# Duke Energy Florida, LLC
# Hines Energy Complex

## Facility ID No. 1050234
## Polk County

## Title V Air Operation Permit Revision

**Permit No. 1050234-025-AV**

(Revision of Title V Air Operation Permit No. 1050234-023-AV)

**<u>Permitting Authority:</u>**

State of Florida
Department of Environmental Protection
Division of Air Resource Management
Office of Permitting and Compliance
2600 Blair Stone Road
Mail Station #5505
Tallahassee, Florida 32399-2400

Telephone: (850) 717-9000
Fax: (850) 717-9097

**<u>Compliance Authority</u>:**

Department of Environmental Protection
Southwest District Office
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Telephone: 813/632-7600
Fax: 813/744-6084

# Title V Air Operation Permit Revision

Permit No. 1050234-025-AV

## Table of Contents

**Section** **Page Number**

Placard Page ..... 1

I. Facility Information.
A. Facility Description. ..... 2
B. Summary of Emissions Units. ..... 2
C. Applicable Regulations. ..... 2

II. Facility-wide Conditions. ..... 4

III. Emissions Units and Conditions.
A. Emission Units (EUs) 001 & 002, Westinghouse 501FC Combined Cycle Combustion Turbines (CCCT): Power Block 1 (PB 1). ..... 7
B. EU 021, Communications Tower Emergency Engine. ..... 16
C. EU 004, Clarke Diesel Fuel Fire Pump. ..... 19
D. EUs 014 & 015, Westinghouse 501FD CCCT: (PB 2). ..... 22
E. EUs 016 & 017, Westinghouse 501FD CCCT: (PB 3). ..... 33
F. EUs 018 & 019, General Electric 7FA CCCT: (PB 4). ..... 44

IV. Acid Rain Part. ..... 54
Phase II Acid Rain Application/Compliance Plan.
Phase II Acid Rain $NO_X$ Compliance Plan.

V. Transport Rule Part ..... 65

VI. Appendices. ..... Separate Document
Appendix A, Abbreviations, Acronyms, Citations and Identification Numbers.
Appendix G, Combustion Turbine Heat Input Curves.
Appendix I, List of Insignificant Emissions Units and/or Activities.
Appendix NESHAP, Subpart A - General Provisions.
Appendix NESHAP, Subpart YYYY - NESHAP for Stationary Combustion Turbines.
Appendix NESHAP, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines.
Appendix NSPS, Subpart A - General Provisions.
Appendix NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines.
Appendix NSPS, Subpart GG, Power Block 4 - Standards of Performance for Stationary Gas Turbines.
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.

Attachments. ..... At End
Figure 1, Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance (40 CFR 60, July, 1996).
Table H, Permit History

# Florida Department of Environmental Protection

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

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

**PERMITTEE:**
Duke Energy Florida (DEF), LLC.
7700 County Line Road 555
Bartow, Florida 33830

Permit No. 1050234-025-AV
Hines Energy Complex
Facility ID No. 1050234
Title V Air Operation Permit Revision

The purpose of this permit is to revise the Title V air operation permit for the above referenced facility. The existing Hines Energy Complex is in Polk County at 7700 County Line Road 555, Bartow, Florida. UTM Coordinates are: Zone 17, 414.17 kilometers (km) East and 3074.1 km North. Latitude is: 27° 47' 19.2825" North; and, Longitude is: 81° 52' 16.4118" West.

The Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213 and 62-214. The above named permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

Executed in Tallahassee, Florida.

1050234-025-AV Effective Date: January 9, 2018
1050234-023-AV Effective Date: November 7, 2016
Renewal Application Due Date: March 27, 2021
Expiration Date: November 7, 2021

David Lyle Read, P.E.

David Lyle Read, P.E.
2018.01.09 13:25:00 -05'00'

*For:*

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

SA/dlr/sms

**Subsection A. Facility Description.**

Duke Energy Florida (DEF), LLC owns and operates Hines Energy Complex, a nominal 2,090 megawatt (MW) electric generating facility in Bartow, Florida. The facility consists of four power blocks (1, 2, 3 and 4), each with combustion turbines and heat recovery steam generators (HRSG).

- Power Block 1 consists of two combined cycle combustion turbines (CT) with unfired HRSG for a nominal total of 500 MW, and a 97,570-barrel fuel oil storage tank. Emissions from each CT and HRSG combination are vented through a single stack.
- Power Block 2 consists of two CTs with unfired HRSG, and an associated single steam-turbine electrical generator, for a nominal total of 530 MW. Emissions from each CT and HRSG combination are vented through a single stack.
- Power Block 3 consists of two CTs with unfired HRSG, and an associated single steam-turbine electrical generator, for a nominal total of 530 MW. Emissions from each CT and HRSG combination are vented through a single stack.
- Power Block 4 consists of two CTs with unfired HRSG, and an associated single steam-turbine electrical generator, for a nominal total of 530 MW. Emissions from each CT and HRSG combination are vented through a single stack.

Each combustion turbine can burn natural gas or No. 2 fuel oil with natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel. Emissions of oxides of nitrogen (NOx) are mitigated by dry low NOx burners for natural gas firing and a water injection system for oil firing, and controlled with selective catalytic reduction (SCR).

