with a combustion turbine firing synthesis gas (syngas) produced from gasification of solid fuels including coal and petroleum coke (petcoke) or No. 2 fuel oil;

An auxiliary boiler (EU 003) that fires No. 2 fuel oil;

A sulfuric acid plant (EU 004);

A solid fuel handling system (EU 005);

A solid fuel gasification system (EU 006);

Units 2 and 3 (EU 009 and 010) are two nominal 165 MW simple cycle combustion turbines (SCCT) that fire either natural gas or No. 2 fuel oil; and

Units 4 and 5 (EU 013 and 014) are two nominal 165 MW ~~SCCT~~ simple cycle CTG that are permitted to fire only natural gas.

PROPOSED PROJECT

This project revises the NO_x reporting requirements when firing oil and natural gas in Units 2 and 3 and the DLN tuning requirements for Units 4 and 5. This requires updating several specific conditions in previously issued PSD permits for the Polk Power Station (PSD-FL-263 and PSD-FL-363). These changes are being processed concurrently with Title V permit revision No. 1050233-028-AV. These changes and other minor changes are described in the Technical Evaluation and Preliminary Determination (TEPD) included in the permit package.

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 in Part 60, Title 40 of the Code of Federal Regulations (CFR).

PREVIOUS APPLICABLE REQUIREMENTS

The conditions of this permit supplement all previously issued air construction and operation permits for these emissions units. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [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. AIR PERMIT MODIFICATIONS (DRAFT)

Units 2 and 3, Two 160 MW Combustion Turbines (EU-009 and 010)

Permit Modified: PSD-FL-263

Subsection III. Units 2 and 3, Two 160 MW Combustion Turbines (EU 009 and 010)

19. Nitrogen Oxides (NO_x) Emissions:

- While firing Natural Gas: The emission rate of NO_x in the exhaust gas shall not exceed 10.5 ppm @15% O₂ on a 24 hr block average as measured by the continuous emission monitoring system (CEMS). ~~In addition, NO_x emissions calculated as NO₂ shall not exceed 59 pounds per hour (at ISO conditions) and 9 ppmvd @15% O₂, to be demonstrated by the initial "new and clean" GE performance stack test. [Rule 62-212.400, F.A.C.]~~

~~Notwithstanding the applicable NO_x limit during normal operation, reasonable measures shall be implemented to maintain the concentration of NO_x in the exhaust gas at 9 ppmvd at 15% O₂ or lower. Any tuning of the combustors for Dry Low NO_x operation while firing gas shall result in initial subsequent NO_x concentrations of 9 ppmvd @15% O₂ or lower. [Rules 62-212.400 and 62-4.070, F.A.C.]~~

While firing Fuel oil: The concentration of NO_x in the exhaust gas shall not exceed 42 ppmvd at 15% O₂ on the basis of a 3-hr average as measured by the continuous emission monitoring system (CEMS). In addition, NO_x emissions calculated as NO₂ shall not exceed 319 lb/hr (at ISO conditions) and 42 ppmvd @15% O₂ to be demonstrated by stack test. ~~The permittee shall be limited to 750 hours per year when firing on fuel oil. [Rule 62-212.400, F.A.C.]~~

~~The permittee shall develop a NO_x reduction plan when the hours of oil firing reach the allowable limit of 750 hours per year. This plan shall include a testing protocol designed to establish the maximum water injection rate and the lowest NO_x emissions possible without affecting the actual performance of the gas turbine. The testing protocol shall set a range of water injection rates and attempt to quantify the corresponding NO_x emissions for each rate and noting any problems with performance. Based on the test results, the plan shall recommend a new NO_x emissions limiting standard and shall be submitted to the Department's Bureau of Air Regulation and Compliance Authority for review. If the Department determines that a lower NO_x emissions standard is warranted for oil firing, this permit shall be revised. (BACT Determination).~~

- 44. Fuel Oil Monitoring Schedule: ~~Compliance with the maximum sulfur content of the low sulfur fuel oil shall be demonstrated through vendor certification or measured with a composite sampling procedure approved by the Administrator pursuant to 40 CFR 75.66. The fuel contract and bills of lading shall be used to demonstrate compliance for the vendor certification. If used, the monthly composite sample shall be prepared from each fuel oil delivery (lot) to the storage tanks. The sample will be analyzed in the laboratory (on-site or off-site) for density, heat content and sulfur content. The following monitoring schedule for No.2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at this facility an analysis which reports the sulfur content and nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40-CFR 60.335(d).~~

SECTION 2. AIR PERMIT MODIFICATIONS (DRAFT)

Units 4 and 5, Two 160 MW Combustion Turbines (EU-013 and 014)

Permit Modified: PSD-FL-363 (No. 1050233-018-AC)

Subsection III.A Simple Cycle Gas-Fired Turbine Units 4 and 5 (EU-011013 and 012014)

21. Allowable NO_x Data Exclusions: Provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions are minimized, NO_x continuous monitoring data collected during periods of startup, shutdown, and malfunction may be excluded from the 24-hr block compliance demonstrations only in accordance with the following requirements. All periods of data excluded shall be consecutive for each such episode and only data obtained during the described episodes (startup, shutdown, malfunction, and ~~DLN~~ tuning) may be excluded. As provided by the authority in Rule 62-210.700(5), F.A.C., the following conditions replace the provisions in Rule 62-210.700(1), F.A.C.

- a. *Startup*: In accordance with the procedures described in the CEMS Data Requirements of this section, no more than the first 30 minutes of CEMS data shall be excluded for each gas turbine startup. For startups of less than 30 minutes in duration, only those minutes attributable to startup shall be excluded.
- b. *Shutdown*: In accordance with the procedures described in the CEMS Data Requirements of this section, no more than the first 20 minutes of CEMS data shall be excluded for each gas turbine shutdown. For shutdowns less than 20 minutes in duration, only those minutes attributable to shutdown shall be excluded.
- c. *Malfunction*: In accordance with the procedures described in the CEMS Data Requirements of this section, no more than 120 minutes of CEMS data shall be excluded in a 24-hour period for each gas turbine due to malfunctions. Within one (1) working day of occurrence, the owner or operator shall notify the Compliance Authority of any malfunction resulting in the exclusion of CEMS data.
- d. *DLN Tuning*: CEMS data collected during initial or other DLN tuning sessions shall be excluded from the compliance demonstrations provided the tuning session is performed in accordance with the manufacturer's specifications. The permittee shall report any excess emissions in the quarterly NO_x report. ~~Prior to performing any tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least one (1) day that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail. [Design; Rule 62-4.070(3), F.A.C.]~~

The permittee shall notify the Compliance Authority within one working day of discovering any emissions in excess of a CEMS standard subject to the specified averaging period. All such reasonably preventable emissions shall be included in any CEMS compliance determinations. All valid emissions data (including data collected during startup, shutdown, malfunction, and ~~DLN~~ tuning) shall be used to report annual emissions for the Annual Operating Report and demonstration of compliance with the CO emissions cap. [Rules 62-4.070(3), 62-210.200, 62-212.400(BACT) and 62-210.700, F.A.C.]



Florida Department of Environmental Protection

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Rick Scott
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Jennifer Carroll
Lt. Governor

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Secretary

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PERMITTEE

Tampa Electric Company (TEC)
P.O. Box 111
Tampa, FL 33601-0111

Authorized Representative:

Karen Sheffield, Director Polk Power Station

Air Permit No. 1050233-029-AC (PSD-FL-194J)

Permit Expires: December 31, 2013

Polk Power Station

Re-Permitting of Unit 1

PROJECT

This project updates the original air construction permit for integrated gasification combine-cycle Unit 1 at the Polk Power Station by incorporating the original PSD construction permit (PSD-FL-194) and all subsequent construction permit modifications into a "clean" new construction permit (PSD-FL-194J). Redundant and obsolete permit conditions were removed. The permit includes revisions related to: the heat input rate to the combined cycle combustion turbine (CCCT); fuel sulfur and sulfur dioxide monitoring requirements for the auxiliary boiler, the coal and petcoke monitoring requirements for the solid fuel gasification system, and replacing fuels with natural gas for several units. This permit effects the existing Polk Power Station, which is an electrical generating plant categorized under Standard Industrial Classification No. 4911. The 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
(Electronic Signature)

(DRAFT)

www.dep.state.fl.us

AIR CONSTRUCTION PERMIT (DRAFT)

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
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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.
(Electronic Signature)

(DRAFT)

SECTION 1. GENERAL INFORMATION (DRAFT)

FACILITY DESCRIPTION

The Polk Power Station (PPS) now consists of five power generation units; however, this permit only addresses Unit 1, the integrated gasification combined-cycle (IGCC) plant. Unit 1 is comprised of a 260 megawatt (MW – net, electrical) combined cycle CCCT designated Emission Unit No. 1 (EU 001). This CCCT fires ~~synthetic~~ synthesis gas (syngas) produced from the gasification of solid fuels including coal and petroleum coke (petcoke) and No. 2 fuel oil as a 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~~ synthesis gas (syngas) cleanup and sulfur recovery system; an auxiliary boiler (EU 003), which fires No. 2 fuel oil; a sulfuric acid plant (EU 004); a solid fuel handling system (EU 005); and a solid fuel gasification system (EU 006).

PROPOSED PROJECT

This permitting action is to re-permit Unit 1 at the Polk Power Station by incorporating the original PSD construction permit (PSD-FL-194) and all subsequent construction permit modifications (PSD-FL-194A through 194I) into a “clean” new construction permit. Redundant and obsolete permit conditions and emission limits will be removed. In addition, changes dealing with the heat input rate to the CCCT, the fuel sulfur monitoring requirement and sulfur dioxide emissions limit for the auxiliary boiler, the visible emissions monitoring of the sulfuric acid plant, the petcoke monitoring requirements for the solid fuel gasification system and changes to the startup and backup fuels for Unit 1 were incorporated into the new permit.

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).

PREVIOUS APPLICABLE REQUIREMENTS

The conditions of this permit supersede all previously issued air construction permits and applicable conditions for the emissions units comprising 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.]

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

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 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. Copies shall be sent to each agency identified under Compliance Authority.
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 Db. NSPS for Industrial-Commercial-Institutional Steam Generating Units;
 - e. Appendix GC. General Conditions;
 - f. Appendix GG. NSPS for Stationary Gas Turbines;
 - g. Appendix GP. NSPS General Provisions; and
 - h. 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.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

[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.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

(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. **Previous Permits:** This permit supersedes and replaces all previous air construction permits (PSD – FL – 194, 194A – 1) and applicable conditions related to Unit 1 at the Polk Power Station. [Rules 62-4.070(3); 62-210.200(PTE); and 62-212.400 (PSD) F.A.C.]

11. **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 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.]

12. **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.]

13. **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]

14. **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.]

15. **Conversion to Natural Gas:** The permittee shall notify the Compliance Authority with 30 days of converting any EU of Unit 1 to natural gas. [Rules 62-4.070(3); 62-210.200(PTE); and 62-212.400 (PSD) F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

A. 260 MW Combined Cycle Gas Turbine No. 1 (EU 001)

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

EU ID No.	Brief Description
001	<p>260 MW Combined Cycle Gas Turbine No. 1: This IGCC CCCT is a General Electric Model Number 7FA unit capable of firing syngas and currently No. 2 fuel oil as a backup and startup fuel. As a result of this permitting action, natural gas will eventually replace the No. 2 fuel oil and also act as an augmentation fuel. The combustion turbine uses nitrogen diluent injection and syngas moisture saturation when firing syngas and water injection when firing No. 2 fuel oil to control nitrogen oxide (NO_x) emissions. The nitrogen diluent injection system and syngas moisture saturation controls NO_x emissions by reducing the flame temperature in the combustion turbine. The stack parameters for the CCCT are: height, 150 feet; diameter, 19 feet; exit temperature, 340 degrees °F; and the actual stack gas flow rate is approximately 1,290,000 acfm.</p> <p>Design Heat Input: Based on a compressor inlet temperature of 59 °F, fuel temperature of 619 °F, diluent temperature of 616 °F, no air extraction, and based on the lower heating value (LHV) of each fuel, the permitted heat input rate to the CCCT is 1,642 MMBtu/hr when firing syngas, syngas augmented by natural gas, natural gas alone, or No. 2 fuel oil alone. Heat input rates may vary depending on site-specific ambient conditions and CCCT characteristics. Manufacturer's curves approved by the Department shall be used to correct the heat input rate to other temperatures/conditions when necessary.</p>

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POLLUTION CONTROL TECHNOLOGIES

- Nitrogen Diluent Injection:** The CCCT is equipped with a nitrogen diluent injection system and syngas moisture saturation to control nitrogen oxide (NO_x) emissions when firing syngas. The nitrogen diluent injection system and syngas moisture saturation control NO_x emissions by reducing the flame temperature in the combustion turbine. It also serves a secondary purpose of increasing the fuel mass flow of the relatively low heat content syngas in order to increase the power output of the CCCT. [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]
- Water Injection System:** The CCCT is also equipped with a water injection system to control NO_x emissions when firing No. 2 fuel oil. This system also controls NO_x emissions by reducing the flame temperature in the combustion turbine. **(This condition becomes obsolete upon conversion of the CCCT from fuel oil to natural gas.)** [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]
- Steam Injection:** Once the CCCT is converted to use natural gas as the startup, backup and augmentation fuel to replace No. 2 fuel oil, the owner or operator shall control emissions of NO_x by the installation of a steam injection system. [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]

NSPS APPLICABILITY

- NSPS Subpart GG:** IGCC CCCT is an affected unit subject to the provisions of 40 CFR 60, NSPS Subpart GG for Stationary Combustion Turbines. 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 GG]
- 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

- Hours of Operation:** This emission unit may operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200, F.A.C., Definitions - potential to emit (PTE)]
- Allowable Fuels:** The CCCT shall utilize the following fuels::

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

A. 260 MW Combined Cycle Gas Turbine No. 1 (EU 001)

- a. *Syngas*: The CCCT fires syngas as the primary fuel
- b. *Fuel Oil*. The CCCT can fire No. 2 fuel oil or pipeline quality natural gas as a startup and backup fuel. The firing of No. 2 fuel oil or pipeline quality natural gas is limited to a 10 percent (%) annual capacity factor to be determined as follows:

$$\left(\frac{\text{Load}(\%)}{100}\right) \times \text{hours of operation} \leq 876 \text{ hours}$$

Once the unit is converted from No. 2 fuel oil to natural gas the compliance authoring shall be notified within 30 days. After conversion to natural gas, the CCCT is prohibited from firing fuel oil

- c. *Natural Gas*. The CCCT has the option to fire syngas augmented with natural gas as needed. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C.]
- 8. **Fuel Oil Sulfur Content**: The maximum sulfur content of the No. 2 fuel oil shall not exceed 0.05% by weight. Compliance with this limit is shown by meeting the SO₂ emission limit given in **Specific Condition 10** of this subsection with compliance shown by a continuous emission monitoring system (CEMS). **{This condition becomes obsolete upon conversion of the CCCT from fuel oil to natural gas.}** [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C; and Federal Acid Rain Program]
- 9. **Natural Gas Sulfur Content**: The CCCT shall fire pipeline quality natural gas which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (gr/100 SCF). Compliance with this limit is shown by meeting the SO₂ emission limit given in **Specific Condition 10** of this subsection with compliance shown by a continuous emission monitoring system (CEMS). [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C; and Federal Acid Rain Program]

EMISSIONS STANDARDS

- 10. **Emission Standards**: The compliance authority shall be notified within 30 days after the CCCT is converted from No. 2 fuel oil to natural gas. **After conversion to natural gas, the CCCT is prohibited from firing fuel oil and fuel oil based emission limits shall no longer apply.** The maximum allowable emissions from the CCCT shall not exceed the following:

Pollutant ¹	Fuel	Basis ²	lb/hr ³	TPY ⁴	Comp. ⁵
NO _x	Oil	42 ppmvd	311	N/A/	CEMS
	Natural Gas Only	25 ppmvd	185		
	Syngas or syngas with natural gas augmentation	15 ppmvd	132	657/601	
VOC ⁶	Natural Gas	0.0017 lb/MMBtu	3	N/A	IST
	Syngas with natural gas augmentation				
CO	Oil	40 ppmvd	99	N/A	ST
	Syngas, natural gas or syngas with natural gas augmentation	25 ppmvd	98	430.1	ST
PM/PM ₁₀ ⁷	Oil	0.009 lb/MMBtu	17	N/A	ST
	Syngas, natural gas or syngas with natural gas augmentation	0.013 lb/MMBtu	17	74.5	ST
SO ₂	Oil	0.048 lb/MMBtu	92.2	N/A	CEMS
	Syngas, natural gas or syngas with natural gas augmentation	0.17 lb/MMBtu	357	1,563.7	

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

A. 260 MW Combined Cycle Gas Turbine No. 1 (EU 001)

Pollutant ¹	Fuel	Basis ²	lb/hr ³	TPY ⁴	Comp. ⁵
SAM ⁸	Syngas, natural gas or syngas with natural gas augmentation	N/A	55	241	ST
VE	Oil	20 percent opacity			ST ⁹
	Syngas, natural gas or syngas with natural gas augmentation	10 percent opacity			ST

1. Pollutant: PM = particulate matter; PM₁₀ = PM with a mean diameter of 10 microns or less; SO₂ = sulfur dioxide; NO_x = nitrogen oxide; CO = carbon monoxide; VOC = volatile organic compounds; SAM = sulfuric acid mist; and VE = visible emissions. PSD-FL-194J replaces all previous PSD permits and represents latest BACT and NSPS emission limits and compliance methods.

2. Syngas emission limits in pounds per million British thermal units (lb/MMBtu) are based on higher heating value (HHV) to the solid fuel gasifier, and The emission rates for lb/MMBtu and tons per year (TPY) include emissions from the sulfuric acid plant. Pollutant concentrations in parts per million volume dry (ppmvd) are corrected to 15% oxygen (O₂). Compliance for EU-001 will be demonstrated with the lb/hr limit. {Permitting Note: For reference purposes only, based on a compressor inlet temperature of 59 °F based and the higher heating value (HHV) of each fuel, the permitted heat input rates to the CCCT are: 1,755 MMBtu/hr when firing syngas and syngas augmented by natural gas; and 1,765 MMBtu/hr when firing either natural gas or No. 2 fuel oil alone.}

3. Emission limitations in lbs/hr are 30-day rolling averages, except for NO_x while firing syngas, which is limited in ppmvd at 15% O₂ and complied with on a 30-day rolling average via CEMS.

4. Annual emission limits in tons per year (TPY) are based on syngas firing with a 10 percent annual capacity factor firing fuel oil. The NO_x limits are for fuel oil/natural gas firing. The SO₂ TPY limit is 10% oil and 90% syngas limit and also includes the sulfuric acid plant.

5. Method of compliance: CEMS = continuous emission monitor system; ST = annual stack test; and IST = initial stack test.

6. Initial stack test firing syngas was conducted. No additional testing with syngas required. Stack tests on natural gas are not required.

7. Excluding SAM. Stack tests required when firing syngas.

8. Annual stack tests conducted while firing syngas only.

9. Annual emissions compliance testing is not required for the CCCT while burning only No. 2 fuel oil or natural gas for less than 400 hours per year.

