Title V Air Operation Permit Revision
Permit No. 1050233-036-AV

APPLICANT

The applicant for this project is Tampa Electric Company (TEC). The applicant's responsible official and mailing address are: Karen Sheffield, Director Polk Power Station, TEC, Polk Power Station, Post Office Box 111, Tampa, Florida 33601-0111.

FACILITY DESCRIPTION

The regulated emissions units (EU) at the existing solid Polk Power Station (PPS) include a 260 megawatt (MW) combined cycle combustion turbine (CCCT, EU 001) which fires syngas or natural gas; an auxiliary boiler (EU 003) which fires natural gas; a sulfuric acid plant (SAP, EU 004); a solid fuel handling system (EU 005); and a solid fuel gasification system (EU 006). The SAP and solid fuel gasification system have burners that are fired with natural gas. These emission units comprise Unit 1 at the facility. In addition, the facility has: two nominal 165 MW simple cycle gas turbines (EU 009 and 010) firing either natural gas or No. 2 fuel oil which comprise Units 2 and 3; and two nominal 165 MW simple cycle gas turbines (EU 013 and 014) firing only natural gas which comprise Units 4 and 5. Finally, as described in the **Project Description** below, previously unregulated emission units consisting of emergency generators and fire pumps have now become a regulated emission unit (EU 007).

PROJECT DESCRIPTION

This project involves a Title V air operation permit revision that incorporates the changes made concurrently in air construction permit No. 1050233-035-AC (PSD-FL-194K) for IGCC Unit 1 to remove the annual visible emissions (VE) testing requirement for the solid fuel handling system (EU 005). See the Technical Evaluation and Preliminary Determination accompanying the concurrent air construction permit for details of this change. In addition, the Title V permit revision incorporates the existing emergency generators and fire pumps at the PPS consisting of reciprocating internal combustion engines (RICE) as a regulated emission unit. In previous Title V air operation permits, these pieces of equipment were considered an unregulated emission unit. However as a result of recent changes to federal regulations, they can no longer be unregulated. Finally, language in the Title V permit was changed to reflect the fact that No. 2 fuel oil and propane are no longer used in any emission unit comprising Unit 1. Natural gas has replaced the fuel oil and propane.

These documents along with all other associated documents in the issued draft/proposed permit package can be accessed by entering file number in the permit number field at the web link given below.

http://www.dep.state.fl.us/air/emission/apds/default.asp

PROCESSING SCHEDULE

07/12/2013: Received an application for a concurrent air construction permit and Title V air permit revision to remove the annual VE testing requirement for the solid fuel handling system (EU 005).

08/20/2013: Issued draft Air Construction Permit and draft/proposed Title V Air Permit revisions.

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is **not** a major source of hazardous air pollutants (HAP).

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

Title V: The facility is a Title V or "major source" of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C).

PSD: The facility is a PSD-major facility pursuant to Rule 62-212, F.A.C.

New Source Performance Standards (NSPS): EU 003 is subject to 40 Code of Federal Regulations (CFR) 60, subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. EU 005

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is subject to 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants. EU 001, 009, 010, 013 and 014 are subject to 40 CFR 60, subpart GG (Standards of Performance for Stationary Gas Turbines).

NESHAP: The combustion turbines are not subject to 40 CFR 63, subpart YYYY (National Emissions Standard for Hazardous Air Pollutants for Stationary Combustion Gas Turbines) because the facility is not a major source of HAP. The emergency equipment is subject to 40 CFR 63, subpart ZZZZ (National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) because the facility is an area source of HAP.

CAIR: The facility is subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

Siting: This plant is subject to certain requirements of Chapter 403, Part II, Florida Statutes, Electric Power Plant and Transmission Line Siting, including a modification of the conditions Site Certification PA92-32.

CAM: Water injection for nitrogen oxides (NO_X) control is the only add on pollution control device used at the facility; however, the units are not subject to compliance assurance monitoring (CAM) provisions because continuous emissions monitors (CEMS) are used to demonstrate compliance with the applicable standards for nitrogen oxides (NO_X) for EU 001, 009, 010, 011 and 012, therefore a CAM plan is not required.

PROJECT REVIEW

The annual VE testing requirement for the solid fuel handling system (EU 005) was removed because facility wide conditions to control fugitive dust and best management practices to minimize particulate matter emissions are sufficient to provide reasonable assurance the VE will be minimized from the emission unit.