**Subsection B. Summary of Emissions Units.**

| EU No. | Brief Description |
|---|---|
| 001 | 170 MW Westinghouse 501FC CT1A with inlet air chiller & unfired HRSG |
| 002 | 170 MW Westinghouse 501FC CT1B with inlet air chiller & unfired HRSG |
| 014 | 170 MW Westinghouse 501FD CT2A with inlet air chiller & unfired HRSG |
| 015 | 170 MW Westinghouse 501FD CT2B with inlet air chiller & unfired HRSG |
| 016 | 170 MW Westinghouse 501FD CT3A with inlet air chiller & unfired HRSG |
| 017 | 170 MW Westinghouse 501FD CT3B with inlet air chiller & unfired HRSG |
| 018 | 170 MW General Electric Model 7FA CT4A with inlet air chiller & unfired HRSG |
| 019 | 170 MW General Electric Model 7FA CT4B with inlet air chiller & unfired HRSG |
| 004 | Clarke Diesel Fire Pump |
| 021 | Communications Tower Emergency Engine (new) |

Also included in this permit are miscellaneous insignificant emissions units and/or activities (see Appendix I, List of Insignificant Emissions Units and/or Activities).

**Subsection C. Applicable Regulations.**

Based on the Title V air operation permit renewal application received on May 20, 2016, this facility is a major source of hazardous air pollutants (HAP). The existing facility is a prevention of significant deterioration (PSD) major source of air pollutants in accordance with Rule 62-212.400, F.A.C. A summary of applicable regulations is shown in the following table.

| Regulation | EU ID |
|---|---|
| ***Federal Rule Citations*** | |
| New Source Performance Standards (NSPS) – 40 CFR 60, Subpart A – General Provisions. | 001, 002, 014, 015, 016, 017, 018, 019 |
| NSPS - 40 CFR 60, Subpart GG - Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800, F.A.C. | |
| NSPS – 40 CFR 72 – 80 - Federal Acid Rain Program, Phase II. | |
| National Emission Standards for Hazardous Air Pollutants (NESHAP) – 40 CFR 63, Subpart A – General Provisions. | 001, 002, 004 014, 015, 016, 017, 018, 019 |
| NESHAP – 40 CFR 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. | |
| NESHAP – 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. | 004, 021 |
| ***State Rule Citations*** | |
| Rule 62-4, F.A.C. (Permitting Requirements). | 001, 002, 014, 015, 016, 017, 018, 019 |
| Rule 62-204, F.A.C. (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference). | |
| Rule 62-210, F.A.C. (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms). | |
| Rule 62-212, F.A.C. (Preconstruction Review, PSD Review and BACT). | |
| Rule 62-213, F.A.C. (Title V Air Operation Permits for Major Sources of Air Pollution). | |
| Rule 62-214, F.A.C. (Requirements For Sources Subject To The Federal Acid Rain Program). | |
| Rule 62-296, F.A.C. (Emission Limiting Standards). | |
| Rule 62-297, F.A.C. (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures). | |
| PSD-FL-195 and revisions; Power Plant Siting Case No.(PPSA): PA 92-33. | 001, 002 |
| PSD-FL-296 and revisions. | 014, 015 |
| PSD-FL-330 and revision | 016, 017 |
| PSD-FL-342; PA 92-33 | 018, 019 |

**The following conditions apply facility-wide to all emission units and activities:**

**FW1.** Appendices. The permittee shall comply with all documents identified in Section VII, Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit unless otherwise indicated. [Rule 62-213.440, F.A.C.]

**Emissions and Controls**

**FW2.** **Not federally Enforceable.** Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means 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. [Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.]

**FW3.** General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed-necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

*{Permitting Note: Nothing is deemed necessary and ordered at this time.}*

**FW4.** General Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b), F.A.C.]

**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:

a. Maintenance of paved areas as needed;
b. Regular mowing of grass and care of vegetation;
c. Limiting access to plant property by unnecessary vehicles.

[Rule 62-296.320(4)(c), F.A.C.; and, proposed by applicant in Title V air operation permit renewal application received May 20, 2016.]

**Annual Reports and Fees**

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

**FW6.** Electronic Annual Operating Report and Title V Annual Emissions Fees. The information required by the Annual Operating Report for Air Pollutant Emitting Facility [Including Title V Source Emissions Fee Calculation] (DEP Form No. 62-210.900(5)) shall be submitted by April 1 of each year, for the previous calendar year, to the Department of Environmental Protection's Division of Air Resource Management. Each Title V source shall submit the annual operating report using the DEP's Electronic Annual Operating Report (EAOR) software, unless the Title V source claims a technical or financial hardship by submitting DEP Form No. 62-210.900(5) to the DEP Division of Air Resource Management instead of using the reporting software. Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C. Each Title V source must pay between January 15 and April 1 of each year an annual emissions fee in an amount determined as set forth in subsection 62-213.205(1), F.A.C. The annual fee shall only apply to those regulated pollutants, except carbon monoxide and greenhouse gases, for which an allowable numeric emission-limiting standard is specified in the source's most recent construction permit or operation permit. Upon completing the required EAOR entries, the EAOR Title V Fee Invoice can be printed by the source

showing which of the reported emissions are subject to the fee and the total Title V Annual Emissions Fee that is due. The submission of the annual Title V emissions fee payment is also due (postmarked) by April 1st of each year. A copy of the system-generated EAOR Title V Annual Emissions Fee Invoice and the indicated total fee shall be submitted to: **Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070.** Additional information is available by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: http://www.dep.state.fl.us/air/emission/tvfee.htm. [Rules 62-210.370(3), 62-210.900 & 62-213.205, F.A.C.; and, §403.0872(11), Florida Statutes (2013)]