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CONTINUOUS MONITORING REQUIREMENTS

11. **NO_x and SO₂ CEMS:** CEMS are installed on the CCCT stack to measure and record the emissions of NO_x and SO₂. The CEMS shall be calibrate, maintain, and operate in a manner sufficient to demonstrate compliance with the emission limits given in **Specific Condition 10** of this subsection. Emission limitations in lbs/hr are 30-day rolling averages; except for NO_x while firing syngas, which is also limited in ppmvd at 15% O₂ and complied with on a 30-day rolling average via CEMS. The NO_x and SO₂ CEMS shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C; and Federal Acid Rain Program]
- {Permitting Note: In addition to the NO_x and SO CEMS, CEMS for carbon dioxide (CO₂) and stack gas flow are installed on the CCCT stack for purposes of the Acid Rain program.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

A. 260 MW Combined Cycle Gas Turbine No. 1 (EU 001)

TESTING AND MONITORING REQUIREMENTS

12. Test Methods: Required tests shall be performed in accordance with the following reference method.

Method	Description of Method and Comments
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content {Notes: Methods shall be performed as necessary to support other methods.}
EPA Methods 5, 5B or 17	Methods for Determining PM Emissions
EPA Methods 6, 6A, 6B or 6C	Methods for Determining SO ₂ Emissions
EPA Method 7, 7A, 7C, 7D or 7E	Determination of NO _x Emissions
EPA Method 8, 8A, 8B or 320	Determination of SAM Emissions
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Carbon Monoxide (NDIR) or CO for Certifying CEMS
EPA Method 18	Measurement of Gaseous Organic Compound Emissions (VOC)

The above methods are 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.]

13. Initial Compliance Test. Within 90 days of conversion of the CCCT to natural gas, stack tests shall be conducted to show that the CCCT is in compliance with the CO and VE emissions limits specified in **Specific Condition 11** of this subsection. Test shall be conducted with the CCCT firing natural gas only and with the CCCT firing syngas augmented with natural gas with the CCCT at its nominal heat input or up to 10% greater. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C; and Federal Acid Rain Program]
14. Annual Compliance Test. During each federal fiscal year (October 1st to September 30th), this emission unit shall be stack tested to demonstrate compliance with the emission limitations and standards for CO, VE and PM/PM₁₀. Test shall be conducted with the CCCT at its nominal heat input or up to 10% greater. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C; and Federal Acid Rain Program]
15. Testing Frequency - SAM. The permittee shall conduct stack tests semi-annually to demonstrate continued compliance with the permitted emissions limits for SAM. The tests shall be conducted with the CCCT firing syngas only with the CCCT at its nominal heat input or up to 10% greater. The semi-annual testing shall be performed for a period of five years following the increase in the petcoke blend ratio and shall consist of at least six test runs. {Since the petcoke blend ratio was increased to 85% in the Fall of 2008, the five-year period is effective calendar years 2009 through 2013.} Thereafter SAM stack testing shall be conducted during each federal fiscal year. [Rules 62-4.070(3) and 62-297.310(7), F.A.C]
16. Testing Requirements. Emissions testing shall be conducted while gasifying and firing a blend of coal/petroleum coke within 10% of 4.7% sulfur by weight and within fuel consumption constraints specified in this permit. Initial and annual tests shall be conducted at 90% or greater of the permitted heat input rate provided in emissions unit description and corrected as described therein and the permitted sulfur percentage of the blended fuel, not to exceed 4.7% sulfur. If it is impracticable to test within the described range, the unit

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

A. 260 MW Combined Cycle Gas Turbine No. 1 (EU 001)

may be tested at less than the described range; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rule 62-4.070(3) and 62-297.310, F.A.C.; and 40 CFR 60.8]

NOTIFICATIONS, RECORDS AND REPORTS

17. Records of Fuels and Heat Input: The owner or operator shall make and maintain records of heat input to the CCCT on a block-hour basis, starting at the beginning of each hour, by multiplying the hourly average fuel firing rate by the heating value representative of that fuel (syngas, fuel oil and natural gas).
[Rule 62-4.070(3), F.A.C.]
18. Records of Startup, Shutdown and Malfunction: The owner or operator shall make and maintain records of periods of startup, shutdown and malfunction. These records shall show the dates, times and duration of these episodes and shall document suspected cause of each episode, corrective actions taken by the owner or operator and actions taken to reduce excess emissions. [Rule 62-4.070(3), F.A.C.]
19. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit.
[Rule 62-297.310(8), F.A.C.]

DRAFT PERMIT

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

B. 120 Million Btu per Hour Auxiliary Boiler (EU 003)

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

EU ID No.	Brief Description
003	<p>120 Million Btu per Hour (MMBtu/hr) Auxiliary Boiler: The auxiliary boiler only operates during startup and shutdown of the Unit 1, or when steam from the HRSG is unavailable. The auxiliary boiler produces steam for in-plant use and has a maximum heat input of 120 MMBtu/hr. The boiler is currently fired with very low sulfur No. 2 fuel oil and has a capacity factor of less than or equal to 35%. As a result of this permitting action, natural gas will eventually replace the No. 2 fuel oil as the boiler's only allowable fuel. The boiler can be continuously fired in a standby mode with full operation limited to a maximum of 3,000 hours per year. The stack parameters are: height, 75 feet; diameter, 3.7 feet; exit temperature, 375 degrees F; and, stack gas flow rate, 32,240 acfm.</p>

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POLLUTION CONTROL TECHNOLOGIES

1. **Exhaust Gas Recirculation (EGR):** The auxiliary boiler is equipped with an exhaust gas recirculation (EGR) system to control NO_x emissions. The EGR system controls NO_x emissions by reducing the flame temperature and excess air (O₂) in the boiler box thereby reducing the formation of thermal NO_x. This system shall be operated as necessary to meet the NO_x emission limit specified in **Specific Condition 9** of this subsection. [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]

NSPS APPLICABILITY

2. **NSPS Subpart Db:** The auxiliary boiler is an affected unit subject to the provisions of 40 CFR 60, Subpart Db - NSPS for Industrial-Commercial-Institutional Steam Generating Units. 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 Db]
3. **NSPS Subpart A:** This emissions unit is subject to the General Provisions of NSPS Subpart A. [Rule 62-204.800, F.A.C.; and 40 CFR 60, Subpart A]

PERFORMANCE AND OPERATIONAL RESTRICTIONS

4. **Hours of Operation:**
 - a. **Standby Mode.** This emissions unit may operate in a standby mode continuously, i.e., 8,760 hours/year.
 - b. **Non-Standby Modes.** The hours of operation for this emissions unit shall not exceed 3,000 hours/year. [Rules 62-4.160(2), 62-210.200 (Definitions - PTE)]
5. **Permitted Capacity.** The maximum heat input based on the higher heat value (HHV) of the fuel to the auxiliary boiler is 120 MMBtu/hr. [Rules 62-4.160(2), 62-210.200 (Definitions - Potential to Emit (PTE)); and, 62-296.406, F.A.C.]
6. **Allowable Fuels:** The auxiliary boiler shall fire:
 - a. **Fuel Oil.** The auxiliary boiler currently shall only fire No. 2 fuel oil **{This condition becomes obsolete upon conversion of the auxiliary boiler from fuel oil to natural gas.}**
 - b. **Natural Gas.** Upon conversion of the boiler to natural gas, the boiler shall only fire pipeline quality natural gas. The compliance authority shall be notified within 30 days after the boiler is converted from No. 2 fuel oil to natural gas. After conversion to natural gas, the boiler is prohibited from firing fuel oil. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

B. 120 Million Btu per Hour Auxiliary Boiler (EU 003)

7. **Fuel Oil Sulfur Content:** The maximum sulfur content of the No. 2 fuel oil shall not exceed 0.05%, by weight. **{This condition becomes obsolete upon conversion of the auxiliary boiler from fuel oil to natural gas.}** [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]
8. **Natural Gas Sulfur Content:** The auxiliary boiler shall fire pipeline quality natural gas which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (gr/100 SCF). [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]

EMISSIONS STANDARDS

9. **Emission Standards:** The compliance authority shall be notified within 30 days after the auxiliary boiler is converted from No. 2 fuel oil to natural gas. **After conversion to natural gas, the auxiliary boiler is prohibited from firing fuel oil and fuel oil based emission limits shall no longer apply.** The maximum allowable emissions from the boiler shall not exceed the following:

Pollutant ¹	Fuel	Limit ²	Basis ³	Comp. ⁴
NO _x ⁵	oil	0.10 lb/MMBtu	BACT	CEMS
	natural gas			
PM	oil	0.10 lb/MMBtu	BACT/NSPS	ST
	natural gas	---	NSPS	FM ⁶
SO ₂	oil	0.50 lb/MMBtu	NSPS	FM ⁶
	natural gas	---	NSPS	
VE	oil	20 percent opacity	BACT/NSPS	ST ⁷
	natural gas	---	---	

1. Pollutant: PM = particulate matter; SO₂ = sulfur dioxide; NO_x = nitrogen oxide; and VE = visible emissions. PSD-FL-194J replaces all previous PSD permits and represents latest BACT and NSPS emission limits and compliance methods.
2. ~~Syn gas~~ Emission limits in pounds per million British thermal units (lb/MMBtu) are based on higher heating value (HHV) of fuel.
3. Basis: BACT = Best Available Control Technology Determination; and NSPS = Subpart Db limit.
4. Method of compliance: CEMS = continuous emission monitor system; ST = annual stack test; and FM = fuel monitoring.
5. NO_x emission limitations in lbs/hr are 30-day rolling averages via CEMS.
6. Compliance can be demonstrated using fuel records as described in §60.49b(r) or measured with a composite sampling procedure approved by the Administrator pursuant to 40CFR 75.66 (see **Specific Condition 10** of this subsection).
7. Annual emissions compliance while burning only liquid fuel for less than 400 hours per year.

[Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]

10. **Fuel Sulfur Monitoring:**
 - a. **No. 2 Fuel Oil.** The fuel oil sulfur limit imposed on the auxiliary boiler meets the definition of very low sulfur fuel oil per §40 GFR 60.41b. Per §40 CFR 60.41b, very low sulfur fuel oil shall have no more than 0.5 weight percent sulfur or that, when combusted without SO₂ emission control, will have a SO₂ emission rate equal to or less than 215 nanograms per joule (ng/J) or 0.5 lb/MMBtu of heat input. The fuel oil used by the auxiliary boiler meets both of these requirements and is exempt from the NSPS Subpart Db requirements of a SO₂ limit and monitoring on a 30 day rolling average basis. Consequently, compliance can be demonstrated using fuel records as described in §60.49b(r). The fuel record requirement shall be met through vendor certification or measured with a composite sampling procedure approved by the Administrator pursuant to 40CFR 75.66. The fuel contract and bills of lading shall be used to demonstrate compliance for the vendor certification. The monthly composite sample shall be prepared from each fuel oil delivery (lot) to the storage tanks. The sample will be analyzed in the laboratory for density, heat content

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

B. 120 Million Btu per Hour Auxiliary Boiler (EU 003)

and sulfur content using method ASTM D 2880-71. **{This condition becomes obsolete upon conversion of the auxiliary boiler from fuel oil to natural gas.}**

- b. *Natural Gas*. Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D4468-85, D5504-01, D6228-98 and D6667-01, D3246-81 or more recent versions or other methods approved by the Department.

[NSPS, Subpart Db]

11. Excess Emissions:

- a. *PM and VE*. The PM and opacity standards apply at all times, except during periods of startup, shutdown or malfunction. **{This condition becomes obsolete upon conversion of the auxiliary boiler from fuel oil to natural gas.}** [40 CFR 60.43b(g)]
- b. *NO_x*. The NO_x standards apply at all times, including periods of startup, shutdown, or malfunction. [40 CFR 60.44b(4)]

TESTING AND MONITORING REQUIREMENTS

12. Test Methods: Required tests shall be performed in accordance with the following reference method.

Method	Description of Method and Comments
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content <i>{Notes: Methods shall be performed as necessary to support other methods.}</i>
EPA Methods 5, 5B or 17	Methods for Determining PM Emissions
9	Visual Determination of the Opacity of Emissions from Stationary Sources

The above methods are 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.]

13. Annual Compliance Tests: Unless otherwise specified by this permit, during each federal fiscal year (October 1st to September 30th), the auxiliary boiler shall be tested to demonstrate compliance with the emission limitations and standards for PM and VE. **{This condition becomes obsolete upon conversion of the auxiliary boiler from fuel oil to natural gas.}**

NOTIFICATIONS, RECORDS AND REPORTS

14. Records of Fuels and Heat Input: The owner or operator shall make and maintain records of heat input to the auxiliary boiler on a block-hour basis, starting at the beginning of each hour, by multiplying the hourly average fuel firing rate by the heating value representative of that fuel (fuel oil or natural gas). [Rule 62-4.070(3), F.A.C.]
15. Records of Startup, Shutdown and Malfunction: The owner or operator shall make and maintain records of periods of startup, shutdown and malfunction. These records shall show the dates, times and duration of these episodes and shall document suspected cause of each episode, corrective actions taken by the owner or operator and actions taken to reduce excess emissions. [Rule 62-4.070(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

B. 120 Million Btu per Hour Auxiliary Boiler (EU 003)

16. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit.
[Rule 62-297.310(8), F.A.C.]

DRAFT PERMIT

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

C. Sulfuric Acid Plant (EU 004)

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

EU ID No.	Brief Description
004	Sulfuric Acid Plant: The sulfuric acid plant (SAP) removes sulfur from the syngas stream before it is combusted in the CCCT. The SAP takes a sulfur gas stream from the solid fuel gasification plant's hot gas cleanup or cold gas cleanup systems and converts it to sulfuric acid using the double contact process. The SAP currently has a 15 MMBtu/hr, propane fired, hydrogen sulfide (H ₂ S) to SO ₂ conversion furnace which vents to the atmosphere only during warm-up; and a 9.0 MMBtu/hr, propane fired, non-contact SO ₂ to sulfur trioxide (SO ₃) converter preheater which is vented to the atmosphere. As a result of this permitting action, natural gas will eventually replace the propane as the fuel used in the burners. This SAP is a double contact absorption plant with a maximum production rate of 299 tons per day (TPD) and 109,135 TPY of 100% H ₂ SO ₄ (sulfuric acid). The stack parameters are: height, 199 feet; diameter, 2.5 feet; exit temperature, 180 degrees °F; and the stack gas flow rate is approximately 17,660 acfm.

{Permitting note(s): This emissions unit is regulated under Rule 62-296.402(2), F.A.C., Sulfuric Acid Plants - New Plants.}

POLLUTION CONTROL TECHNOLOGIES

- Mist Eliminators:** The SAP uses mist eliminators for the control of sulfuric acid mist emissions. [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]

PERFORMANCE AND OPERATIONAL RESTRICTIONS

- 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.)]
- Permitted Capacity:** The SAP production shall not exceed 299 TPD of 100% sulfuric acid. [Rules 62-4.160(2), 62-210.200 (Definitions - PTE) and 62-296.402(2), F.A.C.]
{Permitting note: The corresponding equivalent production rates are 12.46 tons per hour and 109,135 TPY of 100% H₂SO₄.}
- Allowable Fuels:** The conversion furnace and converter preheater shall fire only propane or natural gas. [Rules 62-4.160(2) and 62-213.410, F.A.C.]
- Natural Gas Sulfur Content:** The SAP burners shall fire pipeline quality natural gas which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (gr/100 SCF). [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C.]

EMISSIONS STANDARDS

- Emission Standards:** The maximum allowable emissions from the SAP shall not exceed the following:

Pollutant ¹	Fuel	Limit ²	Basis ³	Comp. ⁴
SO ₂	propane or natural gas	4 lb/ton of 100% H ₂ SO ₄ produced	BACT	CEMSST
SAM ⁵	propane or natural gas	0.15 lb/ton of 100% H ₂ SO ₄ produced	BACT	ST
VE	propane or natural gas	10 percent opacity	BACT	ST

- Pollutant: SO₂ = sulfur dioxide; SAM = sulfuric acid mist; and VE = visible emissions. PSD-FL-194J replaces all previous PSD permits and represents latest BACT and NSPS emission limits and compliance methods.
- Emission limits: pounds of pollutant per ton of 100 percent sulfuric acid (H₂SO₄) produced.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

C. Sulfuric Acid Plant (EU 004)

- 3. Basis: BACT = Best Available Control Technology Determination.
- 4. Method of compliance: CEMS = continuous emission monitor system; ST = annual stack test; and FM = fuel monitoring.
- 5. Prior to permit renewal of Title V Air Operation permit, the SAP shall be tested to demonstrate compliance with the emission limitations and standards for SAM.

[Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C.]

MONITORING OPERATIONS

- 7. **Monitoring - Production.** Compliance with the TPD production limit given in **Specific Condition 3** of this subsection shall be demonstrated through the use of a continuous flow and composition (purity) monitor located between the sulfuric acid plant and the sulfuric acid storage tank. [Rule 62-213.440(1)(b)1.b. (Periodic Monitoring), F.A.C.]
- 8. **Monitoring - Daily Production.** The permittee shall record in tons the daily production of 100% H₂SO₄. [Rule 62-213.440(1)(b)1.b. (Periodic Monitoring), F.A.C.]
- 9. **Special VE Monitoring.** VE testing of the SAP exhaust shall be conducted quarterly for a period of 8 consecutive quarters, utilizing EPA Method 9 to demonstrate compliance with the emission standard for VE given in **Specific Condition 6** of this subsection. If the VE test results for the eight consecutive quarters show no VE above 10% opacity, the permittee may discontinue these quarterly tests with only annual VE testing subsequently required during each federal fiscal year (October 1st to September 30th). [Rule 62-213.440(1)(b)1.b. (Periodic Monitoring), F.A.C.]

TESTING AND MONITORING REQUIREMENTS

- 10. **Test Methods:** Required tests shall be performed in accordance with the following reference method.

Method	Description of Method and Comments
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content {Notes: Methods shall be performed as necessary to support other methods.}
EPA Method 6C	Methods for Determining SO ₂ Emissions
EPA Method 8, 8A, 8B or 320	Determination of SAM and SO ₂ Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources

The above methods are 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.]

- 11. **Annual Compliance Tests:** Unless otherwise specified by this permit, during each federal fiscal year (October 1st to September 30th), the SAP shall be tested to demonstrate compliance with the emission limitations and standards for SO₂ and VE (see **Specific Condition 9** of this subsection).
- 12. **Feedstock During Testing.** Emissions testing shall be conducted while gasifying and firing a coal/petroleum coke blend containing within ±0% of the representative blended fuel sulfur content of 4.7% by weight and the permitted fuel consumption restraints. Annual tests shall be conducted at 90% or greater of the permitted sulfur percentage of the fuel (4.7%). If it is impracticable to test within the described range, the unit may be tested at less than the described range; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

C. Sulfuric Acid Plant (EU 004)

is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rules 62-4.070(3) and 62-297.310(7), F.A.C]

DRAFT PERMIT

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

C. Sulfuric Acid Plant (EU 004)

NOTIFICATIONS, RECORDS AND REPORTS

13. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit.
[Rule 62-297.310(8), F.A.C.]

DRAFT PERMIT

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

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	<u>Solid Fuel Handling System</u> : 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, as needed. [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 exhausts shall be tested to demonstrate compliance with the emission limitations and standards for VE.

NOTIFICATIONS, RECORDS AND REPORTS

9. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(8), F.A.C.]