Due to changes in federal NSPS and NESHAP requirements, a new regulated emission unit was added to the permit for the existing emergency equipment consisting of RICE engines (emergency generators and fire pumps). To accomplish this, the **subsections III.F to III.G** were moved and a new **subsection III.F** added to incorporate the emergency equipment. The pervious **subsections III.F** (EU 009 and EU 010) and **III.G** (EU 013 and EU 014) were moved to **subsections III-G and III.H**, respectively. The previous common condition **subsection III.H** was changed to **III.I**.

As a result of a previous project (Permit No. 1050233-028-AC, PSD-FL-194J), the backup, augmentation and startup fuel for the CCCT (EU 001) of Unit 1 was changed from No. 2 fuel oil to natural gas while the fuel used in the auxiliary boiler (EU 003) was also changed from No. 2 fuel oil to natural gas. Finally, the fuel used in the burners associated with the SAP (EU 004) and the solid fuel gasification system (EU 006) was changed from propane to natural gas. This project has been completed. Consequently, the language in the Title V permit was modified to reflect this change in fuels. Finally an appendix was added to the permit containing 40 CFR 63, Subpart ZZZZ - National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines which is applicable to the emergency equipment.

Changes to the permit made as part of this revision are shown in ~~strike through~~ format for deletions and in double underline format for additions. For ease of identification, all changes have also been highlighted in yellow within the permit document.

1. Section-I – Facility Information, Descriptive Language Change, Page I-1

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 natural gas (used for startup, backup and augmentation) ~~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 13~~2~~3 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 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

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consumed by the oxygen plant and process auxiliary equipment which is the difference between net and gross power production. ~~Currently~~ T~~t~~he startup fuel for the SAP and solid fuel gasifier is natural gas ~~propane~~. Natural gas ~~No. 2 fuel oil~~ is used as the startup, 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.~~

2. Section II – Facility Wide Condition, Change of Specific Condition FW.5, pages II-1 and II-2

~~**FW5.** Unconfined 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. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include: enclosing all solid fuel storage, conveyors, and conveyor transfer points; chemical or water application to unpaved road and unpaved yard areas; paving and maintenance of roads, parking areas, and yards; landscaping or planting of vegetation; confining abrasive blasting where possible; and other techniques, as necessary, to all facilities to maintain an opacity of less than or equal to five percent. [Rule 62-296.320(4)(c), F.A.C.; proposed by applicant in Title V air operation permit renewal application received on May 20, 2009; and, PSD-FL-194J.]~~

FW5. 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:

i. 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.

ii. Water supply lines, hoses and sprinklers shall be located near all materials, coal and petroleum coke stockpiles.

iii. 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.

iv. 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.

v. The manufacturing area and the access roadways for the facility shall be paved with asphalt or concrete.

vi. Vacuum Sweeper shall be used on paved roads.

vii. 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.

[PSD-FL-194J and Rule 62-296.320(4)(c), F.A.C.]

3. Section-III-A – Emission Unit 001, Descriptive Language Change, Page III.A-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-194J]~~

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 gas (syngas~~), a limited amount of No. 2 fuel oil or~~ and pipeline quality natural gas. The pipe line quality natural gas will be used as a startup, backup and augmentation fuel in the CCCT. The permitted heat input rate to the CCCT at 59 degrees ºF, fuel temperature of 619 ºF, diluent temperature of 616 ºF, no air extraction, is 1,642 million Btu per hour on a lower heating value (LHV) basis when firing syngas, syngas augmented by natural gas~~,~~ or natural gas alone ~~or No. 2 fuel oil alone~~. 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 CCCT and the heat input rate will be calculated as the product of the LHV of the fuel and the measured fuel flow.

The combustion turbine uses nitrogen diluent injection and syngas moisture saturation when firing syngas or syngas augmented by natural gas~~, water injection when firing No.2 fuel oil and steam injection when firing natural gas alone to control NO_X (nitrogen oxide) emissions~~. Steam injection is utilized when the combustion turbine is running on natural gas only. 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 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 ºF; and, actual stack gas flow rate, 1,290,000 acfm.

4. Section-III-A – Emission Unit 001, Change of Specific Condition A.2., Page III.A-1

A.2. 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 fuel~~s~~. The firing of ~~No. 2 fuel oil and~~ natural gas only is limited to a 10 percent annual capacity factor to be determined as follows: [Load (%)] / 100% * hours of operation ≤ 876 hours. Where the percent load is based on the CT 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).]