*{Permitting Note: Resources to help you complete your AOR are available on the electronic AOR (EAOR) website at: http://www.dep.state.fl.us/air/emission/eaor. If you have questions or need assistance after reviewing the information posted on the EAOR website, please contact the Department by phone at (850) 717-9000 or email at eaor@dep.state.fl.us.}*

*{Permitting Note: The Title V Annual Emissions Fee form (DEP Form No. 62-213.900(1)) has been repealed.* ***A separate Annual Emissions Fee form is no longer required to be submitted by March 1st each year.****}*

**FW7.** Annual Statement of Compliance. The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit and to the US. EPA at the address shown below within 60 days after the end of each calendar year during which the Title V air operation permit was effective. (See also Appendix RR, Conditions RR1 and RR7.) [Rules 62-213.440(3)(a)2. & 3. and (b), F.A.C.]

U.S. Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303
Attn: Air Enforcement Branch

**FW8.** Prevention of Accidental Releases (Section 112(r) of CAA).

a. As required by Section 112(r)(7)(B)(iii) of the CAA and 40 CFR 68, the owner or operator shall submit an updated Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center. (See paragraph e., below.)
b. As required under Section 252.941(1)(c), F.S., the owner or operator shall report to the appropriate representative of the Division of Emergency Management, as established by department rule, within one working day of discovery of an accidental release of a regulated substance from the stationary source, if the owner or operator is required to report the release to the United States Environmental Protection Agency under Section 112(r)(6) of the CAA.
c. The owner or operator shall submit the required annual registration fee to the Division of Emergency Management on or before April 1, in accordance with Part IV, Chapter 252, F.S., and Rule 27P-21, F.A.C.
d. Any required written reports, notifications, certifications, and data required to be sent to the Division of Emergency Management, should be sent to: Division of Emergency Management, 2555 Shumard Oak Boulevard, Tallahassee, FL 32399-2100, Telephone: (850) 413-9970, Fax: (850) 488-1739.
e. Any Risk Management Plans, original submittals, revisions, or updates to submittals, should be sent electronically through EPA's Central Data Exchange system at the following address: https://cdx.epa.gov. Information on electronically submitting risk management plans using the Central Data Exchange system is available at: http://www2.epa.gov/rmp. The RMP Reporting Center can be contacted at: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650.
f. Any required reports to be sent to the National Response Center, should be sent to: U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, 1200 Pennsylvania Ave. NW, Mail Code: US EPA (5101T), Washington, DC 20460, Telephone: (800) 424-8802.

g. Send the required annual registration fee using approved forms made payable to: Cashier, Division of Emergency Management, State Emergency Response Commission, 2555 Shumard Oak Boulevard, Tallahassee, FL 32399-2149

[Part IV, Chapter 252, F.S.; and, Rule 27P-21, F.A.C.]

**PSD Avoidance Requirements**

*{Permitting Notes: Permit No. 1050234-021-AC avoided the requirements of Rule 62-212.400(4) through (12), Prevention of Significant Deterioration (PSD), F.A.C., for certain pollutants based in whole or in part on projected actual emissions calculations. In accordance with Rule 62-212.300(1)(e), F.A.C., the following monitoring, reporting and recordkeeping provisions apply to emissions of such pollutants. Refer to the Technical Evaluation dated December 12, 2014 that contains the baseline actual emissions, past heat input/generation data, projected annual emissions, and heat input/generation projections when performing the calculations described in* ***FW9.b.*** *below.*

*Specific Conditions* ***FW9.*** *&* ***FW10.*** *apply to E.U. ID Nos. 001, 002, 014-019.}*

**FW9.** Actual Emissions Reporting - Inlet Air Chilling Systems Project (Permit No. 1050234-021-AC). Permit No. 1050234-021-AC was based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C. for emissions of nitrogen oxides (NOx). Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., the permittee is subject to the following monitoring, reporting and recordkeeping provisions.

a. The permittee shall monitor the emissions of NOx from each combustion turbine 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 is completed on each power block. *{The chillers were installed and placed into service on March 22, 2017 (regular operations after the change resumed in calendar year 2017). Therefore, the subject report shall be filed, beginning with the first full calendar year for 5 years, i.e., calendar years 2018 - 2022.}* Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C.

b. The permittee shall report to the Department within 60 days after the end of each calendar year during the 5-year period 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 calculations pursuant to the provisions of 62-210.370, F.A.C.;
   3) If the emissions differ from the preconstruction projection (i.e. are greater than the projection by a value equal to or greater than 40 tons/year of NOx), 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.