SECTION 32. AIR PERMIT MODIFICATION EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

E. Solid Fuel Handling Gasification System (EU 006)

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

EU ID No.	Brief Description
006	<p>Solid Fuel Gasification System: The solid fuel gasification system converts solid fuel (coal or blends of up to 85% pet coke and 15% bituminous coal) into syngas for combustion in the CCCT for the purpose of electric generation. Startup burners for the system fire propane. As a result of this permitting action, natural gas will eventually replace the propane as the fuel used in the burners. As an emergency safety device, a flare is used to combust syngas from the gasification system during startup, shutdown and emergencies. The flare's stack height is 150 feet and the exit temperature of the exhaust gas is 1,830 degrees °F.</p>

POLLUTION CONTROL TECHNOLOGIES

1. **Emergency Flare.** A flare is used to combust syngas during the startup and shut down of the solid fuel gasification system. In addition the flare is used to combust syngas during emergencies such as the malfunction of the CCCT. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]

PERFORMANCE AND OPERATIONAL RESTRICTIONS

2. **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.]
3. **Permitted Composition.** Solid fuels input to the solid fuel gasification plant shall consist of coal or coal/pet coke blends containing a maximum of 85% pet coke. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]
{Permitting Note: The design feed rate of solid fuel to the gasification system is 2,325 TPD on a dry weight basis.}
4. **Allowable Fuels:** The startup burners shall fire only propane or natural gas. [Rules 62-4.160(2) and 62-213.410; F.A.C.]
5. **Natural Gas Sulfur Content:** The solid fuel gasification system shall fire pipeline quality natural gas which shall contain no more than 2.0 grams of sulfur per 100 standard cubic feet (gr/100 SCF). [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]
6. **Flare Operation.** The flare shall only be operated during startup, shutdown or emergencies. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]

EMISSIONS STANDARDS

7. **Visible Emissions (VE).** Visible emissions from the flare shall not be equal to or greater than 20% opacity. [Rule 62-296.320(4)(b)1; F.A.C.]
8. **Blended Fuel Sulfur Content.** The maximum sulfur content of the blended fuel shall not exceed 4.7% by weight. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]
{Permitting Note: The sulfur content limitation in effect limits SO₂ emissions from the CCCT.}

MONITORING OPERATIONS

9. **Fuel Composition.** The composition of coal, pet coke, and blended fuels gasified (including sulfur contents) shall be determined by proximate and ultimate analyses sampling of each unique fuel blend prior to gasification by either the owner/operator or the vendor. [Rules 62-4.070(3), 62-204.800 and 62-297.100, F.A.C.; and 40 CFR 60, Appendix A]
10. **Monitoring - Solid Fuel Sulfur Content.** Compliance with the solid fuel sulfur content standard of 4.7%, by weight, will be determined by sampling each unique fuel blend prior to gasification by the owner/operator or

SECTION 32. AIR PERMIT MODIFICATION EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

E. Solid Fuel Handling Gasification System (EU 006)

the vendor as follows: using appropriate ASTM methods such as, ASTM D2013-72, ASTM D3177-75, and ASTM D4239-85, or latest ASTM edition methods. [40 CFR 60.335(d)]

11. **Monitoring - Solid Fuel Input.** The permittee shall record daily the actual solid fuel input to this emissions unit, in tons per day. [Rule 62-213.440(1)(b), F.A.C.]

TESTING AND MONITORING REQUIREMENTS

10. **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.]
11. **Annual Compliance Tests:** Unless otherwise specified by this permit, during each federal fiscal year (October 1st to September 30th), the flare shall be tested to demonstrate compliance with the emission limitations and standards for VE. Compliance testing for VE is not required for the flare while operating for less than 400 hours per year. [Rules 62-296.320(4)(b)1; and 62-297.310(7)(a)4., F.A.C.]

NOTIFICATIONS, RECORDS AND REPORTS

12. **Recordkeeping.** Written or electronic records of the actual total solid fuel input to this emissions unit, in tons per day and the blended fuel sulfur content of 4.7% by weight limit, shall be maintained and submitted to the compliance authority with each annual report. These records shall be generated each time a new shipment of coal/petroleum coke fuel is received or solid fuel is gasified. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C.]
13. **Test Reports:** The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(8), F.A.C.]

Tampa Electric Company

Polk Power Station
Facility ID No. 1050233
Polk County

Title V Air Operation Permit Revision

Draft/Proposed Permit No. 1050233-028-AV
(Revision of Title V Air Operation Permit No. 1050233-026-AV)



Permitting Authority

State of Florida
Department of Environmental Protection
Division of Air Resource Management
Office of Permitting and Compliance

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2600 Blair Stone Road
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Compliance Authority

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Department of Environmental Protection
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Changes are highlighted in yellow with additions denoted with double-underline and deletions denoted with ~~strikethrough~~. For the final permit, the revision marks will be removed.

SECTION I. FACILITY INFORMATION.

Subsection A. Facility Description.

Unit 1 consists of a nominal 260 megawatt (MW) solid fuel-based integrated gasification and combined cycle (IGCC) plant including: a nominal 192 MW (gross) syngas and No. 2 fuel oil-fired General Electric (GE) 7FA combined cycle combustion turbine (CCCT) designated as Emission Unit (EU) 001; a heat recovery steam generator (HRSG); a nominal 123 MW (gross) steam turbine-electrical generator (STEG); a solid fuel handling system designated as EU 005; an entrained flow solid fuel gasification system designated as EU 006; an oxygen plant; a synthesis synthetic gas (syngas) cleanup and sulfur recovery system; and a sulfuric acid plant (SAP) designated as EU 004. There is also a 120 million British thermal units per hour (MMBtu/hr) auxiliary boiler designated as EU-003. Approximately 65 MW are consumed by the oxygen plant and process auxiliary equipment which is the difference between net and gross power production. Currently the startup fuel for the SAP and solid fuel gasifier is propane. No. 2 fuel oil is used as the augmentation and backup fuel for the CCCT, while it is the only operational fuel used in the auxiliary boiler. The maximum sulfur content of the No. 2 fuel oil used in all the units is 0.05% by weight.

Units 2 and 3 (EU 009 and 010) at the facility are two 165 MW natural gas/fuel oil-fired GE 7FA simple cycle combustion turbines (SCCT) CCCT, while Units 4 and 5 (EU 013 and 014) are two 165 MW natural gas-fired GE 7FA SCCT simple cycle CTG.

One results of this permitting action is that TEC in the future will replace the propane and No. 2 fuel oil currently used as the startup and backup fuels for the emission units of Unit 1 with natural gas.

The regulated emissions units (EU) at this state-of-the-art integrated gasification combined cycle (IGCC) plant include a 260 megawatt (MW) combined cycle combustion turbine (Unit 1 EU 001) which currently fires syngas or No. 2 fuel oil; an auxiliary boiler which currently fires No. 2 fuel oil; a sulfuric acid plant whose burners currently use propane; a solid fuel handling system; a solid fuel gasification system whose burners currently use propane; two nominal 165 MW simple cycle gas turbines (Unit Nos. 2 & 3) firing either natural gas or No. 2 fuel oil; and, two nominal 165 MW simple cycle gas turbines (Unit Nos. 4 & 5) firing only natural gas.

Subsection B. Summary of Emissions Units.

E.U. ID No.	Brief Description
<i>Regulated Emissions Units</i>	
-001	260 MW Combined Cycle Gas Turbine No. 1
-003	120 Million Btu per Hour Auxiliary Boiler
-004	Sulfuric Acid Plant
<i>Solid Fuel Handling and Gasification Systems</i>	
-005	Solid Fuel Handling System
-006	Solid Fuel Gasification System
<i>Simple Cycle Turbines</i>	
-009	Nominal 165 MW Simple Cycle Turbine No. 2
-010	Nominal 165 MW Simple Cycle Turbine No. 3
-011 13	Nominal 165 MW Simple Cycle Turbine No. 4

SECTION I. FACILITY INFORMATION.

-01 2 <u>4</u>	Nominal 165 MW Simple Cycle Turbine No. 5
<i>Unregulated Emissions Units and/or Activities</i>	
-007	Emergency Generators
-008	Heating Units and General Purpose Internal Combustion Engines

Subsection C. Applicable Requirements.

A summary of important applicable requirements is shown in the following table.

Applicable Requirement	E.U. ID No(s).
Rule 62-296.470, F.A.C., Clean Air Interstate Rule	-001, 009, -010, -01+ 3 & -01 2 <u>4</u>
Acid Rain, Phase II SO ₂	-001, 009, -010, -01+ 3 & -01 2 <u>4</u>
Rule 62-212.400, F.A.C., Prevention of Significant Deterioration	-001, -003, -005, -006, -009, -010, -01+ 3 & -01 2 <u>4</u>
40 CFR 60, Subpart A, New Stationary Source Performance Standards (NSPS) General Provisions	-001, -003 & -005, -009, -010, -01+ 3 & -01 2 <u>4</u>
NSPS - 40 CFR 60, Subpart Db, NSPS for Industrial-Commercial-Institutional Steam Generating Units	-003
NSPS - 40 CFR 60, Subpart Y, NSPS for Coal Preparation Plants	-005
NSPS - 40 CFR 60, Subpart GG, NSPS for Stationary Gas Turbines	-001, -009, -010, -01+ 3 & -01 2 <u>4</u>
Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with less than 250 Million Btu per Hour Heat Input, New and Existing Emissions Units	-003
Rule 62-296.402(2), F.A.C., Sulfuric Acid Plants - New Plants	-004

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit -001

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

E.U. ID No.	Brief Description
-001	260 MW Combined Cycle Gas Turbine No. 1

After issuance of the final version of this permit and upon conversion to natural gas, all references to No. 2 fuel oil use in the gas turbine (EU 001) become obsolete. Within 30 days after the conversion to natural gas of this emission unit, the permittee shall notify the Compliance Authority of the conversion. [Rules 62-4.030 and 62-4.050, F.A.C., PSD-FL-194.]

This integrated solid fuel gasification combined cycle combustion turbine (CCCT) is a General Electric Model Number 7FA, 260 megawatt (electric) unit capable of firing synthesis synthetic gas (syngas), or a limited amount of No. 2 fuel oil or pipeline quality natural gas. The maximum permitted heat input rate to the CCCT at 59 degrees-F, fuel temperature of 619°F, diluent temperature of 616°F, no air extraction, is 1,755 1,642 million Btu per hour on a lower heating value (LHV) basis when firing syngas, syngas augmented by natural gas, natural gas alone or No. 2 fuel oil alone and 1,589 million Btu per hour when firing No. 2 fuel oil. Manufacturer's curves approved by the Department shall be used to correct the heat input rate to other temperatures/conditions when necessary. Flow meters will be used to determine fuel flow to the CCG-CCCT and the heat input rate will be calculated as the product of the LHV of the fuel and the measured fuel flow.

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The combustion turbine uses nitrogen diluent injection and syngas moisture saturation when firing syngas or syngas augmented by natural gas, and water injection when firing No.2 fuel oil and steam injection when firing natural gas alone to control NO_x (nitrogen oxide) emissions. The air separation unit produces nitrogen for use in the CCCT, and oxygen for use in the solid fuel gasification system. The nitrogen diluent injection system and syngas moisture saturation controls NO_x emissions by reducing the flame temperature in the ~~combustion turbine~~ CCCT. It also serves a secondary purpose of increasing the fuel mass flow of the relatively low heat content syngas in order to increase the power output of the CCCT. The combined cycle combustion turbine began operation on April 10, 1996. The stack parameters are: height, 150 feet; diameter, 19 feet; exit temperature, 340 degrees-F; and, actual stack gas flow rate, 1,290,000 acfm.

{Permitting note(s): This emissions unit is regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas-Turbines, adopted and incorporated by reference in Rule 62-204.800(8)(b), F.A.C.; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) [PSD-FL-194], as amended; Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated February 24, 1994; and, Rule 62-296.470, F.A.C., Clean Air Interstate Rule (CAIR).}

Essential Potential to Emit (PTE) Parameters

A.1. 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.)]

A.2. Reserved

A.2. Permitted Capacity The maximum heat input rate (higher heating value) is 1,755 million Btu per hour when firing syngas and 1,765 million Btu per hour when firing No. 2 fuel oil at an ambient temperature of 59 degrees F. ~~Manufacturer's curves approved by the Department for the heat input correction to other temperatures may be utilized to establish heat input rates over a range of temperatures for compliance determination. The monitoring required under NSPS 40 CFR 60 Subpart GG shall satisfy periodic monitoring requirements for heat input.~~

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[Rules 62-4.160(2), 62-210.200 (Definitions - PTE); and, 62-296.406, F.A.C.; and, Rule 62-213.440(1)(b)1.b. (Periodic Monitoring), F.A.C. {Resolution of objection from USEPA dated 01/22/1999.}]

A.3. Emissions Unit Operating Rate Limitation After Testing See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit -001

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit -001

A.3 Methods of Operation - Fuels

- a. This emissions unit fires syngas as the primary fuel.
- b. This emissions unit fires No. 2 distillate oil or pipeline quality natural gas as backup and startup fuels. The firing of No. 2 fuel oil and natural gas is limited to a 10 percent annual capacity factor to be determined as follows: $[\text{Load (\%)}] / 100\% * \text{hours of operation} \leq 876 \text{ hours}$. Where the percent load is based on the CCCT rated load of 192 MW.
- c. The emissions unit has the option to fire syngas augmented with natural gas as needed. [Rules 62-4.160(2), 62-210.200 (Definitions - PTE), 62-213.410, 62-213.440(1), F.A.C.; and, PSD-FL-194J; and 62-297.310(5)(b).]

Emission Limitations and Standards

Unless otherwise specified, the averaging time(s) for Specific Condition(s) **A.512** - **A.813**, are based on the specified averaging time of the applicable test method.

A.4. The maximum allowable emissions shall not exceed the following:

POLLUTANT	FUEL	BASIS ^a	LB/HR [*]	TPY ^b
NO _x	Oil	42 ppmvd, ^{**}	311	N/A
	Natural Gas Only	25 ppmvd	185	
	Syngas <u>or syngas with natural gas augmentation</u>	25 <u>15</u> ppmvd ^{***}	220.25 <u>132</u>	1,044 <u>657/601</u>
VOC ^c	Oil	0.028 lb/MMBtu	32	N/A
	Syngas, <u>natural gas or syngas with natural gas augmentation</u>	0.0017 lb/MMBtu	3	38.5
CO	Oil	40 ppmvd	99	N/A
	Syngas, <u>natural gas or syngas with natural gas augmentation</u>	25 ppmvd	98	430.1
PM/PM ₁₀ ^d	Oil	0.009 lb/MMBtu	17	N/A
	Syngas, <u>natural gas or syngas with natural gas augmentation</u>	0.013 lb/MMBtu	17	74.5
Pb	Oil	5.30E-5 lb/MMBtu	0.101	N/A
	Syngas	2.41E-6 lb/MMBtu	0.0035	0.067
SO ₂	Oil	0.048 lb/MMBtu	92.2	N/A
	Syngas, <u>natural gas or syngas with natural gas augmentation</u>	0.17 lb/MMBtu	357	1,563.7
Sulfuric Acid Mist ^e	Syngas		55	241
Inorganic Arsenic	Syngas		0.0006	0.019
Beryllium	Syngas		0.0001	0.0029
Mercury	Syngas		0.0034	0.017

Table Notes:

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit -001

* Emission limitations in lbs/hr are 30-day rolling averages, except for NO_x while firing syngas, which is limited in ppmvd at 15% oxygen and complied with on a 30-day rolling average via CEMS. Pollutant emission rates may vary depending on ambient conditions and the combustion turbine (CT) characteristics. Manufacturer's curves for the emission rate correction to other temperatures at different loads shall be provided to the Department. Subject to approval by the Department, the manufacturer's curves may be used to establish pollutant emission rates over a range of temperatures for the purposes of compliance determination.

** The emission limit for NO_x is adjusted as follows for higher fuel bound nitrogen contents up to a maximum of 0.030 percent, by weight:

Fuel Bound Nitrogen (% by weight)	NO _x Emissions Levels (ppmvd @ 15% O ₂)
0.015 or less	42
0.020	44
0.025	46
0.030	48

Using the formula: $STD = 0.0042 + F$

where:

STD = allowable NO_x emissions (% by volume at 15% O₂ and on a dry basis)

F = NO_x emission allowance for fuel bound nitrogen (FBN) defined by the following table:

Fuel Bound Nitrogen (% by weight)	F (NO _x % by volume)
0 < N < 0.015	0
0.015 < N < 0.03	0.04 (N - 0.015)

where:

N = nitrogen content of the fuel (% by weight)

The permittee shall submit fuel bound nitrogen content data for the low sulfur fuel oil to the Southwest District Office on each occasion that fuel oil is transferred to the storage tanks from any other source.

The percent FBN (Z) following each delivery of fuel shall be determined by the following equation:

$$x(Y) + m(n) = (x + m)(Z)$$

where:

x = amount of fuel in the storage tank

Y = % FBN in the storage tank

m = amount of fuel added

n = % FBN of the fuel added

Z = % FBN of composite fuel

Use of the nitrogen oxides continuous emissions monitor to determine compliance with the standard satisfies the requirement to report the fuel bound nitrogen content data to the Southwest District Office.

*** The NO_x limit was lowered under PSD-FL-194F/1050233-007-AC.

^a Syngas lb/MMBtu and TPY values are based on heat input (HHV) to the solid fuel gasifier and includes emissions from the sulfuric acid plant. Pollutant concentrations in ppmvd are corrected to 15 percent oxygen. Compliance for EU - 001 will be demonstrated with the lb/hr limit. (Permitting Note: For reference purposes only, based on a compressor inlet temperature of 59 °F based and the higher heating value (HHV) of each fuel, the permitted heat input rates to the CCCT are: 1755 MMBtu/hr when firing syngas and syngas augmented by natural gas; and 1765 MMBtu/hr when firing either natural gas or No. 2 fuel oil alone.)

^b Annual emission limits (TPY) are based on 10 percent annual capacity factor firing fuel oil. The rate of SO₂ emissions (lb/MMBtu and TPY) are based on emissions from EU - 001 and EU - 004. In addition, they

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit -001

are calculated by assuming 10% firing of oil/natural gas and 90% firing of syngas. NO_x emissions are for 10% fuel oil or 10% natural gas firing (fuel oil/natural gas).

^c Exclusive of background concentrations. Initial stack test firing syngas was conducted. Stack tests on natural gas are not required.

^d Excluding sulfuric acid mist.

^e Sulfuric acid mist emissions assume a maximum of 0.05 percent sulfur, by weight, in the fuel oil. Annual stack tests conducted while firing syngas only.

[PSD-FL-194], as amended; and, 1050233-015-AC.]

A.6. ~~NO_x. The permittee shall operate the combustion turbine in a manner to achieve the lowest possible NO_x emission limit, but shall not exceed 15 ppmvd-corrected to 15% oxygen and ISO conditions when firing syngas. [PSD-FL-194; and, PSD-FL-194F/1050233-007-AC.]~~

A.5. Sulfur Dioxide (SO₂) - Sulfur Content. The maximum sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent, by weight. The CCCT shall fire pipeline quality natural gas which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (gr/100 SCF). Compliance with either of these limits is shown by meeting the SO₂ emission limit given in Specific Condition A.4 of this subsection with compliance shown by a continuous emission monitoring system (CEMS). [PSD-FL-194] 1050233-015-AC.]

A.6. Visible Emissions (VE). VE shall not exceed 10 percent opacity when firing syngas with or without natural gas augmentation or natural gas only and 20 percent opacity when firing No. 2 fuel oil. [PSD-FL-194.]

Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.

A.7. Excess Emissions Allowed - Startup, Shutdown or Malfunction. Excess emissions resulting from startup, shutdown or malfunction 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. Best operational practices shall be documented in writing and submitted to the Department. The documentation shall include limitations on excess emissions caused by turbine startup and shall be updated within thirty (30) days of implementation of any changes. [Rule 62-210.700(1), F.A.C.; and, 1050233-015-AC.]

A.8. Best Operational Practices to Minimize Excess Emissions. The permittee shall follow the best operational practices to minimize excess emissions during startup and shutdown as described in **Appendix BOP, Best Operational Practices for Startup and Shutdown.** [Rule 62-210.700(2) and 62-213.440(1) (Operational Requirements that Assure Compliance), F.A.C. and Proposed by the Applicant in the Renewal Application.]

A.9. 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(4), F.A.C.]