5. Section-III-A – Emission Unit 001, Change of Specific Condition A.3., Page III.A-2

A.3. The maximum allowable emissions shall not exceed the following:

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POLLUTANT	FUEL	BASIS [a]	LB/HR *	TPY [b]
NO_X	~~Oil~~	~~42 ppmvd~~	~~311~~	N/A
	Natural Gas Only	25 ppmvd	185	
	Syngas or syngas with natural gas augmentation	15 ppmvd	132	657/601
VOC [c]	Syngas, natural gas or syngas with natural gas augmentation	0.0017 lb/MMBtu	3	N/A
CO	~~Oil~~	~~40 ppmvd~~	~~99~~	~~N/A~~
	Syngas, natural gas or syngas with natural gas augmentation	25 ppmvd	98	430.1
PM/PM_{10} [d]	~~Oil~~	~~0.009 lb/MMBtu~~	~~17~~	~~N/A~~
	Syngas, natural gas or syngas with natural gas augmentation	0.013 lb/MMBtu	17	74.5
SO_2	~~Oil~~	~~0.048 lb/MMBtu~~	~~92.2~~	~~N/A~~
	Syngas, natural gas or syngas with natural gas augmentation	0.17 lb/MMBtu	357	1,563.7
Sulfuric Acid Mist [e]	Syngas		55	241

Table Notes:

***** 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.

[a] Syngas lb/MMBtu values are based on heat input (HHV) to the solid fuel gasifier. The emission rates for lb/MMBtu and TPY includes emissions from the sulfuric acid plant. Pollutant concentrations in ppmvd are corrected to 15 percent oxygen. *{Permitting Note: For reference purposes only, based on a compressor inlet temperature of 59 ºF 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 natural gas ~~fuel oil~~. The SO_2 TPY limit also includes the sulfuric acid plant. 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.

6. Section-III-A – Emission Unit 001, Change of Specific Condition A.5., Page III.A-2

A.5. 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-194J]

7. Section-III-A – Emission Unit 001, Change of Specific Condition A.15., Page III.A-4

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A.15. VE Testing Not Required. By this permit, annual emissions compliance testing for visible emissions is not required for this emissions unit while burning only ~~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.]

8. Section-III-B – Emission Unit 003, Descriptive Language Change., Page III.B-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 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-194J]~~

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 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 ºF; and, stack gas flow rate, 32,240 acfm

9. Section-III-B – Emission Unit 003,Change of Specific Condition B.3., Page III.B-1

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-194J.]

10. Section-III-B – Emission Unit 003, Deletion of Specific Conditions B.5., B.6., B.13, B.17. and B.21 Pages III.B-1, 2 and 3

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-194J; and, Rule 62-296.406(1) (BACT), F.A.C.]~~

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.13. ~~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-194J.]~~

B.17. ~~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.21. ~~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.]~~

As a result of the above changes, Specific Conditions throughout the rest of the subsection were renumbered to take into account the deletion of these Specific Conditions.

11. Section-III-B – Emission Unit 003, Change of Specific Condition B.13., Page III.B-2 and 3

B.12. ~~**B.15.**~~ Sulfur Content of ~~Fuel~~ Natural Gas.

~~a. *Fuel Oil*: 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~~

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~~have no more than 0.5 weight percent sulfur or that, when combusted without SO_2 emission control, will have a SO_2 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 SO_2 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 and sulfur content. [NSPS, Subpart Db and PSD-FL-194J].~~

~~a. *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-194J]

12. Section-III-C – Emission Unit 004, Descriptive Language Change, Page III.C-1

~~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-194J]~~

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 (H_2S) to SO_2 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 SO_2 to sulfur trioxide (SO_3) 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% H_2SO_4 (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 F; and, stack gas flow rate, 17,660 acfm. This SAP began operation on April 10, 1996.