[Permit No. 1050234-021-AC, Specific Conditions 3.3 & 3.4.; and, Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

**FW10.** Source Obligation - Inlet Air Chilling Systems Project (Permit No. 1050234-021-AC).

(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.

[Permit No. 1050234-021-AC, Specific Condition 2.8.; and, Rule 62-212.400(12), Avoid PSD, F.A.C.]

## Subsection A. Emissions Units 001 and 002

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

| EU No. | Brief Description |
|---|---|
| 001 | 170 MW Westinghouse 501FC CT1A with inlet air chiller & unfired HRSG |
| 002 | 170 MW Westinghouse 501FC CT1A with inlet air chiller & unfired HRSG |

Emission units 001 and 002 each consist of a combined cycle Westinghouse 501FC Combustion Turbine with an inlet air chiller at the compressor inlet of each turbine, each with a nominal generator rating of 170 MW and each with a maximum heat input rating of 1,915 MMBtu/hr based on high heating value (HHV) while firing natural gas, and 2,020 MMBtu/hr based on HHV while firing fuel oil, based on a compressor inlet air temperature of 59ºF, the HHV of each fuel, and 100% load. $NO_X$ emissions are controlled with dry low $NO_X$ burners and Selective Catalytic Reduction (SCR) for natural gas firing and wet injection for fuel oil firing. Each combustion turbine incorporates an unfired HRSG. Steam from both HRSGs is delivered to a single steam turbine-electrical generator, which has a generating capacity of 160 MW. The total generating capacity of the "2-on-1" combined cycle unit is approximately 500 MW. Stack Parameters: height = 125 feet (ft), exit diameter = 19.0 ft, exit temperature = 190°F., and flow rate = 1,009,500 actual cubic feet per minute (acfm).

*{Permitting notes: 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)41., F.A.C.; Rule 212.400(5), F.A.C., Prevention of Significant Deterioration; PSD-FL-195 and revisions; PPSA: PA 92-33; and, Rule 62-212.400, F.A.C.}*

**Essential Potential to Emit (PTE) Parameters**

**A.1.** Permitted Capacity. The maximum allowable heat input rates at an ambient temperature of 59ºF are as follows:

| EU No. | MMBtu/hr Heat Input | Fuel Type |
|---|---|---|
| 001 & 002 | 1,915 | Natural Gas |
| | 2,020 | Fuel Oil |

Heat input may vary depending on ambient conditions and the CT characteristics. The manufacturer's curves shall be used to establish the heat input rates over a range of temperatures for the purpose of compliance determination. See Appendix G, Combustion Turbine Heat Input Curves. [Rule 62-210.200(PTE), F.A.C., and Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition A.1.]

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

**A.3.** Methods of Operation (Fuels). The only fuels that are allowed to be burned in these units are:

a. *Natural Gas* – having a maximum sulfur content of 1 grain per 100 cubic feet of natural gas shall be fired in each CT at all times.
b. *Fuel Oil* - having a maximum sulfur content of 0.05%, by weight. The maximum allowable consumption of fuel oil for the two turbines is 13,762,806 gallons per year, which is equivalent to an aggregate of 1,000 hours per year of operation at full load.

[Permit No. 1050234-003-AC/PSD-FL-195B, Specific Conditions A.3. & A.5.]

**A.4.** Hours of Operation. These emissions units may operate continuously (8,760 hours/year). [Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition A.2.]

**Control Technology**

**A.5.** Control of Nitrogen Oxides ($NO_X$). Control of NOx from each CT while firing natural gas shall be accomplished using dry low $NO_X$ burners (DLN) and SCR. [Permit Nos. PSD-FL-195A/PA-92-33 and 105234-003-AC/PSD-FL-195B, Specific Condition B.1.i.]

**Emission Limitations and Standards**

Unless otherwise specified, the averaging times for **Specific Conditions A.6. - A.12.** are based on the specified averaging time of the applicable test method.

**A.6.** Visible Emissions(VE). As determined by stack tests, visible emissions shall not exceed:
a. *When firing natural gas:* 10% opacity.
b. *When firing fuel oil:* 20% opacity.
[Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition B.1.]

**A.7.** $NO_X$ Emissions. As determined by a Continuous Emissions Monitoring System (CEMS) and adjusted to a reference temperature of 59°F, except during periods of startup, shutdown, malfunction, $NO_X$ emissions shall not exceed:
a. *Pursuant to PSD*:
(1) When firing natural gas:
(a) 73 pounds per hour (lbs/hr) per CT, 24-hour block average midnight-to-midnight (for informational purposes, lbs/hr limit is based on 12 parts per million by volume, dry basis (ppmvd) at 15% oxygen ($O_2$), not ISO corrected).
(b) 639 tons per year (tpy) (total from both CTs).
(2) When firing fuel oil:
(a) 305 lbs/hr per CT, 24-hour block average midnight-to-midnight (for informational purposes, lbs/hr limit is based on 42 ppmvd at 15% $O_2$ at full load operation, not ISO corrected).
(b) 153 tpy (total from both CTs).
(3) Pollutant emission rates may vary depending on ambient conditions (compressor inlet temperatures) and the CT characteristics. Manufacturer's curves for the $NO_X$ emission rate correction to other temperatures at different loads were provided to the DEP for review and are now a part of this permit (see Appendix G-1). The manufacturer's curves shall be used to establish pollutant emission rates over a range of temperatures for the purpose of compliance determination. Emissions limitations in lbs/hr/CT of $NO_X$ are blocked 24-hour averages (midnight-to-midnight) and are determined continuously by a CEMS.