Continuous Emissions Monitoring Systems (CEMS)

{Permitting Note: The following continuous monitors are installed on these units: SO₂, NO_x, carbon dioxide (CO₂) and stack gas flow.}

A.10. CEMS for NO_x and SO₂. Emissions of NO_x and SO₂ shall be determined continuously with data from the existing continuous emissions monitoring systems (CEMS). [~~Permit No. 1050233-021-AC/PSD-FL-194], specific condition 3.5.~~]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit -001

Test Methods and Procedures

A.11. Test Methods. Required tests shall be performed in accordance with the following reference methods:

Method(s)	Description of Method(s) and Comment(s)
EPA Methods 1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
EPA Methods 5, 5B or 17	Methods for Determining PM Emissions
EPA Methods 6, 6A, 6B or 6C	Methods for Determining SO ₂ Emissions
EPA Method 7, 7A, 7C, 7D or 7E	Determination of NO _x Emissions
EPA Method 8, 8A or 320 Method 8B*	Determination of SAM Emissions
EPA Method 9	Visual Determination of the Opacity of Emissions (VE)
EPA Method 10	Determination of CO Emissions
EPA Method 18	Measurement of Gaseous Organic Compound Emissions (VOC)

The above methods are 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. ~~*Method 8B as approved in PSD-FL-194J, Permit No. 1050233-021-AC/PSD-FL-194H.~~ [Chapter 62-297, F.A.C.]

A.12. Initial Compliance Test: ~~Within 90 days of conversion of the CCCT to natural gas, stack tests shall be conducted to show that the CCCT is in compliance with the CO and VE emissions limits specified in Specific Conditions A.4 and A.6 of this subsection, respectively. [Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); 62-212.400 (BACT), F.A.C.; Federal Acid Rain Program; PSD-FL-194J.]~~

A.13. Annual Compliance Test. Unless otherwise specified by this permit, during each federal fiscal year (October 1st to September 30th), Emissions Unit ID No. -001 shall be tested to demonstrate compliance with the emission limitations and standards for VE, CO, NO_x and SO₂ PM/PM₁₀. ~~The NO_x and SO₂ RATA test data may be used to demonstrate compliance with the annual test requirement, provided the testing requirements (notification, procedures and reporting) of Chapter 62-297, F.A.C. are met. [Rule 62-297.310(7), F.A.C.; and, Permit No. 1050233-021-AC/PSD-FL-194JH, specific condition 3.5.]~~

A.14. Compliance Test Prior To Renewal. Prior to permit renewal, Emissions Unit ID No. -001 shall be tested to demonstrate compliance with the emission limitations and standards for VE, CO, NO_x, SO₂-VOC and PM/PM₁₀. [Rule 62-297.310(7)(a)3., F.A.C. ; and, Permit No. 1050233-021-AC/PSD-FL-194JH, specific condition 3.5.]

A.15. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

A.16. VE Testing Not Required. By this permit, annual emissions compliance testing for visible emissions is not required for this emissions unit while burning only ~~liquid fuel No. 2 fuel oil or natural gas~~ for less than 400 hours per year. See Specific Condition TR7. [Rule 62-297.310(7)(a)4., F.A.C.]

~~**A.14. Lead, Inorganic Arsenic, Beryllium, and Mercury.** The initial compliance test requirement for these pollutants has been satisfied and no further tests are required. [PSD-FL-194.]~~

A.17. Testing Frequency - SAM. The permittee shall conduct stack tests semi-annually to demonstrate continued compliance with the permitted emissions limits for SAM. The semi-annual testing shall be performed for a period of five (5) years following the increase in the petcoke blend ratio (the petcoke blend

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit -001

ratio was increased to 85% in the Fall of 2008, therefore, the 5-year period is effective calendar year (CY) 2009 through CY 2013) and shall consist of at least six test runs. [Rules 62-4.070(3) and 62-297.310(7), F.A.C.; and, ~~Permit No. 1050233-021-AC/PSD-FL-194H, specific condition 3.5.~~]

A.18. Testing Requirements Conditions. ~~Emissions testing shall be conducted while gasifying and firing a blend of coal/petroleum coke within 10% of 4.7% sulfur by weight and within fuel consumption constraints specified in this permit. Emissions testing shall be conducted while gasifying and firing a coal/petroleum coke blend containing the highest blended fuel ratio at which that the plant wishes to be allowed to operate (up to 85% petroleum coke / 15% coal and 4.7% sulfur, by weight). Initial and annual tests shall be conducted at 90% or greater of the permitted sulfur content of the fuel, not to exceed 4.7%, and the heat input rate provided in emissions unit description and corrected as described therein. If it is impracticable to test within the described range, the unit may be tested at less than the described range; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.~~ [Rules 62-4.070(3) and 62-297.310(7), F.A.C.; and, ~~Permit No. 1050233-021-AC/PSD-FL-194H, specific condition 3.5.; Permit No. 1050233-029-AC/PSD-FL-194; and 40 CFR 60.8J~~]

Recordkeeping and Reporting Requirements

See Appendix RR, Facility-wide Reporting Requirements, for additional reporting requirements.

A.19. Reporting Schedule. The following report shall be submitted to the Compliance Authority:

Report	Reporting Deadline(s)	Related Condition(s)
NSPS Excess Emissions and Monitoring System Performance	Every 6 months (semi-annual), except when more frequent reporting is specifically required	A.220.

[40 CFR 60, Subpart A.]

NSPS 40 CFR 60 Requirements

A.20. NSPS Requirements - Subpart A. This emissions unit shall comply with all applicable requirements of 40 CFR 60, Subpart A, General Provisions, including:

- 40 CFR 60.7, Notification and Recordkeeping
- 40 CFR 60.8, Performance Tests
- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements,

which have been adopted by reference in Rule 62-204.800(8)(d), F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 60.4, 40 CFR 60.8(b)(2) and (3), 40 CFR 60.11(e)(7) and (8), 40 CFR 60.13(g), (i) and (j)(2), and 40 CFR 60.16. This emissions unit shall comply with **Appendix 40 CFR 60 Subpart A** included with this permit. [Rule 62-204.800(8)(d), F.A.C.]

A.21. NSPS Requirements - Subpart GG. Except as otherwise provided in this permit, the combustion turbine shall comply with all applicable provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(8)(b), F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 60.334(b)(2) and 40 CFR 60.335(f)(1). The Subpart GG requirement to correct test data to ISO conditions applies, but such correction is not required to demonstrate compliance with the non-NSPS permit standard(s). This emissions unit shall comply with **Appendix 40 CFR 60 Subpart GG** attached to this permit. [Rule 62-204.800(8)(b)39., F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit -001

Other Requirements

A.22. This emissions unit is also subject to conditions **H.1.** and **H.2.** contained in **Subsection H. Common Conditions.**

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Unit -003

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

E.U. ID No.	Brief Description
-003	120 Million Btu per Hour Auxiliary Boiler

After issuance of the final version of this permit and upon conversion to natural gas all references to No. 2 fuel oil use in the auxiliary boiler (EU 003) become obsolete. Within 30 days after the conversion to natural gas of this emission unit, the permittee must notify the Compliance Authority of the conversion. [Rules 62-4.030 and 62-4.050, F.A.C.; PSD-FL-194.]

The auxiliary boiler only operates during startup and shutdown of the CCCT, or when steam from the HRSG is unavailable. The auxiliary boiler produces steam for in-plant use and has a maximum heat input of 120-0 million Btu per hour. The boiler is fired with only very low sulfur fuel oil or pipeline quality natural gas and has a capacity factor of less than or equal to 35%. The boiler can be continuously fired in a standby mode with full operation limited to a maximum of 3,000 hours per year. No add-on air pollutant emission control devices are employed by this emissions unit. This emissions unit has exhaust gas recirculation (EGR) for the control of NO_x emissions. The auxiliary boiler began operation on April 10, 1996. The stack parameters are: height, 75 feet; diameter, 3.7 feet; exit temperature, 375 degrees °F; and, stack gas flow rate, 32,240 acfm.

{Permitting note(s): This emissions unit is regulated under NSPS - 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, adopted and incorporated by reference in Rule 62-204.800(8)(b)3., F.A.C.; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) [PSD-FL-194, as amended]; Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated February 24, 1994; and, Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with less than 250 Million Btu per Hour Heat Input, New and Existing Emissions Units.}

Essential Potential to Emit (PTE) Parameters

- B.1. Permitted Capacity.** The maximum process/operation rate heat input (higher heating value) is 120-0 million Btu per hour. [Rules 62-4.160(2), 62-210.200 (Definitions - Potential to Emit (PTE)); and, 62-296.406, F.A.C.; and, PSD-FL-194(A).]
- B.2. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]
- B.3. Methods of Operation - Fuels.** This emissions unit shall fire only very low sulfur No. 2 distillate oil or pipeline quality natural gas. [Rules 62-4.160(2), 62-210.200 (Definitions - PTE), 62-213.410, 62-213.440(1), F.A.C.; and, PSD-FL-194(K).]
- B.4. Hours of Operation.**
 - a. **Standby Mode.** This emissions unit may operate in a standby mode continuously, i.e., 8,760 hours/year.
 - b. **Non-Standby Modes.** The hours of operation for this emissions unit shall not exceed 3,000 hours/year. [Rules 62-4.160(2), 62-210.200 (Definitions - PTE), F.A.C.; and, PSD-FL-194(A).]

Emission Limitations and Standards

Unless otherwise specified, the averaging time(s) for Specific Condition(s) **B.5. - B.12.** are based on the specified averaging time of the applicable test method.

- B.5. Visible Emissions (VE).** When firing fuel oil, visible emissions shall not exceed 20 percent opacity (six-minute average), except for one six-minute period per hour during which opacity shall not exceed 27 percent. [40 CFR 60.43b(f); PSD-FL-194(A); and, Rule 62-296.406(1) (BACT), F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Unit -003

- B.6. Particulate Matter (PM) Emissions.** When firing fuel oil, Particulate matter emissions shall not exceed 43 ng/J (0.10 pound per million Btu) heat input. [40 CFR 60.43b(b); PSD-FL-194; and, Rule 62-296.406(2) (BACT), F.A.C.]
- B.7. Sulfur Dioxide (SO₂) Emissions.** ~~Sulfur dioxide emissions shall not exceed 0.80 pound per million Btu heat input. [40 CFR 60.42b(a) & (j); PSD-FL-194; and, Rule 62-296.406(3) (BACT), F.A.C.]~~
- B.8. SO₂ Percent Reduction.** ~~Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in 40 CFR 60.45b(e) or 40 CFR 60.45b(d), and following the monitoring procedures as described in 40 CFR 60.47b(a) or 40 CFR 60.47b(b) to determine sulfur dioxide emission rate or fuel oil sulfur content; or (2) maintaining fuel receipts as described in 40 CFR 60.49b(e). [40 CFR 60.42b(i) and, PSD-FL-194]~~
- B.7. SO₂ - Sulfur Content.** The maximum sulfur content of the very low sulfur No. 2 fuel oil shall not exceed 0.05 percent, by weight. The boiler shall fire pipeline quality natural gas which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (gr/100 SCF). Meeting the No. 2 fuel oil sulfur limit shall show compliance with the SO₂ emissions of less than 0.50 lb/MMBtu required by NSPS Subpart Db. [PSD-FL-194]; and, Rule 62-296.406(3) (BACT), F.A.C.; and NSPS Subpart Db]
- B.9. SO₂ - Averaging Time.** ~~Compliance with the emission limits and the fuel oil sulfur limits are determined on a 30-day rolling average basis. [40 CFR 60.42b(e) and, PSD-FL-194.]~~
- B.8. Nitrogen Oxides (NO_x) Emissions.** Emissions of nitrogen oxides (expressed as NO₂) shall not exceed 0.10 pound per million Btu heat input. [40 CFR 60.44b(a); and, PSD-FL-194(A).]
- B.9. NO_x - Averaging Time.** Compliance with the emission limits is determined on a 30-day rolling average basis. [40 CFR 60.44b(i).]
- Excess Emissions**
- Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.
- B.9. Excess Emissions Allowed - Startup, Shutdown or Malfunction.** Excess emissions resulting from startup, shutdown or malfunction 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. [Rule 62-210.700(1), F.A.C.]
- B.10. Best Operational Practices to Minimize Excess Emissions.** The permittee shall follow the best operational practices to minimize excess emissions during startup and shutdown as described in **Appendix BOP, Best Operational Practices for Startup and Shutdown.** [Rule 62-210.700(2) and 62-213.440(1) (Operational Requirements that Assure Compliance), F.A.C. and Proposed by the Applicant in the Renewal Application.]
- B.11. 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(4), F.A.C.]
- B.12. PM and VE.** When firing fuel oil, the particulate matter and opacity standards apply at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43b(g) and, PSD-FL-194.]
- B.16. SO₂.** ~~The sulfur dioxide emission limitations apply at all times, including periods of startup, shutdown and malfunction. [40 CFR 60.42b(g) and, PSD-FL-194.]~~

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Unit -003

B.13. NO_x. The nitrogen oxide standards apply at all times, including periods of startup, shutdown, or malfunction. [40 CFR 60.44b(4) and, PSD-FL-194.]

Monitoring of Operations

B.14. Sulfur Content of Fuel.

a. Fuel Oil: Compliance with the maximum sulfur content of the low sulfur fuel oil shall be demonstrated by testing for sulfur content of the fuel oil in the storage tanks once per day when firing oil. Testing for fuel oil heating value shall also be conducted on the same schedule. [PSD-FL-194.] While still firing fuel oil the following new monitoring requirements apply with regard to fuel oil sulfur content. The fuel oil sulfur limit imposed on the auxiliary boiler meets the definition of very low sulfur fuel oil per §40 CFR 60.41b. Per §40 CFR 60.41b, very low sulfur fuel oil shall have no more than 0.5 weight percent sulfur or that, when combusted without SO₂ emission control, will have a SO₂ emission rate equal to or less than 215 nanograms per joule (ng/J) or 0.5 lb/MMBtu of heat input. The fuel oil used by the auxiliary boiler meets both of these requirements and is exempt from the requirements of a SO₂ limit and monitoring on a 30 day rolling average basis. Consequently, compliance can be demonstrated using fuel records as described in §60.49b(c). The fuel record requirement shall be met through vendor certification or measured with a composite sampling procedure approved by the Administrator pursuant to 40CFR 75.66. The fuel contract and bills of lading shall be used to demonstrate compliance for the vendor certification. The monthly composite sample shall be prepared from each fuel oil delivery (lot) to the storage tanks. The sample will be analyzed in the laboratory for density, heat content and sulfur content. [NSPS, Subpart Db and PSD-FL-194].

b. Natural Gas: The boiler shall fire pipeline quality natural gas which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (gr/100 SCF). Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D4468-85, D5504-01, D6228-98 and D6667-01, D3246-81 or more recent versions or other methods approved by the Department. [PSD-FL-194]

Test Methods and Procedures

B.15. Test Methods. Required tests shall be performed in accordance with the following reference methods:

Method(s)	Description of Method(s) and Comment(s)
EPA Methods 1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
EPA Methods 5, 5B or 17	Methods for Determining PM Emissions
EPA Methods 6, 6A, 6B or 6C	Methods for Determining SO ₂ Emissions
Method 7, 7A, 7C, 7D or 7E	Determination of NO _x Emissions
EPA Method 10	Determination of CO Emissions
EPA Method 9	Visual Determination of the Opacity of Emissions (VE)

The above methods are 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.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Unit -003

B.16. Annual Compliance Test. Unless otherwise specified by this permit, during each federal fiscal year (October 1st to September 30th), Emissions Unit ID No. -003 shall be tested to demonstrate compliance with the emission limitations and standards for VE (when firing fuel oil). [Rule 62-297.310(7), F.A.C.]

B.17. Compliance Test Prior To Renewal. Prior to permit renewal, Emissions Unit ID No. -003 shall be tested to demonstrate compliance with the emission limitations and standards for VE (when firing fuel oil), PM (when firing fuel oil) and NO_x. [Rule 62-297.310(7)(a)3., F.A.C.]

B.18. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

B.19. Sulfur Dioxide Emissions. ~~The owner or operator shall demonstrate compliance per Specific Condition B.14 of this subsection. The owner or operator shall determine compliance with the fuel sulfur content limit by using method ASTM D 2880-71, or the latest edition.~~ [PSD-FL-194.]

B.20. VE Testing Not Required. By this permit, annual emissions compliance testing for visible emissions is not required for this emissions unit while burning only liquid fuel for less than 400 hours per year. See Specific Condition TR7. [Rule 62-297.310(7)(a)4., F.A.C.]

Recordkeeping and Reporting Requirements

See Appendix RR, Facility-wide Reporting Requirements, for additional reporting requirements.

B.21. Reporting Schedule. The following report shall be submitted to the Compliance Authority:

Report	Reporting Deadline(s)	Related Condition(s)
NSPS Excess Emissions and Monitoring System Performance	Every 6 months (semi-annual), except when more frequent reporting is specifically required	B.238.

[40 CFR 60, Subpart A.]

B.22. Records. Records of the hours of non-standby operation of the auxiliary boiler will be kept for purposes of periodic monitoring. [Rule 62-213.440(1)(b)1.b. (Periodic Monitoring), F.A.C. {Resolution of objection from USEPA dated 01/22/1999.}]

NSPS 40 CFR 60 Requirements

B.23. NSPS Requirements - Subpart A. This emissions unit shall comply with all applicable requirements of 40 CFR 60, Subpart A, General Provisions, including:

- 40 CFR 60.7, Notification and Recordkeeping
- 40 CFR 60.8, Performance Tests
- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements,

which have been adopted by reference in Rule 62-204.800(8)(d), F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 60.4, 40 CFR 60.8(b)(2) and (3), 40 CFR 60.11(e)(7) and (8), 40 CFR 60.13(g), (i) and (j)(2), and 40 CFR 60.16. This emissions unit shall comply with **Appendix 40 CFR 60 Subpart A** included with this permit. [Rule 62-204.800(8)(d), F.A.C.]

B.24. NSPS Requirements - Subpart Db. Except as otherwise provided in this permit, this emissions unit shall comply with all applicable provisions of 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, adopted by reference in Rule 62-204.800(8)(b)3., F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 60.44b(f) and (g) and 40 CFR

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Unit -003

60.49b(a)(4). This emissions unit shall comply with **Appendix 40 CFR 60 Subpart Db** included with this permit. [Rule 62-204.800(8)(b)3., F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection C. Emissions Unit -004

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

E.U. ID No.	Brief Description
-004	Sulfuric Acid Plant

After issuance of the final version of this permit and upon conversion to natural gas all references to propane use in the sulfuric acid plant (EU 004) become obsolete. Within 30 days after the conversion to natural gas of this emission unit, the permittee must notify the Compliance Authority of the conversion. [Rules 62-4.030 and 62-4.050, F.A.C.; PSD-FL-194.]

The sulfuric acid plant (SAP) removes sulfur from the syngas stream before it is combusted in the CCCT. The SAP takes a sulfur gas stream from the solid fuel gasification plant's hot gas cleanup or cold gas cleanup systems and converts it to sulfuric acid using the double contact process. The SAP has a 15 million Btu per hour, pipeline quality natural gas or propane fired, hydrogen sulfide (H₂S) to SO₂ conversion furnace which vents to the atmosphere only during warm-up; and a 9 million Btu per hour, pipeline quality natural gas or propane fired, non-contact SO₂ to sulfur trioxide (SO₃) converter preheater which is vented to the atmosphere. This SAP is a double contact absorption plant with a maximum production rate of 299 tons per day (TPD) and 109,135 tons per year of 100% H₂SO₄ (sulfuric acid). The SAP uses vanadium pentoxide catalyst in the converters. The SAP uses mist eliminators for the control of sulfuric acid mist emissions. The stack parameters are: height, 199 feet; diameter, 2.5 feet; exit temperature, 180 degrees F; and, stack gas flow rate, 17,660 acfm. This SAP began operation on April 10, 1996.