13. Section-III-C – Emission Unit 004, Change of Specific Condition C.4., Page III.C-1

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-194J]

14. Section-III-D – Emission Unit 005, Deletion of Specific Condition D.2., Page III.D-1

Air Pollution Control Technologies and Measures

~~**D.3.** 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-194J]~~

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15. Section-III-D – Emission Unit 005, Addition of Specific Conditions D.2. and D.3., Page III.D-1

D.2. 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. [PSD-FL-194J; Rules 62-4.070(3); and 62-4.160(2); 62-210.200(PTE), F.A.C]

D.3. 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 minimize fugitive dust emissions.
[PSD-FL-194J; Rules 62-4.070(3); 62-4.160(2); 62-210.200(PTE); and 62-212.400 (BACT), F.A.C]

16. Section-III-D – Emission Unit 005, Deletion of Specific Condition D.3., Page III.D-1

~~**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-194J.]~~

17. Section-III-D – Emission Unit 005, Deletion of Specific Conditions D.6. to D.9., Page III.D-2

~~**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 dust suppression system 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-194J.]~~

~~**D.8.** Compliance Tests Prior To Renewal. Prior to permit renewal, the dust suppression system 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

D.6. Reports: The permittee shall prepare and submit reports in accordance with the requirements of § 60.258, "Reporting and Recordkeeping" per 40 CFR 60, NSPS Subpart Y for Coal Preparation Plants. [PSD-FL-194K and NSPS 40 CFR 60, Subpart Y]

As a result of the above changes, Specific Conditions throughout the rest of the subsection were renumbered to take into account the deletion and additions of the Specific Conditions.

18. Section-III-E – Emission Unit 006, Descriptive Language Change, Page III.E-1

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~~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-194J]~~

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 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 ºF. Emissions from the flare's pilot flame are negligible. The solid fuel gasifier preheater will combust pipeline quality natural gas ~~or propane~~.

19. Section-III-F – Emission Unit 007, Addition of Emergency Equipment (New Subsection) as Regulated Emission Unit, Page III.H-1 to III.H-4.

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

E.U. ID No.	Brief Description of Engine
007	• Two Caterpillar 430 HP Diesel Engine Driven Emergency Fire Pumps • Two Cummins 750 HP Diesel Engine Driven Emergency Generators

This section is comprised of four compression ignition (CI) reciprocating internal combustion engines (RICE).

Emissions Unit 007 consists of two diesel engines driven emergency fire pumps (430 HP) and two diesel engine drive emergency generators (750 HP). Air pollutant emissions from these engines are uncontrolled.

The following table provides important details for these four RICE engines:

Engines Description	Engine Brake HP	Date of Purchase	Displacement liters	Model No.
Diesel Fire Pump # 1	430 HP (325 KW)	1995	14.6	3406-B
Diesel Fire Pump # 2	430 HP (325 KW)	1995	14.6	3406-B
Diesel Generator # 1	750 HP (560 KW)	1995	18.7	KTTA19G2
Diesel Generator # 2	750 HP (560 KW)	1995	18.7	KTTA19G2

*{Permitting Note: These compression ignition reciprocating internal combustion engines (CI RICE) are regulated under 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) adopted in Rule 62.204.800(11)(b), F.A.C. This permit section addresses "existing" emergency stationary CI RICE that are located at an area source of HAP and that have not been modified or reconstructed after 6/12/2006. If the RICE are modified or reconstructed after 7/11/2005, the NSPS 40 CFR 60, Subpart IIII, will then apply. In accordance with 40 CFR 63.6595(a)(1), the permittee shall comply with the following emissions limitations, operating limitations, and other requirements no later than **May 3, 2013**.}*

Essential Potential to Emit (PTE) Parameters

F.1. Hours of Operation.

a. *Emergency Situations*. There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(1)]

b. *Other Situations*. You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (1) through (3) of this section for a maximum of 100 hours per calendar year.

(1) *Maintenance and Testing*: These units are authorized to operate for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. [40 CFR 63.6640(f)(2)(i)]

(2) *Demand Response*: Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3. [40 CFR 63.6640(f)(2)(ii)]

(3) *Deviation of Voltage*: Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
[40 CFR 63.6640(f)(2)(iii)]

c. *Non-emergency Situations*. These units are authorized to operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. [40 CFR 63.6640(f)(4)]

Emission Limitations and Operating Requirements

F.2. Work or Management Practice Standards.

a. *Oil*. Change oil and filter every 500 hours of operation or annually, whichever comes first. [40 CFR 63.6603 & Table 2d.4.a.]

b. *Air Cleaner*. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6603 & Table 2d.4.b.]

c. *Hoses and Belts*. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6603 & Table 2d.4.c.]

d. *Operation and Maintenance*. Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions or develop and follow your own maintenance plan which must provide, to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e)(3) & Table 6].