b. *Pursuant to NSPS*: For fuel oil firing, $NO_X$ levels of 42 ppm @ 15% are based on a fuel bound nitrogen content of 0.015% or less. The emission limit for $NO_X$ is adjusted as follows for higher nitrogen contents up to a maximum of 0.030% by weight:

| Fuel Bound Nitrogen (% by weight) | $NO_X$ Levels (ppmvd @ 15% $O_2$) | $NO_X$ Emissions | |
|---|---|---|---|
| | | lb/hr/CT | TPY (both CTs) |
| 0.015 or less | 42 | 305 | 153 |
| 0.020 | 44 | 320 | 160 |
| 0.025 | 46 | 334 | 167 |
| 0.030 | 48 | 349 | 175 |

Using the formula STD = 0.0042 + F, where:
STD = allowable $NO_X$ emissions (percent by volume at 15% $O_2$ and on a dry basis)
F = $NO_X$ emission allowance for fuel-bound nitrogen 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 = the nitrogen content of the fuel (% by weight).
[Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition B.1.]

**A.8.** Particulate Material/Particulate Matter less than 10 Microns ($PM/PM_{10}$). As determined by stack tests, $PM/PM_{10}$ emissions shall not exceed:
a. *While firing natural gas:*
(1) 15.6 lbs/hr per CT, and
(2) 79 tpy (total from both CT).
b. *While firing fuel oil:*
(1) 44.8 lbs/hr per CT, and
(2) 21 tpy (total from both CT).
$PM/PM_{10}$ emission limitations include sulfuric acid mist. [Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition B.1.]

**A.9.** Carbon Monoxide (CO). As determined by stack tests, CO emissions shall not exceed:
a. *While firing natural gas:*
(1) 77 lbs/hr per CT, 24-hour block average midnight-to-midnight (for informational purposes, lbs/hr limit is based on 25 ppmvd at 15% $O_2$, not ISO corrected), and
(2) 675 tpy (total from both CT).
b. *While firing fuel oil:*
(1) 93 lbs/hr per CT, 24-hour block average midnight-to-midnight (for informational purposes, lbs/hr limit is based on 30 ppmvd at 15% $O_2$, not ISO corrected), and
(2) 47 tpy (total from both CT).
[Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition B.1.]

**A.10.** Sulfur Dioxide($SO_2$). As determined by fuel analysis, $SO_2$ emissions shall not exceed:
a. *While firing natural gas:*
(1) 4.7 lbs/hr per CT, and
(2) 44 tpy (total from both CT).
b. *While firing fuel oil:*
(1) 94 lbs/hr per CT, and
(2) 47 tpy (total from both CT).
$SO_2$ emissions are based on a maximum of 1 grain of S/100 cf of natural gas and 0.05% sulfur, by weight, in the fuel oil. [Permit No. 1050234-003-AC/ PSD-FL-195B, Specific Condition B.1.]

**A.11.** Volatile Organic Compound (VOC). As determined by stack tests, VOC emissions shall not exceed:
a. *While firing natural gas:*
(1) 10.4 lbs/hr per CT (for informational purposes, lbs/hr limit is based on 7 ppmvd), and
(2) 91 tpy (total from both CT).
b. *While firing fuel oil:*
(1) 19.0 lbs/hr per CT (for informational purposes, lbs/hr limit is based on 10 ppmvd), and
(2) 5.6 tpy (tpy total is from both CT).
[Permit No. 1050234-003-AC/ PSD-FL-195B, Specific Condition B.1.]

**A.12.** Ammonia. Ammonia slip shall not exceed 10 ppm. [40 CFR 60.334(i)(1) and 1050234-003-AC/ PSD-FL-195B, Specific Condition B.1.]

**Excess Emissions**

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

**A.13.** Excess Emissions Allowed. 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 120 minutes (non-continuous) in any 24-hour period except in the event that the steam turbine has been shut down for 8 hours or more, in which case, the following provisions apply:

a. During a cold start-up to combined cycle operation, up to 240 minutes of excess emissions are allowed in a 24-hour period. Cold start-up is defined as a start-up to combined cycle operation following a steam turbine shutdown lasting at least 48 hours.
b. During a warm start up to combined cycle operation, up to 180 minutes of excess emissions are allowed in a 24-hour period. Warm start-up is defined as a startup to combined cycle operation following a steam turbine shutdown lasting at least 8 hours.
c. During fuel switches (oil-to-gas or gas-to-oil), up to 120 minutes of excess emissions per fuel switch per emissions unit are allowed.
d. Allowable Excess Emissions Convenience Summary:

| Method of Operation | Excess Emissions Conditions | Period Authorized for Excess Emissions |
|---|---|---|
| Hot Start-up | Complete shutdown of CT-HRSG lasting ≤ 8 hours | ≤ 120 minutes/start-up/unit |
| Cold STG Start-up | STG shutdown lasting ≥ 48 hours | ≤ 240 minutes/start-up/unit |
| Warm CT-HRSG Start-up | Complete shutdown of CT-HRSG lasting ≥ 8 hours | ≤ 180 minutes/start-up/unit |
| Shutdown | Shutdown | ≤ 120 minutes/shutdown/unit |
| Fuel Switches | Oil-to-Gas or Gas-to-Oil | ≤ 120 minutes/fuel-switch/unit |
| Documented Malfunctions | Malfunctions | ≤ 120 minutes in any 24-hour block |