{Permitting note(s): This emissions unit is regulated under Rule 62-296.402(2), F.A.C., Sulfuric Acid Plants - New Plants.}

Essential Potential to Emit (PTE) Parameters

- C.1. **Hours of Operation.** This emissions unit may operate continuously (8760 hours/year). [Rule 62-210.200 (Definitions - Potential to Emit (PTE), F.A.C.)]
- C.2. **Permitted Capacity.** The SAP production shall not exceed 299 tons per day (TPD) of 100% sulfuric acid. [Rules 62-4.160(2), 62-210.200 (Definitions - PTE) and 62-296.402(2), F.A.C.; and, ~~Permit No. 1050233-021-A-C/PSD-FL-194~~, specific condition 3.3.] {Permitting note: The corresponding equivalent production rates are 12.46 tons per hour and 109,135 tons per year of 100% H₂SO₄.}
- C.3. **Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]
- C.4. **Methods of Operation - Fuels.** The conversion furnace shall fire only pipeline quality natural gas or propane. [Rules 62-4.160(2) and 62-213.410, F.A.C. and PSD-FL-194]

Emission Limitations and Standards

Unless otherwise specified, the averaging time(s) for Specific Condition(s) C.5. - C.7 are based on the specified averaging time of the applicable test method.

- C.5. **Visible Emissions (VE).** VE shall not exceed 10% opacity. VE testing shall be accomplished quarterly as stated in Specific Condition C.13 below in order to meet the EPA requirement to remove the daily VE monitoring. [Rule 62-296.402(2)(a), F.A.C.]
- C.6. **Sulfur Dioxide (SO₂).** SO₂ emissions shall not exceed 4 pounds per ton of 100% H₂SO₄ produced. [Rule 62-296.402(2)(b), F.A.C.]
- C.7. **Sulfuric Acid Mist (SAM).** SAM emissions shall not exceed 0.15 pound per ton of 100% H₂SO₄ produced. [Rule 62-296.402(2)(c), F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection C. Emissions Unit -004

Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.

C.8. Excess Emissions Allowed. 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. [Rule 62-210.700(1), F.A.C.]

C.9. 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(4), F.A.C.]

Monitoring of Operations

~~**C.10. Monitoring - Visible Emission Observation.**~~ The owner or operator shall observe and record a quantified visible emission observation, six minutes in duration, for the sulfuric acid plant on a daily basis, for the purpose of periodic monitoring. [Rule 62-213.440(1)(b)1.b. (Periodic Monitoring), F.A.C. {Resolution of objection from USEPA dated 01/22/1999.}] ~~[Reserved]~~

C.10. Monitoring - Production. Compliance with the TPD production limit shall be demonstrated through the use of a continuous flow and composition (purity) monitor located between the sulfuric acid plant and the sulfuric acid storage tank. [Permit No. 1050233-021-AC/PSD-FL-194]H, specific condition 3.3.]

C.11. Monitoring - Daily Production. Record, in tons, the daily production of 100% sulfuric acid for purposes of periodic monitoring. [Rule 62-213.440(1)(b)1.b. (Periodic Monitoring), F.A.C. {Resolution of objection from USEPA dated 01/22/1999.}]

Test Methods and Procedures

C.12. Test Methods. Required tests shall be performed in accordance with the following reference methods:

Method(s)	Description of Method(s) and Comment(s)
EPA Method 6C	Methods for Determining SO ₂ Emissions
EPA Method 8, 8A or 320 Method 8B*	Determination of SAM and SO ₂ Emissions from Stationary Sources
DEP Method 9	Visual Determination of the Opacity of Emissions (VE)

The above methods are 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. *Method 8B as approved in Permit No. 1050233-021-AC/PSD-FL-194]H. [Chapter 62-297, F.A.C.; and, Permit No. 1050233-021-AC/PSD-FL-194]H, specific condition 10.]

C.13. Annual Compliance Tests. ~~Unless otherwise specified by this permit, VE testing shall be conducted quarterly for a period of 8 consecutive quarters, utilizing EPA test method 9 to demonstrate compliance with the emission standard for VE given in Specific Condition C.5. If the VE test results for the eight consecutive quarters show no VE above 5% opacity, the permittee may discontinue these quarterly tests with only annual VE testing subsequently required during each federal fiscal year (October 1st to September 30th). Emission testing for SO₂ shall continue to be accomplished during each federal fiscal year this emissions unit shall be tested to demonstrate compliance with the emission limitations and standards for VE and SO₂.~~ [Rule 62-297.310(7), F.A.C.; and, PSD-FL-194]]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection C. Emissions Unit -004

- C.14. Compliance Tests Prior To Renewal.** Prior to permit renewal, this emissions unit shall be tested to demonstrate compliance with the emission limitations and standards for VE, SO₂ and SAM. [Rule 62-297.310(7)(a)3., F.A.C.; and, Permit No. 1050233-021-AC/PSD-FL-194H, specific condition 3.5.]
- C.15. Common Testing Requirements.** Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]
- C.16. Visible Emissions.** The test method for visible emissions shall be DEP Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. [Rule 62-296.402(3)(a), F.A.C.]
- C.17. Sulfuric Acid Mist/Sulfur Dioxide.** The test method for acid mist shall be EPA Method 8, 8A or 320 incorporated and adopted by reference in Chapter 62-297, F.A.C., or an alternative method approved by the Department. The minimum sample volume for the EPA Method 8 test shall be 40 dry standard cubic feet. The test method for sulfur dioxide shall be EPA Method 6C, incorporated and adopted by reference in Chapter 62-297, F.A.C., or an alternative method approved by the Department. [Rule 62-296.402(3)(b), F.A.C.; and, Applicant Request.]
- C.18. Testing.** Emissions testing shall be conducted while gasifying and firing a coal/petroleum coke blend within fuel consumption constraints specified in this permit. Annual tests shall be conducted at 90% or greater of the permitted sulfur content of the fuel, not to exceed 4.7%. If it is impracticable to test within the described range, the unit may be tested at less than the described range; in this case, subsequent emissions unit operation is limited to 10 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity, containing the highest blended fuel ratio at which that the plant wishes to be allowed to operate (up to 85% petroleum coke / 15% coal and 4.7% sulfur, by weight). [Rules 62-4.070(3) and 62-297.310(7), F.A.C.; and, Permit No. 1050233-021-AC/PSD-FL-194H PSD-FL-194, specific condition 3.5.]

Recordkeeping and Reporting Requirements

See Appendix RR, Facility-wide Reporting Requirements, for additional reporting requirements.

Other Requirements

~~B.19. Compliance Plan – Unfinished Work and/or Activities.~~

- a. ~~The report under specific condition 3.10 of Permit No. 1050233-021-AC/PSD-FL-194H has not yet been completed:~~
- ~~3.10 SAM Emissions Monitor Report. Prior to the expiration date of Permit No. 1050233-021-AC/PSD-FL-194H, the permittee shall submit a report detailing the potential options for continuous SAM emissions monitoring. Upon installation of an approved SAM CEMS or other approved monitoring protocol, the semi-annual SAM compliance tests required may be discontinued.~~
- b. ~~The permittee expects to finish the report after the August 2009 SAM testing and complete it by 01/01/2010.~~

~~[Rules 62-213.440(2) and 62-213.420(1)(a)5., F.A.C.]~~

Other Requirements

- C.19.** This emissions unit is also subject to conditions H.1. and H.2. contained in **Subsection H. Common Conditions**

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection D. Emissions Unit -005

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

E.U. ID No.	Brief Description
-005	Solid Fuel Handling System

The solid fuel handling system consists of a bottom unloading station where water/surfactant spray is applied to the incoming fuel as needed for dust control. The system also includes enclosed or covered conveying systems, rubber skirted drop points from bins, two fuel silos (Silo Nos. 1 and 2) each with an associated baghouse dust suppression system, a silo feed to belt conveyor baghouse dust suppression system, a fuel surge bin with an associated baghouse dust suppression system, and two rod mill crushers for slurry production.

Solid fuel is received by truck and is unloaded to the fuel unloading bin. Fugitive particulate matter emissions are controlled by ~~surfactant or water spray applied~~ a dust suppression system as needed. Fuel is conveyed via 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. When needed, fugitive particulate matter emissions from the fuel silos are each controlled by an associated baghouse dust suppression system. Fuel is then reclaimed from the silos via enclosed or covered conveyors to the surge bin inside the slurry preparation building. ~~When needed,~~ Fugitive particulate matter emissions from the surge bin are controlled by an associated baghouse dust suppression system. Fuel and water are then mixed in the rod mill crushers to produce a coal slurry.

{Permitting note(s): This emissions unit is regulated under NSPS - 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants, adopted and incorporated by reference in Rule 62-204.800(8)(b)31., F.A.C.; and, Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) [PSD-FL-194]-~~as amended~~}.}

Essential Potential to Emit (PTE) Parameters

D.1. Hours of Operation. This emissions unit may operate continuously (8760 hours/year). [Rule 62-210.200 (Definitions - Potential to Emit (PTE), F.A.C.)]

Air Pollution Control Technologies and Measures

D.2. Particulate matter 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. [~~PSD-FL-194~~ Permit No. 1050233-015-AC-]

Emission Limitations and Standards

Unless otherwise specified, the averaging time(s) for Specific Condition(s) **D.3.** is based on the specified averaging time of the applicable test method.

D.3. Visible Emissions (VE). Visible emissions shall be less than or equal to 5 (five) percent opacity. [PSD-FL-194(A)]

Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.

D.4. Excess Emissions Allowed. 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. [Rule 62-210.700(1), F.A.C.]

D.5. 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(4), F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection D. Emissions Unit -005

Test Methods and Procedures

D.6. Test Methods. Required tests shall be performed in accordance with the following reference methods:

Method(s)	Description of Method(s) and Comment(s)
EPA Method 9	Visual Determination of the Opacity of Emissions (VE)

The above methods are 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.]

D.7. Annual Compliance Tests. Unless otherwise specified by this permit, during each federal fiscal year (October 1st to September 30th), the ~~baghouse~~ dust suppression system exhausts shall be tested to demonstrate compliance with the emission limitations and standards for VE. [Rule 62-297.310(7), F.A.C.; and, PSD-FL-194.]

D.8. Compliance Tests Prior To Renewal. Prior to permit renewal, the ~~baghouse~~ dust suppression system exhausts shall be tested to demonstrate compliance with the emission limitations and standards for VE. [Rule 62-297.310(7)(a)3., F.A.C.]

D.9. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

Recordkeeping and Reporting Requirements

See Appendix RR, Facility-wide Reporting Requirements, for additional reporting requirements.

NSPS 40 CFR 60 Requirements

D.10. NSPS Requirements - Subpart A. This emissions unit shall comply with all applicable requirements of 40 CFR 60, Subpart A, General Provisions, including:
40 CFR 60.7, Notification and Recordkeeping
40 CFR 60.8, Performance Tests
40 CFR 60.11, Compliance with Standards and Maintenance Requirements
40 CFR 60.12, Circumvention
40 CFR 60.13, Monitoring Requirements
40 CFR 60.19, General Notification and Reporting Requirements,
which have been adopted by reference in Rule 62-204.800(8)(d), F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 60.4, 40 CFR 60.8(b)(2) and (3), 40 CFR 60.11(e)(7) and (8), 40 CFR 60.13(g), (i) and (j)(2), and 40 CFR 60.16. This emissions unit shall comply with **Appendix 40 CFR 60 Subpart A** included with this permit. [Rule 62-204.800(8)(d), F.A.C.]

D.11. NSPS Requirements - Subpart Y. Except as otherwise provided in this permit, this emissions unit shall comply with all applicable provisions of 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants, adopted and incorporated by reference in Rule 62-204.800(8)(b)31., F.A.C. This emissions unit shall comply with **Appendix 40 CFR 60 Subpart Y** included with this permit. [Rule 62-204.800(8)(b)2., F.A.C.]

Other Requirements

This emissions unit is also subject to conditions H.1. and H.2. contained in **Subsection H. Common Conditions.**

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection E. Emissions Unit -006

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

E.U. ID No.	Brief Description
-006	Solid Fuel Gasification System

After issuance of the final version of this permit and upon conversion to natural gas all references to propane use in the solid fuel gasification system (EU 006) become obsolete. Within 30 days after the conversion to natural gas of this emission unit, the permittee must notify the Compliance Authority of the conversion. [Rules 62-4.030 and 62-4.050, F.A.C.; PSD-FL-194]

The solid fuel gasification system converts solid fuel (coal or blends of up to 85% petroleum coke (pet coke) and 15% bituminous coal) into ~~synthesis~~synthetic gas (syngas) fuel for combustion in the CCCT for the purpose of electric generation. As an emergency safety device, a flare is used to burn gas from the process during startup, shutdown and emergencies. The flare is the only control device associated with the gasification system. The flare's stack height is 150 feet and the exit temperature of the exhaust gas is 1830 ~~degrees~~[°]F. Emissions from the flare's pilot flame are negligible. The solid fuel gasifier preheater will combust pipeline quality natural gas or propane.

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{Permitting note(s): This emissions unit is regulated under Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) [PSD-FL-194, ~~as amended~~].}

Essential Potential to Emit (PTE) Parameters

E.1. Hours of Operation. This emissions unit may operate continuously (8760 hours/year). [Rule 62-210.200 (Definitions - Potential to Emit (PTE), F.A.C.)]

E.2. Permitted Composition Capacity. Solid fuels input to the solid fuel gasification plant shall consist of coal or coal/petroleum coke blends containing a maximum of 85% petroleum coke by weight. ~~The maximum input of solid fuels to the solid fuel gasification plant shall not exceed 2,325 tons per day, on a dry basis. The maximum weight of the petroleum coke blended shall not exceed 1,976 tons per day, on a dry basis.~~ [Rules 62-4.160(2) and 62-210.200 (Definitions - PTE), F.A.C.; and Permit No. 1050233-029-AC/PSD-FL-194]
{Permitting Note: The design feed rate of solid fuel to the gasification system is 2,325 TPD on a dry weight basis.}

E.3. Flare Operation. The flare shall only be operated during startup, shutdown or emergencies. [PSD-FL-194.]

Emission Limitations and Standards

Unless otherwise specified, the averaging time(s) for Specific Condition(s) E.4. is based on the specified averaging time of the applicable test method.

E.4. Visible Emissions (VE). Visible emissions shall not be equal to or greater than 20% opacity. [Rule 62-296.320(4)(b)1., F.A.C.]

E.5. SO₂ - Sulfur Content. The maximum sulfur content of the blended fuel shall not exceed 4.7% by weight. [Rules 62-4.160(2) and 62-210.200 (Definitions - PTE), F.A.C.; and PSD-FL-194 PSD-FL-194(E); and Permit No. 1050233-021 AC/PSD-FL-194H, specific condition 3.1.]

{Permitting note(s): The sulfur content limitation in effect limits SO₂ emissions from the CCCT.}

Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.

E.6. Excess Emissions Allowed. 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

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection E. Emissions Unit -006

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. [Rule 62-210.700(1), F.A.C.]

E.7. 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(4), F.A.C.]

Monitoring of Operations

E.8. Fuel Composition. The composition of coal, petroleum coke, and blended fuels gasified (including sulfur contents) shall be determined by proximate and ultimate analyses sampling of each unique fuel blend prior to gasification by either the owner/operator or the vendor. [Rules 62-4.070(3), 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A; and, PSD-FL-194J Permit No. 1050233-021-AC/PSD-FL-194H, specific condition 3-7.]

E.9. Monitoring - Solid Fuel Sulfur Content. Compliance with the solid fuel sulfur content standard of 4.7%, by weight, will be determined by sampling each unique fuel blend prior to gasification by the owner/operator or the vendor as follows: using appropriate ASTM methods such as, ASTM D2013-72, ASTM D3177-75, and ASTM D4239-85, or latest ASTM edition methods. [40 CFR 60.335(d); and PSD-FL-194J]

E.10. Monitoring - Solid Fuel Input. The permittee shall record daily the actual solid fuel input to this emissions unit, in tons per day. [Rule 62-213.440(1)(b), F.A.C.]

Test Methods and Procedures

E.11. Test Methods. Required tests shall be performed in accordance with the following reference method(s):

Method(s)	Description of Method(s) and Comment(s)
EPA Method 9	Visual Determination of the Opacity of Emissions (VE)

The above methods are 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.]

E.12. VE Testing - Annual. By this permit, annual emissions compliance testing for VE is not required for this emissions unit ~~while if the flare operating~~ for less than 400 hours per year. [Rule 62-297.310(7)(a)4, F.A.C.]

E.13. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

Recordkeeping and Reporting Requirements

See Appendix RR, Facility-wide Reporting Requirements, for additional reporting requirements.

E.14. Recordkeeping. Written or electronic records verifying that the coal/petroleum coke blends input to the solid fuel gasification system have not exceeded the 85% ~~(1,976 tons per day)~~ maximum petroleum coke by dry weight limit and the blended fuel sulfur content of 4.7% by weight limit, shall be maintained and submitted to the compliance authority with each annual report. ~~These records shall be generated each time a new shipment of coal/petroleum coke fuel is received or solid fuel is gasified.~~ [PSD-FL-194J]

Other Requirements

E.15. This emissions unit is also subject to conditions **H.1.** and **H.2.** contained in **Subsection H. Common Conditions.**

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection F. Emissions Units -009 & -010

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

E.U. ID No.	Brief Description
-009	Nominal 165 MW Simple Cycle Turbine No. 2
-010	Nominal 165 MW Simple Cycle Turbine No. 3

These emissions units are two dual-fuel, nominal 165 megawatts (MW) General Electric Model PG7241 FA simple cycle combustion turbines. These units use dry low NOx combustors when firing natural gas and use water injection when firing No. 2 fuel oil. Pipeline quality natural gas is the primary fuel and No. 2 fuel oil serves as the backup fuel. CT No. 2 began operation on June 29, 2000. The stack parameters for CT No. 2 are: height, 114 feet; diameter, 18 feet; exit temperature, 1,117-degrees-^oF; and, actual stack gas flow rate, 12,377,044 acfm. CT No. 3 began operation in April, 2002. The stack parameters for CT No. 3 are: height, 114 feet; diameter, 18 feet; exit temperature, 1,117 degrees-^oF; and, actual stack gas flow rate, 12,377,044 acfm.

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{Permitting note(s): These emissions units are regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(8)(b), F.A.C.; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) [PSD-FL-263]; Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated February 24, 1994; and, Rule 62-296.470, F.A.C., Clean Air Interstate Rule (CAIR).}

Essential Potential to Emit (PTE) Parameters

- F.1. **Hours of Operation.** The maximum hours of operation for each unit are 4,380 hours per year on natural gas and 750 hours per year on fuel oil. [Rule 62-210.200 (Definitions - Potential to Emit (PTE), F.A.C.; and, PSD-FL-263.]
- F.2. **Permitted Capacity.** The maximum heat input rates, based on the lower heating value (LHV) of each fuel to each unit at ambient conditions of 59-degrees-^oF temperature, 60% relative humidity, 100% load, and 14.7 psi pressure shall not exceed 1,600 million Btu per hour (MMBtu/hr) when firing natural gas, nor 1,800 MMBtu/hr when firing No. 2 or superior grade of distillate fuel oil. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions, or equations for correction to other ambient conditions provided to the Department shall be utilized for these corrections. [Rules 62-4.160(2), 62-210.200 (Definitions - PTE); and, PSD-FL-263.]
- F.3. **Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]
- F.4. **Methods of Operation - Fuels.** Only pipeline quality natural gas or maximum 0.05 percent sulfur No. 2 fuel oil or superior grade of distillate fuel oil shall be fired in each unit. {Note: The limitation of this specific condition is more stringent than the NSPS 40 CFR 60 Subpart GG sulfur dioxide limitation and thus assures compliance with 40 CFR 60.333 and 60.334.} [Rules 62-4.160(2), 62-210.200 (Definitions - PTE), 62-213.410, 62-213.440(1), F.A.C.; and, PSD-FL-263.]