e. *Engine Startup*. During periods of startup the owner or operator must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63.6625(h) and Table 2d]

f. *Oil Analysis*. The owner or operator has the option of using oil analysis to extend the oil change requirement. The oil analysis must be performed at the same frequency specified for changing the oil in paragraph a., of this condition. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator

must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63.6625(i)]

Monitoring of Operations

F.3. Hour Meter. The owner or operator must install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)]

Compliance

F.4. Continuous Compliance. Each unit shall be in compliance with the emission limitations, operating limitations, and other requirements in this section at all times. [40 CFR 63.6605(a)]

F.5. Operation and Maintenance of Equipment. At all times the owner or operator must operate and maintain, any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the compliance authority which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

Recordkeeping Requirements

F.6. Notification, Performance and Compliance Records. The owner or operator must keep:

a. A copy of each notification and report that the owner or operator submitted to comply with this section, including all documentation supporting any Initial Notification or Notification of Compliance Status that the owner or operator submitted.

b. Records of the occurrence and duration of each malfunction of operation.

c. Records of all required maintenance performed on the hour meter.

d. Records of actions taken during periods of malfunction to minimize emissions in accordance with Specific Condition **E.5.**, including corrective actions to restore malfunctioning process and monitoring equipment to its normal or usual manner of operation.

e. Records of the actions required in specific condition **E.2.d.** to show continuous compliance with each emission limitation or operating requirement.

f. Records of the Work or Management Practice Standards specified in Specific Condition **F.2.**

g. Records of the maintenance conducted in order to demonstrate that the RICE was operated and maintained according to your own maintenance plan.

h. Records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for emergency demand response operation or for periods of voltage or frequency deviations, the owner or operator must keep records of the notification of the emergency situation, and the time of engine operation for these purposes. [40 CFR 63.6655]

F.7. Records Retention.

a. The owner or operator must keep records in a suitable and readily available form for expeditious reviews.

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b. The owner or operator must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.6660 and 40 CFR 63.10(b)(1)]

General Provisions

F.8. 40 CFR 63 Subpart A, General Provisions. The owner or operator shall comply with the following applicable requirements of 40 CFR 63 Subpart A, General Provisions, which have been adopted by reference in Rule 62-204.800(11)(d)1., F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 63.5(e), 40 CFR 63.5(f), 40 CFR 63.6(g), 40 CFR 63.6(h)(9), 40 CFR 63.6(j), 40 CFR 63.13, and 40 CFR 63.14. Link to 40 CFR 63, Subpart A - General Provisions

General Provisions Citation	Subject of Citation
§63.1	General applicability of the General Provisions
§63.2	Definitions (Additional terms defined in §63.6675)
§63.3	Units and abbreviations
§63.4	Prohibited activities and circumvention
§63.5	Construction and reconstruction
§63.6(a)	Applicability
§63.6(c)	Compliance dates for existing sources
§63.9(a)	Applicability and State delegation of notification requirements
§63.9(b)(1)–(5)	Initial notifications. Except that §63.9(b)(3) is reserved.
§63.9(i)	Adjustment of submittal deadlines
§63.9(j)	Change in previous information
§63.10(a)	Administrative provisions for recordkeeping/reporting
§63.10(b)(1)	Record retention
§63.10(b)(2)(vi)–(xi)	Records
§63.10(b)(2)(xii)	Record when under waiver
§63.10(b)(2)(xiv)	Records of supporting documentation
§63.10(b)(3)	Records of applicability determination
§63.10(d)(1)	General reporting requirements
§63.10(f)	Waiver for recordkeeping/reporting
§63.12	State authority and delegations
§63.13	Addresses
§63.14	Incorporation by reference
§63.15	Availability of information

[40 CFR 63.6665 & Table 8 to Subpart ZZZZ of Part 63]

As a result of the above changes, subsection letters for the remaining subsections of **Section III** were changed according along with the letters referencing the specific conditions in each subsection.

20. Appendices – Addition of New Appendix Containing 40 CFR 63, Subpart ZZZZ

An appendix was added to the Title V permit containing the 40 CFR 63 Subpart 63 - National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. This NESHAP is applicable to the emergency equipment.

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CONCLUSION

This project revises Title V air operation permit (DEP File No. 1050233-028-AV), which was issued on December 12, 2012. This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C. In accordance with the terms and conditions of this permit, the above named permittee is hereby authorized to operate the facility as shown on the application and approved drawings, plans, and other documents, on file with the permitting authority.

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