[Rules 62-210.700(1), 62-210.700(2) & 62-213.440(1), F.A.C.; and, Permit No. 1050234-015-AC/PSD-FL-195D, Specific Condition B.3.]

**A.14.** CEMS Data Exclusion – Limited Use Operations. CEMS data collected during any of the following limited use operational periods shall be excluded from the compliance averages:

a. *DLN Tuning*. CEMS data collected during major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of a combustor change-out, a major repair or maintenance to a combustor, or circumstances as identified or requested by the equipment vendor. Prior to performing any major tuning session, the permittee shall provide the Department's Southwest District Compliance Authority with an advance notice that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.
b. *Full Speed No Load Testing*. As a periodic maintenance practice, the permittee may perform full speed no load tests with the combustion turbine generator in accordance with the manufacturer's recommendations (or industry standards). An example of work that may require full speed no load testing includes, but is not limited to, testing and commissioning of synchronizing instrumentation, transformers and generation equipment to assure safe and reliable connection to the bulk electric system.

[Rule 62-4.070(3), F.A.C.; and Permit No. 1050234-024-AC, Section 3, Subsection A, Specific Condition 2.]

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

**Monitoring of Operations**

**A.16.** Proper Operation. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d)].

**A.17.** Fuel Monitoring. The permittee shall monitor sulfur content and nitrogen content of the new No. 2 distillate fuel oil and sulfur content of natural gas. These values may be provided by the vendor and the frequency of determinations of these values shall be as follows:

a. *New No. 2 Distillate Fuel Oil*: The values (sulfur and nitrogen content) shall be determined on each occasion that fuel is transferred to the storage tanks from any other source. Records of these values shall be kept by the facility for a five-year period for regulatory agency inspection purposes.

b. *Natural Gas*: Pursuant to 40 CFR 60, Subpart GG, fuel sulfur records for the natural gas fired at this facility shall be maintained as follows (See Appendix GG, NSPS Subpart GG Requirements for Gas Turbines):

Fuel Sulfur Records

The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.

(1) 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 in accordance with 40 CFR 60, Subpart GG. (See Appendix NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines.)

(2) Sampling and analysis for the fuel oil sulfur content shall be conducted in accordance with the methods in 40 CFR 60, Subpart GG, or their latest editions. For each subsequent fuel delivery, the permittee shall either (1) maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor, or (2) take and analyze a sample according to the above procedures and maintain a permanent file of the results of the analysis. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content. (See Appendix NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines.)

(3) The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75, Appendix D.

[Rule 62-4.160(15), F.A.C.; 40 CFR 75, Appendix D; and, Permit No. 1050234-018-AC/PSD-FL-195E, Specific Condition 1].

**A.18.** Water Injection Monitoring Requirements. In accordance with the manufacturer's specifications, the permittee shall operate and maintain a monitoring system to continuously measure and record the water-to-fuel ratio when firing distillate oil. The permittee shall document the water-to-fuel ratio required to meet permitted emissions levels over the range of load conditions allowed by this permit. The $NO_X$ CEMS is used to demonstrate compliance with the $NO_X$ emissions standards. During $NO_X$ CEMS downtimes or malfunctions, the permittee shall monitor the water-to-fuel ratio and operate at a level that is consistent with the documented flow rate for the gas turbine load condition. [Rule 62-213.440(1)(b), F.A.C.]

**A.19.** Ammonia Monitoring Requirements. In accordance with the manufacturer's specifications, the permittee shall operate and maintain an ammonia flow meter to measure and record the ammonia injection rate to the SCR system. The permittee shall document the general range of ammonia flow rates required to meet permitted emissions levels over the range of load conditions allowed by this permit by comparing $NO_X$ emissions recorded by the CEM system with ammonia flow rates recorded using the ammonia flow meter. During $NO_X$ monitor downtimes or malfunctions, the permittee shall operate at the ammonia flow rate that is consistent with the documented flow rate for the combustion turbine load condition. [Rule 62-213.440(1)(b), F.A.C.]

**Continuous Emissions Monitoring Requirements**

**A.20.** $NO_X$ CEMS. $NO_X$ emissions shall be determined continuously by a CEMS that is operated and maintained in accordance with 40 CFR 75. Compliance with the $NO_X$ emissions standards shall be demonstrated with this CEMS based on a 24-hour block average. Based on CEMS data at the end of each operating day, new 24-hour average emission rates, both actual and allowable (based on compressor inlet temperatures) are calculated from the arithmetic average of all valid hourly emission rates during the previous 24 operating hours. Valid hourly emission rates shall not include periods of startup (including fuel switching), shutdown, or malfunction as defined in Rule 62-210.200(Definitions), F.A.C., where emissions exceed the $NO_X$ standard. These excess emission periods shall be reported as required by 40 CFR 60.7(b) (see Appendix NSPS, Subpart A - General Provisions). A valid hourly emission rate shall be calculated for each hour in which two $NO_X$ and $CO_2$ (or $O_2$) concentrations are obtained at least 15 minutes apart. When monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate the 24-hour block average. [Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition B.1.a.]