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Air Pollution Control Technologies and Measures

- F.5. **Maintenance of Dry Low NOx (DLN) Systems.** The DLN systems shall be maintained to minimize nitrogen oxides (NOx) emissions and carbon monoxide (CO) emissions, consistent with normal operation and maintenance practices. Operation of the DLN systems in the diffusion-firing mode shall be minimized when firing natural gas. [Rules 62-4.070, and 62-210.650, F.A.C.; and, PSD-FL-263.]

Emission Limitations and Standards

- F.6. **Nitrogen Oxides (NOx) - While firing Natural Gas.** The emission rate of NOx in the exhaust gas shall not exceed 10.5 ppm @15% O₂ on a 24-hr block average as measured by the continuous emission monitoring

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection F. Emissions Units -009 & -010

system (CEMS). In addition, NO_x emissions calculated as NO₂ shall not exceed 59 pounds per hour (at ISO conditions) and 9 ppmvd @15% O₂ to be demonstrated by the initial "new and clean" GE performance stack test. Notwithstanding the applicable NO_x limit during normal operation, reasonable measures shall be implemented to maintain the concentration of NO_x in the exhaust gas at 9 ppmvd @15% O₂ or lower. Any tuning of the combustors for dry low NO_x operation while firing gas shall result in subsequent NO_x concentrations of 9 ppmvd @15% O₂ or lower. [PSD-FL-263B]

F.7. Nitrogen Oxides (NO_x) - While firing Fuel Oil. The concentration of NO_x in the exhaust gas shall not exceed 42 ppmvd at 15% O₂ on the basis of a 3-hr average as measured by the continuous emission monitoring system (CEMS). In addition, NO_x emissions calculated as NO₂ shall not exceed 319 lb/hr (at ISO conditions) and 42 ppmvd @15% O₂ to be demonstrated by stack test. The permittee shall be limited to 750 hours per year when firing on fuel oil, develop a NO_x reduction plan when the hours of oil firing reach the allowable limit of 750 hours per year. This plan shall include a testing protocol designed to establish the maximum water injection rate and the lowest NO_x emissions possible without affecting the actual performance of the gas turbine. The testing protocol shall set a range of water injection rates and attempt to quantify the corresponding NO_x emissions for each rate and noting any problems with performance. Based on the test results, the plan shall recommend a new NO_x emissions limiting standard and shall be submitted to the Department's Bureau of Air Regulation and the Compliance Authority for review. If the Department determines that a lower NO_x emissions standard is warranted for oil firing, the PSD permit shall be revised. [PSD-FL-263B]

F.8. Sulfur Dioxide (SO₂). SO₂ emissions shall be limited by firing pipeline natural gas (sulfur content less than 2 grains per 100 standard cubic foot) or by firing No. 2 or superior grade distillate fuel oil with a maximum 0.05 percent sulfur for no more than 750 hours per year per unit. Emissions of SO₂ (at ISO conditions) shall not exceed 9.2 lb/hr (natural gas) and 98.1 lb/hr (fuel oil) as measured by applicable compliance methods. [PSD-FL-263.]

F.9. Visible Emissions (VE). VE shall not exceed 10 percent opacity. [PSD-FL-263.]

F.10. Volatile Organic Compounds (VOC). The concentration of VOC in the stack exhaust gas with the combustion turbine operating on natural gas shall exceed neither 1.4 ppmvw (ppmv wet) nor 2.8 lb/hr (ISO conditions) and neither 3.5 ppmvw nor 7 lb/hr (ISO conditions) while operating on oil to be demonstrated by initial stack test using EPA Method 18, 25 or 25A. [PSD-FL-263.]

F.11. Carbon Monoxide (CO). The concentration of CO in the stack exhaust gas shall exceed neither 12 ppmvd nor 38 lb/hr (at ISO conditions) while firing gas and neither 20 ppmvd nor 65 lb/hr (at ISO conditions) while firing oil based on stack test. The permittee shall demonstrate compliance with these limits by stack test using EPA Method 10. [PSD-FL-263.]

Excess Emissions

F.12. Excess Emissions Allowed - Startup, Shutdown or Malfunction. Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration. Operation below 50% output shall be limited to 2 hours per unit cycle (breaker closed to breaker open). [Rule 62-210.700(1), F.A.C.; and, PSD-FL-263, Specific Condition 24.]

- a. Tuning: CEMS data collected during initial or other tuning sessions shall be excluded from the compliance demonstrations provided the tuning session is performed in accordance with the manufacturer's specifications. The permittee shall report any excess emissions in the quarterly NO_x report. [Rule 62-4.070(3), F.A.C.; PSD-FL-263B]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection F. Emissions Units -009 & -010

- F.13. Best Operational Practices to Minimize Excess Emissions.** The permittee shall follow the best operational practices to minimize excess emissions during startup and shutdown as described in **Appendix BOP, Best Operational Practices for Start up and Shutdown.** [Rule 62-210.700(2) and 62-213.440(1) (Operational Requirements that Assure Compliance), F.A.C. and Proposed by the Applicant in the Renewal Application.]
- F.14. 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. These emissions shall be included in the 24-hr average for NO_x. [Rule 62-210.700(4), F.A.C.; and, PSD-FL-263.]

Continuous Emissions Monitoring Systems (CEMS)

{Permitting Note: The following continuous monitors are installed on these units: NO_x and CO₂}

- F.15. CEMS - NO_x.** The permittee shall install, calibrate, maintain, and operate a CEMS in the stack to measure and record the NO_x emissions from these units. Upon request from EPA or DEP, the CEMS emission rates for NO_x on these units shall be corrected to ISO conditions to demonstrate compliance with the NO_x standard established in 40 CFR 60.332. [PSD-FL-263.]
- F.16. CEMS - NO_x.** Continuous compliance with the NO_x emission limits shall be demonstrated with the CEMS based on the applicable averaging time of 24-hr block average (DLN). Based on CEMS data, a separate compliance determination is conducted at the end of each operating day and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous operating day. A valid hourly emission rate shall be calculated for each hour in which at least two NO_x concentrations are obtained at least 15 minutes apart. Valid hourly emission rates shall not include periods of start up, shutdown, or malfunction unless prohibited by Rule 62-210.700 F.A.C. [Rules 62-4.070 and 62-210.700, F.A.C., 40 CFR 75; and, BACT.]
- F.17. CEMS.** All CEMS shall be in continuous operation except for breakdowns, repairs, calibration checks, and zero and span adjustments. These CEMS shall meet minimum frequency of operation requirements: one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data average. [40 CFR 60.13; and, PSD-FL-263.]
- F.18. Continuous Monitoring Certification and Quality Assurance Requirements.** The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) or 40 CFR Part 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40 CFR 75. [PSD-FL-263.]

Monitoring Requirements

- F.19. NO_x CEMS in lieu of Water to Fuel Ratio.** The NO_x CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998-version). The calibration of the water/fuel monitoring device required in 40 CFR 60.335(c)(2) (1998 version) will be replaced by the 40 CFR 75 certification tests of the NO_x CEMS. [PSD-FL-263.]
- F.20. Natural Gas Monitoring Schedule.** A custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2) provided the following requirements are met:
- The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30. The permittee shall submit a monitoring plan, certified by signature of the Designated Representative, that

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection F. Emissions Units -009 & -010

commits to using a primary fuel of pipeline supplied natural gas (sulfur content less than 2.0 gr/100 scf pursuant to 40 CFR 75.11(d)(2)).

- Each unit shall be monitored for SO₂ emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA.

This custom fuel monitoring schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for these units is changed to a higher sulfur fuel, SO₂ emissions must be accounted for as required pursuant to 40 CFR 75.11(d). Sulfur content monitoring with respect to 40 CFR 60, Subpart GG is not required for gaseous fuels that meet the 40 CFR 60.331(u) definition of "natural gas" in accordance with the procedures specified in 40 CFR 60.334(h)(3).

[40 CFR 60.334(h)(3); and, PSD-FL-263.]

F.21. Fuel Oil Monitoring Schedule. Compliance with the maximum sulfur content of the low sulfur fuel oil shall be demonstrated through vendor certification or measured with a composite sampling procedure approved by the Administrator pursuant to 40CFR 75.66. The fuel contract and bills of lading shall be used to demonstrate compliance for the vendor certification. The monthly composite sample shall be prepared from each fuel oil delivery (lot) to the storage tanks. The sample will be analyzed in the laboratory for density, heat content and sulfur content. The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at this facility an analysis which reports the sulfur content and nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335. The use of the NO_x CEMS satisfies the requirement for nitrogen monitoring. [PSD-FL-263B]

Test Methods and Procedures

F.22. Test Methods. Required tests shall be performed in accordance with the following reference methods:

Method(s)	Description of Method(s) and Comment(s)
EPA Methods 1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
EPA Methods 6, 6A, 6B or 6C	Methods for Determining SO ₂ Emissions
EPA Method 7, 7A, 7C, 7D or 7E	Determination of NO _x Emissions
EPA Method 9	Visual Determination of the Opacity of Emissions (VE)
EPA Method 10	Determination of CO Emissions
EPA Method 18	Measurement of Gaseous Organic Compound Emissions (VOC)
EPA Method 20	Determination of NO _x , SO ₂ and Diluent Emissions from Stationary Gas Turbines

The above methods are 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.]

F.23. Annual Compliance Test. Unless otherwise specified by this permit, during each federal fiscal year (October 1st to September 30th), Emissions Unit ID Nos. -009 and -010 shall be tested to demonstrate compliance with the emission limitations and standards for VE, CO and NO_x. The NO_x RATA test data may be used to demonstrate compliance with the annual test requirement, provided the testing requirements (notification, procedures and reporting) of Chapter 62-297, F.A.C. are met. [Rule 62-297.310(7), F.A.C.; and, PSD-FL-263.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection F. Emissions Units -009 & -010

- F.24. Compliance Test Prior To Renewal.** Prior to permit renewal, Emissions Unit ID Nos. -009 and -010 shall be tested to demonstrate compliance with the emission limitations and standards for VE, CO and NOx. [Rule 62-297.310(7)(a)3., F.A.C.; and, PSD-FL-263.]
- F.25. Common Testing Requirements.** Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]
- F.26. VE Testing Not Required.** By this permit, annual emissions compliance testing for visible emissions is not required for this emissions unit while burning only liquid fuel for less than 400 hours per year. See Specific Condition TR7. [Rule 62-297.310(7)(a)4., F.A.C.]
- F.27. Testing.** Initial (I) tests shall be conducted after any modifications (and shake down period not to exceed 100 days after re-starting the CT) of air pollution control equipment such as change or tuning of combustors. Annual (A) compliance tests shall be performed during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.310(7), F.A.C., on each unit while firing natural gas as well as while firing fuel oil. The following reference methods shall be used:
- EPA Reference Method 9, VE (I, A);
 - EPA Reference Method 10, CO (I, A);
 - EPA Reference Method 20, NOx and SO₂. Initial test only for compliance with 40 CFR 60 Subpart GG and (I, A) short-term NOx BACT limits (EPA reference Method 7E, RATA test data may be used to demonstrate compliance for annual test requirements); and,
 - EPA Reference Method 18, 25 and/or 25A, VOC. Initial test only.
- [PSD-FL-263.]
- F.28. CO and NOx Testing.** Annual compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the annual RATA testing for the NOx CEMS required pursuant to 40 CFR 75. [PSD-FL-263.]
- F.29. Compliance with the SO₂ Emission Limits.** The use of pipeline natural gas, is the method for determining compliance for SO₂. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO₂ standard, ASTM methods, D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA-approved custom fuel monitoring schedule or natural gas supplier data may be submitted or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be utilized. However, the applicant is responsible for ensuring that the procedures in 40 CFR 60.335 or 40 CFR 75 are used when determination of fuel sulfur content is made. Sulfur content monitoring with respect to 40 CFR 60, Subpart GG is not required for gaseous fuels that meet the 40 CFR 60.331(u) definition of "natural gas" in accordance with the procedures specified in 40 CFR 60.334(h)(3). Analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e) (1998 version). [40 CFR 60.335(d) and 40 CFR 60.334(h)(3); and, PSD-FL-263.]
- F.30. VOC-Testing.** An initial test was required to demonstrate compliance with the VOC emission limit. Thereafter, the CO emission limit and periodic tuning data shall be employed as a surrogate and no annual testing is required. [PSD-FL-263.]
- F.31. Operating Rate During Testing.** Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient temperature) and 110

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection F. Emissions Units -009 & -010

percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C. [PSD-FL-263.]

Recordkeeping and Reporting Requirements

See Appendix RR, Facility-wide Reporting Requirements, for additional reporting requirements.

F.32. Reporting Schedule. The following report shall be submitted to the Compliance Authority:

Report	Reporting Deadline(s)	Related Condition(s)
NSPS Excess Emissions and Monitoring System Performance	Every 6 months (semi-annual), except when more frequent reporting is specifically required	F.34.

[40 CFR 60, Subpart A.]

F.33. NO_x CEMS for Reporting Excess Emissions. Excess Emissions and Monitoring System Performance Reports shall be submitted as specified in 40 CFR 60.7(c). CEM monitor downtime shall be calculated and reported according to the requirements of 40 CFR 60.7(c)(3) and 40 CFR 60.7(d)(2). Periods when NO_x emissions (ppmvd @ 15% oxygen) are above the BACT standards shall be reported to the DEP Southwest District Office within one working day (verbally) followed up by a written explanation no later than three (3) working days (alternatively by facsimile within one working day). [PSD-FL-263.]

NSPS 40 CFR 60 Requirements

F.34. NSPS Requirements - Subpart A. This emissions unit shall comply with all applicable requirements of 40 CFR 60, Subpart A, General Provisions, including:

- 40 CFR 60.7, Notification and Recordkeeping
- 40 CFR 60.8, Performance Tests
- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements,

which have been adopted by reference in Rule 62-204.800(8)(d), F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 60.4, 40 CFR 60.8(b)(2) and (3), 40 CFR 60.11(e)(7) and (8), 40 CFR 60.13(g), (i) and (j)(2), and 40 CFR 60.16. These emissions units shall comply with Appendix 40 CFR 60 Subpart A included with this permit. [Rule 62-204.800(8)(d), F.A.C.]

F.35. NSPS Requirements - Subpart GG. Except as otherwise provided in this permit, the combustion turbine shall comply with all applicable provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(8)(b), F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 60.334(b)(2) and 40 CFR 60.335(f)(1). The Subpart GG requirement to correct test data to ISO conditions applies, but such correction is not required to demonstrate compliance with the non-NSPS permit standard(s). These emissions units shall comply with **Appendix 40 CFR 60 Subpart GG** attached to this permit. [Rule 62-204.800(8)(b)39., F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection G. Emissions Units -01113 & -01214

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

E.U. ID No.	Brief Description
-01113	Nominal 165 MW Simple Cycle Turbine No. 4
-01214	Nominal 165 MW Simple Cycle Turbine No. 5

These emissions units are two General Electric PG7241 FA simple cycle gas turbine generators with a nominal output of 165 megawatts (MW) each. Each unit may operate up to 4,380 hours per year. The units are fired exclusively with natural gas, which minimizes sulfur dioxide (SO₂) emissions. The units were designed and constructed with dry low NO_x (DLN) burner technology for the control of nitrogen oxides (NO_x) emissions. The advanced burner design reduces incomplete combustion and minimizes carbon monoxide (CO), particulate matter (PM/PM₁₀), and volatile organic compound (VOC) emissions. CT No. 4 began operation on February 23, 2007. The stack parameters for CT No. 4 are: height, 114 feet; diameter, 18 feet; exit temperature, 1,117 degrees^oF; and, actual stack gas flow rate, 2,393,587 acfm. CT No. 5 began operation on February 23, 2007. The stack parameters for CT No. 5 are: height, 114 feet; diameter, 18 feet; exit temperature, 1,117 degrees^oF; and, actual stack gas flow rate, 2,393,587 acfm.

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{Permitting note(s): These emissions units are regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(8)(b), F.A.C.; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) [PSD-FL-363]; Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination; and, Rule 62-296.470, F.A.C., Clean Air Interstate Rule (CAIR).}

Equipment

G.1. Gas Turbines. The permittee is authorized to tune, operate, and maintain two General Electric Model PG7241FA gas turbine-electrical generator sets with a nominal generating capacity of 165 MW each. Each gas turbine will be equipped with a DLN combustion system and an inlet air filtration system. Each unit shall include a SpeedtronicTM Mark V automated gas turbine control system (or equivalent). [PSD-FL-363/1050233-018-AC, Specific Condition 3.]

G.2. Simple Cycle, Intermittent Operation. Each turbine shall operate only in simple cycle mode not to exceed the permitted hours of operation allowed by this permit. This restriction is based on the permittee's request, which formed the basis of the PSD applicability and BACT determinations and resulted in the emission standards specified in this permit. For any request to convert this unit to combined cycle operation by installing/connecting to heat recovery steam generators, including changes to the fuel quality or quantity related to combined cycle conversion which may cause an increase in short or long-term emissions, the permittee may be required to submit a full PSD permit application complete with a new proposal of the BACT as if the unit had never been built. [Rules 62-212.400(12) and 62-212.400 (BACT), F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 8.]

Essential Potential to Emit (PTE) Parameters

G.3. Hours of Operation. Each gas turbine shall operate no more than 4,380 hours during any consecutive 12 months. Restrictions on individual methods of operation are specified in separate conditions. [Rule 62-210.200 (Definitions - Potential to Emit (PTE), F.A.C.; and, PSD-FL-363/1050233-018-AC, Specific Condition 5.]

G.4. Permitted Capacity. The maximum heat input rate for each gas turbine is 1,834 million British thermal units (MMBtu) per hour when firing natural gas based on a compressor inlet air temperature of 59 degrees^oF, the higher heating value (HHV) of natural gas, and 100% load. Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternate methods of operation, and evaporative cooling. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection G. Emissions Units -0413 & -0414

the Permitting and Compliance Authorities upon request. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rules 62-4.160(2), 62-210.200 (Definitions - PTE); 62-212.400 (BACT), and, PSD-FL-363/1050233-018-AC, Specific Condition 6.]

G.5. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

G.6. Methods of Operation - Fuels. Each gas turbine shall fire only natural gas containing no more than 2.0 grains of sulfur (S) per 100 standard cubic feet (SCF) of natural gas. [Rules 62-4.160(2), 62-210.200 (Definitions - PTE), 62-212.400 (BACT), 62-213.410, 62-213.440(1), F.A.C.; and, PSD-FL-363/1050233-018-AC, Specific Condition 7.]

Air Pollution Control Technologies and Measures

G.7. Maintenance of Dry Low NOx (DLN) Systems. The permittee shall operate and maintain the General Electric DLN 2.6 combustion system (or better) to control NOx emissions from the gas turbines when firing natural gas. The system shall be maintained and tuned in accordance with the manufacturer's recommendations. [Rules 62-4.070, and 62-210.650, F.A.C.; and, PSD-FL-363/1050233-018-AC, Specific Condition 4.]

G.8. Operating Procedures. The BACT determinations established by air construction permit PSD-FL-363/1050233-018-AC rely on "good operating practices" to reduce emissions. Therefore all operators and supervisors shall be properly trained to operate and ensure maintenance of the gas turbines, and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods for minimizing excess emissions. [Rules 62-4.070(3) and 62-212.400 (BACT), F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 17.]

Emission Limitations and Standards

Unless otherwise specified, the averaging time(s) for Specific Condition(s) **G.10. - G.11.** are based on the specified averaging time of the applicable test method.

G.9. NSPS Requirements. The BACT emissions standards are as stringent as or more stringent than the limits imposed by the applicable NSPS 40 CFR 60 subpart GG provisions. Some separate reporting and monitoring may be required by the individual subparts. These provisions include a requirement to correct test data to International Organization for Standardization (ISO) conditions; however, such correction is not used for compliance determinations with the BACT standards. [Rule 62-204.800(8)(b), F.A.C.; 40 CFR 60, Subparts A and GG; and PSD-FL-363/1050233-018-AC, Specific Condition 2.]

G.10. Emission Standards. Emissions from each gas turbine shall not exceed the following emission standards:

Air Pollutant	Emission Standard^e	Averaging Time	Compliance Method	Basis
Carbon Monoxide (CO) ^a	99.0 tons (Emissions Cap)	12-month rolling total both units combined	CEMS	Avoid PSD
Nitrogen Oxides (NOx) ^b	9.0 ppmvd @ 15% O ₂	24-hour block, CEMS	CEMS	BACT
PM/PM ₁₀ ^c	10% opacity 2 grains S/100	6-minute block N/A	EPA Method 9	BACT

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection G. Emissions Units -01113 & -01214

	SCF of gas		Test Recordkeeping	
	2 grains S/100 SCF of gas	N/A	Recordkeeping	
Sulfur Dioxide (SO ₂) ^d	2 grains S/100 SCF of gas	N/A	Recordkeeping	BACT
VE	10% opacity	6 – minute block	EPA Method 9	

- Continuous compliance shall be demonstrated with the CO emissions cap by data collected from the required continuous emissions monitoring systems (CEMS) for both units combined.
- Continuous compliance shall be demonstrated with the 24-hour block NO_x emissions limit by data collected from the required CEMS.
- The fuel sulfur specifications combined with the efficient combustion design and operation of the gas turbine represents BACT for particulate matter (PM/PM₁₀) emissions. No stack tests are required. Compliance with the CO and visible emissions standards shall serve as indicators of good combustion. {Permitting Note: Maximum expected PM/PM₁₀ emissions from each gas turbine are approximately 18 lb/hour.}
- The fuel sulfur specifications effectively limit the potential emissions of sulfur dioxide (SO₂) from each gas turbine and represent BACT for SO₂ emissions. No stack tests are required. {Permitting Note: Maximum expected SO₂ emissions from each gas turbine are approximately 9.5 lb/hour.}
- The mass emission rate standards are based on a turbine inlet condition of 59 degrees F and the higher heating value of natural gas. Mass emission rates may be adjusted from actual test conditions in accordance with the performance curves and/or equations on file with the Department.

{Permitting Note: In combination with the annual restriction on hours of operation, the above emissions standards effectively limit annual potential emissions from both gas turbines to: 99 tons/year of CO, 267 tons/year of NO_x, 79 tons/year of PM/PM₁₀, 42 tons/year of SO₂, 5 tons/year of sulfuric acid mist (SAM), and 12 tons/year of VOC.}

[Rule 62-212.400 (BACT), F.A.C.; Rule 62-4.070(3), F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 9.]

G.11. Alternate Visible Emissions Standard. Visible emissions due to startups, shutdowns, and malfunctions shall not exceed 10% opacity except for up to ten, 6-minute averaging periods during a calendar day, which shall not exceed 20% opacity. [Rule 62-212.400 (BACT), F.A.C. and PSD-FL-363/1050233-018-AC, Specific Condition 20.]

{Permitting Note: The above condition applies only to the SIP based emissions standards specified in Specific Condition G.10.}

Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.

G.12. Allowable NO_x Data Exclusions. Provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions are minimized, NO_x continuous monitoring data collected during periods of startup, shutdown, malfunction and DLN tuning may be excluded from the 24-hr block compliance demonstrations only in accordance with the following requirements. All periods of data excluded shall be consecutive for each such episode and only data obtained during the described episodes (startup,

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shutdown, malfunction, and DLN tuning) may be excluded. As provided by the authority in Rule 62-210.700(5), F.A.C., the following conditions replace the provisions in Rule 62-210.700(1), F.A.C.

- a. **Startup:** In accordance with the procedures described in the CEMS Data Requirements of this section, no more than the first 30 minutes of CEMS data shall be excluded for each gas turbine startup. For startups of less than 30 minutes in duration, only those minutes attributable to startup shall be excluded.
- b. **Shutdown:** In accordance with the procedures described in the CEMS Data Requirements of this section, no more than the first 20 minutes of CEMS data shall be excluded for each gas turbine shutdown. For shutdowns less than 20 minutes in duration, only those minutes attributable to shutdown shall be excluded.
- c. **Malfunction:** In accordance with the procedures described in the CEMS Data Requirements of this section, no more than 120 minutes of CEMS data shall be excluded in a 24-hour period for each gas turbine due to malfunctions. Within one (1) working day of occurrence, the owner or operator shall notify the Compliance Authority of any malfunction resulting in the exclusion of CEMS data.
- d. **DLN Tuning:** CEMS data collected during initial or other DLN tuning sessions shall be excluded from the compliance demonstrations provided the tuning session is performed in accordance with the manufacturer's specifications. The permittee shall report any excess emissions in the quarterly NO_x report. ~~Prior to performing any tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least one (1) day that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail. [Design; Rule 62-4.070(3), F.A.C.; and PSD-FL-363C/1050233-018-AC, Specific Condition 21.]~~

The permittee shall notify the Compliance Authority within one working day of discovering any emissions in excess of a CEMS standard subject to the specified averaging period. All such reasonably preventable emissions shall be included in any CEMS compliance determinations. All valid emissions data (including data collected during startup, shutdown, malfunction, and DLN tuning) shall be used to report annual emissions for the Annual Operating Report and demonstration of compliance with the CO emissions cap. [Rules 62-4.070(3), 62-210.200, 62-212.400(BACT) and 62-210.700, F.A.C.; PSD-FL363C]

- G.13. Excess Emissions Allowed - Startup, Shutdown or Malfunction.** Excess emissions resulting from startup, shutdown or malfunction 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. [Rule 62-210.700(1), F.A.C.]
- G.14. Best Operational Practices to Minimize Excess Emissions.** The permittee shall follow the best operational practices to minimize excess emissions during startup and shutdown as described in **Appendix BOP, Best Operational Practices for Start up and Shutdown.** [Rule 62-210.700(2) and 62-213.440(1) (Operational Requirements that Assure Compliance), F.A.C. and Proposed by the Applicant in the Renewal Application.]
- G.15. 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. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.; and, PSD-FL-363/1050233-018-AC, Specific Condition 19.]

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Subsection G. Emissions Units -0413 & -0414

Continuous Emissions Monitoring Systems (CEMS)

{Permitting Note: The following continuous monitors are installed on these units: NO_x, CO and CO₂}

- G.16. CEMS.** The permittee shall calibrate, maintain, and operate CEMS to measure and record the emissions of CO and NO_x from each gas turbine in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section.
- a. *CO Monitor:* Each CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The annual and required RATA tests shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.
 - b. *NO_x Monitor:* Each NO_x monitor shall be certified pursuant to the specifications of 40 CFR 75. Quality assurance procedures shall conform to the requirements of 40 CFR 75. The annual and required RATA tests required for the NO_x monitor shall be performed using EPA Method 20 or 7E in Appendix A of 40 CFR 60.
 - c. *Diluent Monitor:* The oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas shall be monitored at the location where CO and NO_x are monitored to correct the measured emissions rates to 15% oxygen. If a CO₂ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

[Rules 62-4.070(3), 62-210.800, 62-212.400 (BACT) and 62-297.520, F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 22.]

- G.17. CEMS Data Requirements.** The CEMS shall be calibrated, maintained, and operated in the gas turbine stacks to measure and record the emissions of CO, and NO_x in a manner sufficient to demonstrate compliance with the CEMS-based emission limits of this section. The CEMS shall express the results in units of ppmvd corrected to 15% oxygen. Upon request by the Department, the CEMS emission rates shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332.
- a. *Valid Hourly Averages for Compliance:* Each CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour (except for the allowable NO_x data exclusions), shall be used to calculate a 1-hour block average that begins at the top of each hour. Each 1-hour block average shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, a 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). If less than two such data points are available, there is insufficient data and the 1-hour block average is not valid. Also, if an allowable exclusion episode should occur over two separate hourly averages, only those minutes attributed to the specific episode shall be excluded from each hour. {Permitting Note: For example, a 20-minute startup begins at 2:50 p.m. and ends at 3:10 pm. This means that 10 minutes of startup data would be excluded from the first hourly average and 10 minutes would be excluded from the second hourly average. The first hourly average (2:00 – 3:00 p.m.) is not a valid hourly average because there is insufficient data. The second hourly average (3:00 – 4:00 p.m.) is a valid hourly average consisting of 50 minutes of monitoring data.}
 - b. *24-hour Block Averages:* A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive valid hourly average concentration values. If a unit operates less than 24 hours during the block, or there are less than 24 valid hourly averages available, the 24-hour block average shall be the average of all available valid hourly average concentration values for the 24-hour block. {Permitting Note: For purposes of determining compliance with the 24-hour CEMS standards, the

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missing data substitution methodology of 40 CFR Part 75, Subpart D, shall not be utilized. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block and periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance reports. For example, the "24-hr block average" may consist of only 6 valid operating hours for the day.}

- c. *12-Month Rolling Total:* By the end of each month, each CEMS shall determine a 12-month rolling total of CO emissions from each gas turbine and the combined total. The 12-month rolling total shall be based on all valid CO CEMS data collected, including startups, shutdowns, and malfunctions.
- d. *Data Exclusion:* Except for monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each CEMS shall monitor and record emissions during all operations including episodes of startups, shutdowns, malfunctions, and ~~DLN~~ tuning. Limited amounts of NOx CEMS emissions data recorded during some of these episodes may be excluded from the corresponding compliance demonstration subject to the provisions of Condition No. G.21 in this section. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable.
- e. *Monitor Availability.* Monitor availability for each CEMS used to demonstrate compliance shall be 95% or greater in any calendar quarter. Monitor availability shall be calculated consistent with 40 CFR §60.334 and reported in the State Implementation Plan (SIP) and NSPS excess emissions reports required in Condition G.29. In the event that 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit, except as otherwise authorized by the Compliance Authority.

[Rules 62-4.070(3) and 62-212.400 (BACT), F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 23.]

- G.18. **CEMS - CO and NOx.** Continuous compliance with the NOx and CO emissions standards shall be demonstrated with data collected from the required continuous emissions monitoring systems (CEMS). [Rules 62-297.310(7)(a) and (b), F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 15.]

Test Methods and Procedures

- G.19. **Test Methods.** Required tests shall be performed in accordance with the following reference method(s):

Method(s)	Description of Method(s) and Comment(s)
EPA Methods 1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
EPA Methods 6, 6A, 6B or 6C	Methods for Determining SO ₂ Emissions
EPA Method 7, 7A, 7C, 7D or 7E	Determination of NOx Emissions
EPA Method 9	Visual Determination of the Opacity of Emissions (VE)
EPA Method 10	Determination of CO Emissions
EPA Method 20	Determination of NOx, SO ₂ and Diluent Emissions from Stationary Gas Turbines

The above methods are 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.]

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- G.20. Annual Compliance Test.** Unless otherwise specified by this permit, during each federal fiscal year (October 1st to September 30th), Emissions Unit ID Nos. -~~0113~~ and -~~0124~~ shall be tested to demonstrate compliance with the emission limitations and standards for VE and NOx. The NOx RATA test data may be used to demonstrate compliance with the annual test requirement, provided the testing requirements (notification, procedures and reporting) of Chapter 62-297, F.A.C. are met. For each VE test, emissions of CO and NOx recorded by the CEMS shall also be reported. [Rule 62-297.310(7), F.A.C.; and, PSD-FL-363/1050233-018-AC, Specific Condition 14.]
- G.21. Compliance Test Prior To Renewal.** Prior to permit renewal, Emissions Unit ID Nos. -011 and -012 shall be tested to demonstrate compliance with the emission limitations and standards for VE, CO and NOx. The CO and NOx RATA test data may be used to demonstrate compliance with the renewal test requirement, provided the testing requirements (notification, procedures and reporting) of Chapter 62-297, F.A.C. are met. [Rule 62-297.310(7)(a)3., F.A.C.; and, PSD-FL-263.]
- G.22. Common Testing Requirements.** Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]
- G.23. Special Compliance Tests.** The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the DLN combustors, etc. [Rule 62-297.310(7)(b), F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 16.]

Recordkeeping and Reporting Requirements

See Appendix RR, Facility-wide Reporting Requirements, for additional reporting requirements.

- G.24. Reporting Schedule.** The following report shall be submitted to the Compliance Authority:

Report	Reporting Deadline(s)	Related Condition(s)
NSPS Excess Emissions and Monitoring System Performance	Every 6 months (semi-annual), except when more frequent reporting is specifically required	G.25. & G.30.

[40 CFR 60, Subpart A.]

- G.25. Excess Emissions Reporting.**
- a. *Malfunction Notification:* If NOx data will be excluded due to a malfunction, the permittee shall notify the Compliance Authority within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Compliance Authority may request a written summary report of the incident.
 - b. *SIP Excess Emissions Report:* Within 30 days following the end of each calendar quarter, the permittee shall submit a report to the Compliance Authority of the following for each gas turbine: a summary of the 24-hour NOx compliance periods for the quarter; a summary of NOx data excluded due to malfunctions for the quarter; a summary of the 12-month rolling CO emissions totals for the quarter; a summary of any RATA tests performed during the quarter; and a summary of the CEMS systems monitor availability for the quarter.
 - (1) If four consecutive quarterly reports demonstrate compliance with the CEMS-based emissions standards, the reporting frequency may be reduced to semiannual reporting. As part of the fourth consecutive satisfactory quarterly report, the permittee shall provide written notification of its intent to reduce the reporting frequency to a semiannual basis. The notification shall include a statement that the units were in full compliance during the four consecutive quarters and that reporting will be reduced to a semiannual basis. Semiannual reports shall include above information required for each

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quarter in the semiannual period. The permittee shall continue to comply with all other record keeping and monitoring provisions.

- (2) If reports are being submitted on a semiannual basis and a unit is not in compliance with the CEMS-based emissions standards, the permittee shall immediately (within one day of detection) notify the Compliance Authority of the compliance status and reestablish quarterly reporting beginning with the current quarter. If compliance is reestablished for four consecutive quarters, semiannual reporting may resume as specified above.

- c. *NSPS Excess Emissions Reports:* Within thirty (30) days following each calendar semiannual period, the permittee shall submit a report including any applicable periods of excess emissions and monitoring systems performance as defined in 40 CFR Part 60, Subpart GG that occurred during the previous semiannual period to the Compliance Authority. *{Permitting Note: If there are no periods of excess emissions as defined in 40 CFR Part 60 Subpart GG, a statement to that effect may be submitted with the SIP Quarterly Report to suffice for the NSPS Semi-Annual Report.}*

[Rules 62-4.070(3), 62-4.130, 62-204.800, 62-210.700(6) and 62-212.400 (BACT), F.A.C.; 40 CFR 60.7 and 60.334; and PSD-FL-363/1050233-018-AC, Specific Condition 29.]

- G.26. Monitoring and Recordkeeping of Capacity.** The permittee shall monitor and record the operating rate of the gas turbine on a daily average basis, considering the number of hours of operation during each day (including the times of startup, shutdown, malfunction, and ~~DE~~-tuning). This shall be achieved through monitoring daily rates of consumption and heat content of each allowable fuel in accordance with the provisions of 40 CFR 75 Appendix D, and recording the data using a monitoring component of the CEMS system required above. [Rules 62-4.070(3) and 62-212.400 (BACT), F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 24.]

- G.27. Monthly Operations Summary Recordkeeping.** By the fifth calendar day of each month, the permittee shall record the following for each fuel in a written or electronic log for the gas turbine for the previous month of operation: hours of operation for the month and for the rolling 12-month total. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-212.400 (BACT), F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 25.]

- G.28. Fuel Sulfur Records.** Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D4468-85, D5504-01, D6228-98 and D6667-01, D3246-81 or more recent versions. These methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75 Appendix D. Sulfur content monitoring with respect to 40 CFR 60, Subpart GG is not required for gaseous fuels that meet the 40 CFR 60.331(u) definition of "natural gas" in accordance with the procedures specified in 40 CFR 60.334(h)(3). [40 CFR 60.334(h)(3); Rules 62-4.070(3), 62-212.400(BACT), F.A.C.; and, PSD-FL-363/1050233-018-AC, Specific Condition 26.]

- G.29. CEMS RATA Reports.** At least 15 days prior to conducting any Relative Accuracy Test Assessments (RATA) on a CEMS, the permittee shall notify the Compliance Authority of the schedule (letter, email, fax, or phone call). A summary of the RATA reports shall be provided upon written request of the Compliance Authority and in the SIP Excess Emissions Report. [Rules 62-4.070(3) and 62-212.400 (BACT), F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 28.]

NSPS 40 CFR 60 Requirements

- G.30. NSPS Requirements - Subpart A.** This emissions unit shall comply with all applicable requirements of 40 CFR 60, Subpart A, General Provisions, including:

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- 40 CFR 60.7, Notification and Recordkeeping
- 40 CFR 60.8, Performance Tests
- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements,

which have been adopted by reference in Rule 62-204.800(8)(d), F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 60.4, 40 CFR 60.8(b)(2) and (3), 40 CFR 60.11(e)(7) and (8), 40 CFR 60.13(g), (i) and (j)(2), and 40 CFR 60.16. These emissions units shall comply with Appendix 40 CFR 60 Subpart A included with this permit. [Rule 62-204.800(8)(d), F.A.C.]

G.31. NSPS Requirements - Subpart GG. Except as otherwise provided in this permit, the combustion turbine shall comply with all applicable provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(8)(b), F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 60.334(b)(2) and 40 CFR 60.335(f)(1). The Subpart GG requirement to correct test data to ISO conditions applies, but such correction is not required to demonstrate compliance with the non-NSPS permit standard(s). These emissions units shall comply with **Appendix 40 CFR 60 Subpart GG** attached to this permit. [Rule 62-204.800(8)(b)39., F.A.C.]

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**Subsection H. Common Conditions
Emissions Units -001, -004, -005 & -006**

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

E.U. ID No.	Brief Description
-001	260 MW Combined Cycle Gas Turbine No. 1
-004	Sulfuric Acid Plant
-005	Solid Fuel Handling System
-006	Solid Fuel Gasification System

H.1. Source Obligation - Petcoke Increase Project.

- 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.; and, PSD-FL-194I Permit No. 1050233-021-AC/PSD-FL-194H, specific condition 2-4.]

H.2. PSD Applicability Monitoring and Reporting Requirements - Petcoke Increase Project.