**A.21.** CEMS. For each combined cycle unit, the permittee shall install, operate, and maintain a CEMS (in accordance with 40 CFR 60, Appendix F, or 40 CFR 75) or use other DEP approved alternate methods to monitor nitrogen oxides and, if necessary, a diluent gas ($CO_2$ or $O_2$).

a. Each CEMS shall meet performance specifications of 40 CFR 60, Appendix B, or 40 CFR 75.
b. CEMS data shall be recorded and reported in accordance with 40 CFR 60, Subpart A and Subpart GG, and 40 CFR 75. The record shall include periods of startup, shutdown, and malfunction. Compliance with **Specific Condition A.7.** for $NO_X$ shall be determined by CEMS on a mass emission rate basis (lbs/hr) using EPA Method 7E, 19, or 20 and hourly averaged heat inputs (MMBtu/hr).
c. A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.
d. The procedures under 40 CFR 60.13 and 40 CFR 75, whichever is more stringent, shall be followed for installation, evaluation, and operation of all CEMS.
e. For purposes of the reports required under this permit, excess emissions are defined as any calculated average emission rate, as determined pursuant to **Specific Condition A.13.** which exceeds the applicable emission limits in **Specific Condition A.7.**

[Permit No. 1050234-003-AC/PSD-FL-195B, Specific Conditions D.1 – D.5. and Rule 62-213.440(1)(b), F.A.C.]

**Test Methods and Procedures**

**A.22.** Test Methods. When required, tests shall be performed in accordance with the following reference methods:

| Method | Description of Method and Comments |
|---|---|
| 1-4 | Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content |
| 5 or 17 | Method for Determining PM Emissions (All PM is assumed to be $PM_{10}$.) |
| 7E | Determination of Nitrogen Oxide Emissions from Stationary Sources |
| 9 | Visual Determination of the Opacity of Emissions from Stationary Sources |
| 10 | Determination of Carbon Monoxide Emissions from Stationary Sources {Note: The method shall be based on a continuous sampling train.} |
| 18 | Measurement of Gaseous Organic Compound Emissions by Gas Chromatography |
| 19 | Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.) |
| 20 | Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines |
| 25A | Method for Determining Gaseous Organic Concentrations (Flame Ionization) |
| ASTM D4294-02, D129-00, D2622-98, D1266-98, D5453-00, D1552-01 or equivalent, including latest editions or as incorporated by reference under 40 CFR 60.17 or under Appendix D to Part 75. | Method for Determining Sulfur Content of Petroleum Products. |
| ASTM D1072-80, 90, D3246-81, 92, 96, D4468-85, D6667-01, D4084, or equivalent, including latest editions or as incorporated by reference under 40 CFR 60.17 or under Appendix D to Part 75 | Methods for Determining Sulfur Content of Natural Gas. |
| CTM-027 | Conditional EPA Test Method 027, Measurement of Ammonia Slip (or equivalent method) |

The above methods are described in 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. [Rules 62-297.401 & 62-297.440, F.A.C.; and Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition C.1.]

**A.23.** 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.24.** Annual Compliance Tests Required. During each calendar year (January 1st to December 31st), each CT shall be tested to demonstrate compliance with the emissions standards for the following pollutants with the fuel(s) listed below:

a. *PM*. Only for oil and only if oil is fired for more than 400 hours for the CT in the previous calendar year.
b. *VE*. Only for oil and only if oil is fired for more than 400 hours for the CT in the previous calendar year.
c. *CO*:
(1)For gas, and
(2)For oil if oil is fired for more than 400 hours for the CT in the previous calendar year.
d. *Fuel Sulfur Content*. For oil.

[Rules 62-213.440(1) & 62-297.310(8), F.A.C.; and, Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition C.1.]
*{Permitting Note: Annual VE test is not required if only firing natural gas or firing oil for 400 hours or less.}*

**A.25.** Critical Fuel Parameters. The maximum sulfur content of the low sulfur fuel oil shall not exceed 0.05%, by weight. Compliance shall be demonstrated in accordance with the requirements of 40 CFR 60, Subpart GG, or their latest editions, testing for sulfur content of the fuel oil in the storage tanks on each occasion that fuel is transferred to the storage tanks from any other source. Testing for fuel bound nitrogen content per 40 CFR 60, Subpart GG, or their latest editions, and for fuel oil higher heating value, shall also be conducted on the same schedule. See Appendix GG - NSPS Subpart GG Requirements for Gas Turbines. [40 CFR 60.334 and Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition C.2.]