- a. The permittee shall monitor the emissions of SO₂ and SAM; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, beginning with the first full calendar year following the year in which the change occurred (the petcoke blend ratio was increased to 85% in the Fall of 2008, therefore, the 5-year period is effective for calendar year (CY) 2009 emissions through CY 2013 emissions). Emissions shall be computed in accordance with Rule 62-210.370, F.A.C.
- b. The permittee shall report to the Department within 60 days after the end of each year during which records must be generated under subparagraph 62-212.300(1)(e)1., F.A.C., setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:
 1. The name, address and telephone number of the owner or operator of the major stationary source;
 2. The annual emissions as calculated pursuant to subparagraph 62-212.300(1)(e)1., F.A.C.;
 3. If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and,
 4. Any other information that the owner or operator wishes to include in the report.
- c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1. and 2., F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

[Rule 62-212.300(1)(e), F.A.C.; and, PSD-FL-194I Permit No. 1050233-021-AC/PSD-FL-194H, specific condition 3-12.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

**Subsection H. Common Conditions
Emissions Units -001, -004, -005 & -006**

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

E.U. ID No.	Brief Description
-001	260 MW Combined Cycle Gas Turbine No. 1
-004	Sulfuric Acid Plant
-005	Solid Fuel Handling System
-006	Solid Fuel Gasification System

H.1. Source Obligation - Petcoke Increase Project.

- 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.; and, PSD-FL-194 Permit No. 1050233-021-AC/PSD-FL-194H, specific condition 2.4.]

H.2. PSD Applicability Monitoring and Reporting Requirements - Petcoke Increase Project

- a. The permittee shall monitor the emissions of SO₂ and SAM; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, beginning with the first full calendar year following the year in which the change occurred (the petcoke blend ratio was increased to 85% in the Fall of 2008; therefore, the 5-year period is effective for calendar year (CY) 2009 emissions through CY 2013 emissions). Emissions shall be computed in accordance with Rule 62-210.370, F.A.C.
- b. The permittee shall report to the Department within 60 days after the end of each year during which records must be generated under subparagraph 62-212.300(1)(e)1., F.A.C., setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:
 - 1. The name, address and telephone number of the owner or operator of the major stationary source;
 - 2. The annual emissions as calculated pursuant to subparagraph 62-212.300(1)(e)1., F.A.C.;
 - 3. If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and,
 - 4. Any other information that the owner or operator wishes to include in the report.
- c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1. and 2., F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

[Rule 62-212.300(1)(e), F.A.C.; and, PSD-FL-194 Permit No. 1050233-021-AC/PSD-FL-194H, specific condition 3.12.]

Table 1, Summary of Air Pollutant Standards and Terms

Tampa Electric Company						Final Permit No. 1050233-028-AV			
Polk Power Station						Facility ID No. 1050233			
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.									
E.U. ID No.	Brief Description								
[-001]	260 MW Combined Cycle Combustion Turbine No. 1								
Pollutant Name or Parameter	Fuel(s)	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citation(s)	See permit condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
2 YEAR DEMONSTRATION PERIOD (This period has passed and is kept for reference only.)									
NO _x	Oil	10% Capacity	42 to 48 ppmvd	311	N/A			PSD-FL-194	
NO _x	Syngas	8,760		664.2	2,908.3			PSD-FL-194	
VOC	Oil	10% Capacity		32	N/A			PSD-FL-194	
VOC	Syngas	8,760		3	38.5			PSD-FL-194	
CO	Oil	10% Capacity		99	N/A			PSD-FL-194	
CO	Syngas	8,760		98	430.1			PSD-FL-194	
PM / PM ₁₀	Oil	10% Capacity		17	N/A			PSD-FL-194	
PM / PM ₁₀	Syngas	8,760		17	74.5			PSD-FL-194	
Pb	Oil	10% Capacity		0.101	N/A			PSD-FL-194	
Pb	Syngas	8,760		0.023	0.13			PSD-FL-194	
SO ₂	Oil	10% Capacity		92.2	N/A			PSD-FL-194	
SO ₂	Syngas	8,760		518	2269			PSD-FL-194	
Sulfuric Acid Mist	Syngas	8,760		55	241			PSD-FL-194	
Inorganic Arsenic	Syngas	8,760		0.08	0.35			PSD-FL-194	
Beryllium	Syngas	8,760		0.0001	0.0029			PSD-FL-194	
Mercury	Syngas	8,760		0.025	0.11			PSD-FL-194	
POST DEMONSTRATION PERIOD									
NO _x	Oil	10% Capacity	42 to 48 ppmvd	311	N/A			PSD-FL-194J	III.A.4.
NO _x	Gas	10% Capacity	25 ppmvd	185.0	N/A			PSD-FL-194J	III.A.4.
NO _x	Syngas/Gas Augmentation	8,760	15 ppmvd	132	620			PSD-FL-194J	III.A.4.
VOC	Oil	10% Capacity	0.028 lb/MMBtu	32	N/A	Obsolete		PSD-FL-194J	
VOC	Syngas/Gas/Gas Augmentation	8,760	0.0017 lb/MMBtu	3				PSD-FL-194J	III.A.4.
CO	Oil	10% Capacity	40 ppmvd	99	N/A			PSD-FL-194J	III.A.4.
CO	Syngas/Gas/Gas Augmentation	8,760	25 ppmvd	98	430.1			PSD-FL-194J	III.A.4.
PM/PM ₁₀	Oil	10% Capacity	0.009 lb/MMBtu	17	N/A			PSD-FL-194J	III.A.4.
PM/PM ₁₀	Syngas/Gas/Gas Augmentation	8,760	0.013 lb/MMBtu	17	74.5			PSD-FL-194J	III.A.4.
Pb	Oil	10% Capacity	5.30E-5 lb/MMBtu	0.101	N/A	Obsolete		PSD-FL-194J	
Pb	Syngas	8,760	2.41E-6 lb / MMBtu	0.0035	0.067	Obsolete		PSD-FL-194J	
SO ₂	Oil	10% Capacity	0.048 lb/MMBtu	92.2	N/A			PSD-FL-194J	III.A.4.
SO ₂	Oil	10% Capacity	0.05% sulfur by weight					PSD-FL-194J	III.A.5
SO ₂	Syngas/Gas/Gas Augmentation	8,760	0.17 lb/MMBtu	357	1,563.7			PSD-FL-194J	III.A.4.
Sulfuric Acid Mist	Syngas	8,760		55	241			PSD-FL-194J	III.A.4.
Inorganic Arsenic	Syngas	8,760		0.0006	0.019	Obsolete		PSD-FL-194J	
Beryllium	Syngas	8,760		0.0001	0.0029	Obsolete		PSD-FL-194J	
Mercury	Syngas	8,760		0.0034	0.017	Obsolete		PSD-FL-194J	
VE	Oil	10% Capacity	20 % opacity					PSD-FL-194J	III.A.6.
VE	Syngas/Gas/Gas Augmentation	8,760	10% opacity					PSD-FL-194J	III.A.6.

Table 1, Summary of Air Pollutant Standards and Terms									
Tampa Electric Company					Final Permit No. 1050233-028-AV				
Polk Power Station					Facility ID No. 1050233				
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.									
E.U. ID No.	Brief Description								
[-003]	120 Million Btu per Hour Auxiliary Boiler								
Pollutant Name or Parameter	Fuel(s)	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citation(s)	See permit condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
VE	Oil	8,760	20% except 27% one six-min. / hr					40CFR60.43b(f), PSD-FL-194J, & F.A.C. 62-296.406(1)	III.B.5.
PM	Oil	8,760	0.10 lb / MMBtu			12.0	21.3**	40CFR60.43b(b)	III.B.6.
SO ₂	Oil	8,760	0.80 lb / MMBtu (no longer applies)			Obsolete		Per §40 CFR 60.41b	
SO ₂	Oil	8,760	0.05% sulfur by weight			6.8	12.1	PSD-FL-194J & F.A.C. 62-296.406(3)	III.B.7.
SO ₂	Gas	8,760	2 gr/100 SCF					PSD-FL-194J, F.A.C. 62-296.406(3), & NSPS Subpart Db	III.B.7.
NO _x	Oil/Gas	8,760	0.10 lb / MMBtu			12.0	21.3**	40CFR60.44b(a) & PSD-FL-194J	III.B.8.
Notes:									
* The "Equivalent Emissions" listed are for informational purposes only.									
** Based on 3,000 hrs. at capacity and 5,760 hrs. at less than capacity (capacity is defined as 90-100% of maximum operation rate)									

Table 1, Summary of Air Pollutant Standards and Terms									
Tampa Electric Company Polk Power Station							Final Permit No. 1050233-028-AV Facility ID No. 1050233		
E.U. ID No.	Brief Description								
[-004]	Sulfuric Acid Plant								
Pollutant Name or Parameter	Fuel(s)	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citation(s)	See permit condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
VE	Propane/Gas	8,760	10% opacity -					Rule 62-296.402(2)(a), F.A.C	III.C.5.
SO ₂	Propane/Gas	8,760	4 lb / ton 100% acid			49.8	218.3	Rule 62-296.402(2)(b), F.A.C	III.C.6.
SAM	Propane/Gas	8,760	0.15 lb / ton 100% acid			1.87	8.2	Rule 62-296.402(2)(c), F.A.C	III.C.7.
Notes:									
* The "Equivalent Emissions" listed are for informational purposes only.									

Table 1, Summary of Air Pollutant Standards and Terms									
Tampa Electric Company Polk Power Station							Final Permit No. 1050233-028-AV Facility ID No. 1050233		
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.									
E.U. ID No.	Brief Description								
[-005]	Solid Fuel Handling System								
Pollutant Name or Parameter	Fuel(s)	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citation(s)	See permit condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
VE		8,760	5% opacity					PSD-FL-194J	III.D.3.
Notes:									
* The "Equivalent Emissions" listed are for informational purposes only.									

Table 1, Summary of Air Pollutant Standards and Terms									
Tampa Electric Company Polk Power Station						Final Permit No. 1050233-028-AV Facility ID No. 1050233			
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.									
E.U. ID No.	Brief Description								
[-006]	Solid Fuel Gasification System								
Pollutant Name		Allowable Emissions				Equivalent Emissions*			
or Parameter	Fuel(s)	Hours/Year	Standard(s)	lbs./hour	TPY	lbs./hour	TPY	Regulatory Citation(s)	See permit condition(s)
		8,760	2.325 tons / day coal (no longer a limit)					PSD-FL-194J	III.E.2.
VE (flare)			<20%					Rule 62-296.320(4)(b)1., F.A.C	III.E.4.
SO ₂			4.7% sulfur by weight			NA	NA	PSD-FL-194J, 62-4.160(2), & 62-210.100 F.A.C.	III.E.5.
Notes:									
* The "Equivalent Emissions" listed are for informational purposes only.									

Table 1, Summary of Air Pollutant Standards and Terms

Tampa Electric Company					Final Permit No. 1050233-028-AV				
Polk Power Station					Facility ID No. 1050233				
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.									
E.U. ID No.	Brief Description								
[-009]	165 MW Simple Cycle Combustion Turbine No. 2								
[-010]	165 MW Simple Cycle Combustion Turbine No. 3								
The following apply to each individual emissions unit listed above.									
Pollutant Name or Parameter	Fuel(s)	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citation(s)	See permit condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
NO _x	Nat. Gas	4,380	10.5 ppmvd 24-hr avg.					PSD-FL-263B	III.F.6.
NO _x	Oil	750	42 ppmvd 3-hr avg.	319			119.6	PSD-FL-263B	III.F.7.
SO ₂	Nat. Gas	4,380	2 gr/100 scf	9.2			20.1	PSD-FL-263B	III.F.8.
SO ₂	Oil	750	0.05% sulfur by weight	98.1			36.8	PSD-FL-263B	III.F.8.
VE	All	4,380	10% opacity					PSD-FL-263B	III.F.9.
VOC	Nat. Gas	4,380	1.4 ppmvw	2.8			6.1	PSD-FL-263B	III.F.10.
VOC	Oil	750	3.5 ppmvw	7			2.6	PSD-FL-263B	III.F.10.
CO	Nat. Gas	4,380	12 ppmvd	38			83.2	PSD-FL-263B	III.F.11.
CO	Oil	750	20 ppmvd	65			24.4	PSD-FL-263B	III.F.11.
Notes:									
* The "Equivalent Emissions" listed are for informational purposes only.									

Table 1, Summary of Air Pollutant Standards and Terms									
Tampa Electric Company Polk Power Station						Final Permit No. 1050233-028-AV Facility ID No. 1050233			
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.									
E.U. ID No.	Brief Description								
[-013]	165 MW Simple Cycle Combustion Turbine No. 4								
[-014]	165 MW Simple Cycle Combustion Turbine No. 5								
Unless otherwise indicated, the following apply to each individual emissions unit listed above.									
Pollutant Name or Parameter	Fuel(s)	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citations	See permit condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
-013 & -014 CO combined	Natural Gas	4,380			99.0	45.2		PSD-FL-363	III.G.10.
NO _x	Natural Gas	4,380	9.0 ppmvd @ 15% O ₂ 24-hr block			60.9	133.4	PSD-FL-363	III.G.10.
PM/PM ₁₀	Natural Gas	4,380	2 grains S/100 SCF gas			18.0	39.4	PSD-FL-363	III.G.10.
VE	Natural Gas	4,380	10% opacity, except 20% for up to 10-6-min. avgs./day					PSD-FL-363	III.G.10. & G.11.
SO ₂	Natural Gas	4,380	2 grains S/100 SCF gas			10.2	22.3	PSD-FL-363	III.G.10.
Notes:									
* The "Equivalent Emissions" listed are for informational purposes only.									

Table 2, Summary of Compliance Requirements

Tampa Electric Company							Final Permit No. 1050233-028-AV	
Polk Power Station							Facility ID No. 1050233	
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.								
E.U. ID No.	Brief Description							
[-001]	260 MW Combined Cycle Combustion Turbine No. 1							
			Testing	Frequency	Min. Compliance			
Pollutant Name		Compliance	Time	Base	Test			
or Parameter	Fuel(s)	Method	Frequency	Date *	Duration	CMS**	See permit condition(s)	
NO _x	All	EPA Method 7, 7A, 7C, 7D or 7E	Annual		1-hour	Yes	III.A.11. to 18.	
VOC	All	EPA Method 18	Initial		1-hour		III.A.11. to 18.	
CO	All	EPA Method 10	Annual		1-hour		III.A.11. to 18.	
PM/PM ₁₀	Oil	EPA Methods 5, 5B or 17	Renewal		1-hour		III.A.11. to 18.	
SO ₂	All	EPA Methods 6, 6A, 6B or 6C	Annual		1-hour	Yes	III.A.11. to 18.	
VE	All	EPA Method 9	Annual		30-minutes		III.A.11. to 18.	
Sulfuric Acid Mist	Syngas	EPA Method 8, 8A, 8B, or 320	Semi-annual for 5 years/ Annual Thereafter		1-hour		III.A.11. to 18.	
Pb	All		Initial Only		Obsolete		III.A.18.	
Inorganic Arsenic	Syngas		Initial Only		Obsolete		III.A.18.	
Beryllium	Syngas		Initial Only		Obsolete		III.A.18.	
Mercury	Syngas		Initial Only		Obsolete		III.A.18.	
Notes:								
* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.								
**CMS [=] continuous monitoring system								

Table 2, Summary of Compliance Requirements							
Tampa Electric Company Polk Power Station						Final Permit No. 1050233-028-AV Facility ID No. 1050233	
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.							
E.U. ID No.	Brief Description						
[-003]	120 Million Btu per Hour Auxiliary Boiler						
Pollutant Name or Parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS**	See permit condition(s)
VE	Oil	EPA Method 9	Annual		30-minutes	Yes	III.B.15. 20.
PM	Oil	EPA Method 5, 5B or 17	Renewal		120-minutes		III.B.15. 20.
SO ₂	Oil	ASTM D2880-71, or latest edition	Composite Sample/vendor certification				III.B.14.
NO _x	Oil/Gas	EPA Method 7, 7A, 7C, 7D, or 7E	Renewal		1-hour	Yes	III.B.15. 20.
Notes:							
* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.							
**CMS [=] continuous monitoring system							

Table 2, Summary of Compliance Requirements

Tampa Electric Company						Final Permit No. 1050233-0286-AV	
Polk Power Station						Facility ID No. 1050233	
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.							
E.U. ID No.	Brief Description						
[-004]	Sulfuric Acid Plant						
			Testing Time	Frequency Base	Min. Compliance Test		
Pollutant Name or Parameter	Fuel(s)	Compliance Method	Frequency	Date *	Duration	CMS**	See permit condition(s)
VE	Propane/Gas	DEP Method 9	Annual		30-minutes		III.C.12.
SO ₂	Propane/Gas	EPA Method 6C	Annual		1-hour		III.C.12.
SAM	Propane/Gas	EPA Method 8, 8A, 8B, or 320	Renewal		1-hour		III.C.12.
Notes:							
* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.							
**CMS [=] continuous monitoring system							

Table 2, Summary of Compliance Requirements

Tampa Electric Company							Final Permit No. 1050233-028-AV	
Polk Power Station							Facility ID No. 1050233	
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.								
E.U. ID No.	Brief Description							
[-005]	Solid Fuel Handling System							
			Testing	Frequency	Min. Compliance			
Pollutant Name		Compliance	Time	Base	Test			
or Parameter	Fuel(s)	Method	Frequency	Date *	Duration	CMS**	See permit condition(s)	
VE		EPA Method 9	Annual		30-minutes		III.D.6.	
Notes:								
* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.								
**CMS [=] continuous monitoring system								

Table 2, Summary of Compliance Requirements						
Tampa Electric Company Polk Power Station					Final Permit No. 1050233-028-AV Facility ID No. 1050233	
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.						
E.U. ID No.	Brief Description					
[-006]	Solid Fuel Gasification System					
Pollutant Name or Parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS**
Coal input		Recordkeeping (no longer a requirement)	Daily			III.E.2.
VE (flare)		EPA Method 9	if > 400 hours/year		30 minutes	III.E.11. & 12.
SO ₂						III.E.9.
Notes:						
* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.						
**CMS [=] continuous monitoring system						

Table 2, Summary of Compliance Requirements							
Tampa Electric Company				Final Permit No. 1050233-028-AV			
Polk Power Station				Facility ID No. 1050233			
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.							
E.U. ID No.	Brief Description						
[-009]	165 MW Simple Cycle Combustion Turbine No. 2						
[-010]	165 MW Simple Cycle Combustion Turbine No. 3						
Pollutant Name or Parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS**	See permit condition(s)
NO _x	All	EPA Method 20	Annual		1-hour	Yes	III.F.22. to 30.
SO ₂ % Sulfur	All	Fuel Sampling & Analysis - ASTM Methods	Daily / Transfer				III.F.22. to 30.
SO ₂	All	EPA Method 20	Annual		1-hour		III.F.22. to 30.
VE	All	EPA Method 9	Annual		30-minutes		III.F.22. to 30.
VOC	All	EPA Method 18, 25 and/or 25A	Initial only		1-hour		III.F.22. to 30.
CO	All	EPA Method 10	Annual		1-hour		III.F.22. to 30.
Notes:							
* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.							
**CMS [=] continuous monitoring system							

Table 2, Summary of Compliance Requirements							
Tampa Electric Company Polk Power Station				Final Permit No. 1050233-0286-AV Facility ID No. 1050233			
This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.							
E.U. ID No.	Brief Description						
[-013]	165 MW Simple Cycle Combustion Turbine No. 4						
[-014]	165 MW Simple Cycle Combustion Turbine No. 5						
Pollutant Name or Parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS**	See permit condition(s)
CO	Natural Gas	CEMS	Renewal			Yes	III.G.18.to 23.
NO _x	Natural Gas	CEMS	Annual			Yes	III.G.18.to 23.
PM/PM ₁₀	Natural Gas	VE serves as surrogate					III.G.18.to 23.
VE	Natural Gas	Method 9	Annual		1 hour		III.G.18.to 23.
SO ₂	Natural Gas	Fuel Sampling & Analysis - ASTM Methods					III.G.18.to 23.
Notes:							
* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.							
**CMS [=] continuous monitoring system							