**A.26.** Sulfur Dioxide - NSPS. The permittee shall determine compliance with the sulfur standards for distillate oil by using the ASTM reference methods specified in 40 CFR 60, Subpart GG, or their latest editions. The analysis may be performed by the permittee, a service contractor retained by the permittee, the fuel vendor, or any other qualified agency. See Appendix GG - NSPS Subpart GG Requirements for Gas Turbines. [40 CFR 60.334; 40 CFR 60.335; Rules 62-213.440(1), 62-297.440 & 62-297.620(2)(d), F.A.C.; and, Permit No. 1050234-015-AC/PSD-FL-195D, Specific Condition C.1.]

**A.27.** Compliance Tests Prior To Renewal. VE test shall be required for any fuel fired for more than 400 hours in any year of the previous 5 years. Except as provided in subparagraph 62-297.310(8)(b)3., F.A.C. (see condition **TR7.**b.(3) in Appendix TR – Facility-wide Testing Requirements), any CT that does not operate for more than 400 hours per year shall not be required to conduct a visible emissions compliance test for the purpose of a renewal of an air operation permit. [Rules 62-210.300(2)(a) and 62-297.310(8)(b), F.A.C.]

**Recordkeeping and Reporting Requirements**

**A.28.** Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

**A.29.** Daily Fuel Records. To determine compliance with the natural gas and fuel oil firing heat input limitation, the permittee shall maintain daily records of natural gas and fuel oil consumption for each turbine, as well as recent records of the heating value for each fuel. All records shall be maintained for a minimum of five years after the date of each record and shall be made available to representatives of the Department upon request. [Rule 62-4.070(3), F.A.C.; and, Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition E.1.]

**Miscellaneous Conditions**

**A.30.** Future Addition of Control Devices. The permittee shall have the option of installing duct module(s) suitable for possible future installation of an oxidation catalyst and/or SCR equipment on each combined cycle generating unit. In the event that the module(s) are not installed in the HRSG, the retrofit costs associated with not making provisions for such technology (initially) shall not be considered in any future

economic evaluation to justify not installing SCR or an oxidation catalyst. [Permit No. 1050234-003-AC/PSD-FL-195B, Specific Condition A.4.]

*{Permitting Note: SCR was installed between 1999 and 2000 under the authority of permit No. PSD-FL-195A/PA-92-33, which was subsequently replaced by Permit No. 1050234-003-AC/PSD-FL-195B on August 16, 2000.}*

**A.31.** Federal Requirements. In addition to the above conditions, these units shall also comply with all the applicable requirements of 40 CFR 60, Subparts A and GG. See Appendices NSPS, Subpart A - General Provisions and NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines. [Permit Nos. 1050234-003-AC/PSD-FL-195B, Specific Condition E.1.]

**A.32.** National Emission Standards for Hazardous Air Pollutants (NESHAP). The Department determines that compliance with the stationary combustion turbine requirements of 40 CFR 63, Subpart YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (currently stayed) will be required once the final rule has been promulgated. See Appendix NESHAP, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines of this permit. [Rule 62-213.440(1), F.A.C. and 40 CFR 63.6085]

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

| EU No. | Brief Description |
|---|---|
| 021 | Communications Tower Emergency Engine |

This unit includes one 42 horse power (HP) propane-fired stationary reciprocating internal combustion engine (RICE). This engine is a Ford LRG-425I, four-cylinder engine and is associated with the communications tower. This engine is regulated under NESHAP Subpart ZZZZ. This engine was installed in 2005.

The following table contains details for this emissions unit:

| Engine Brake HP | Date of Construction | Primary Fuel | Applicable Requirements for Spark Ignition Type Engines |
|---|---|---|---|
| 42 | 10/2005 | Propane | 40 CFR 63, Subparts A and ZZZZ. |

*{Permitting Note: This spark ignition (SI) engine used as a standby emergency generator is regulated under 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary RICE adopted in Rule 62.204.800(11)(b), F.A.C. Because this engine qualifies as an existing emergency stationary RICE that commenced construction before June 12, 2006 and manufactured before January 1, 2009, with a maximum engine power greater than 25 HP, it is not subject to regulation under NSPS 40 CFR 60, Subpart JJJJ.}*

**Essential Potential to Emit (PTE) Parameters**

**B.1.** Hours of Operation.

a. *Emergency Situations*. There is no time limit on the use of this standby emergency generator in emergency situations. [40 CFR 63.6640(f)(1)]
b. *Maintenance and Readiness Testing*. This engine is 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. Operation for maintenance checks and readiness testing is limited to 100 hours per year. [40 CFR 63.6640(f)(2)(i)]
c. *Non-emergency Situations*. This engine is authorized to operate up to 50 hours per year in non-emergency situations; however, those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. [40 CFR 63.6640(f)(3)]
d. *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 the appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63.6625(h)]

**Emission Limitations and Operating Requirements**

**B.2.** Work or Management Practice Standards.

a. *Oil*. Change oil and filter every 500 hours of operation or annually, whichever comes first or use an oil analysis program to extend this interval, as provided in **paragraph e**., below. [40 CFR 63 Table 2c(6)(a) and footnote 2]
b. *Spark Plugs*. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63 Table 2c(6)(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 Table 2c(6)(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)]

e. *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% of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20% 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**

**B.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**

**B.4.** Continuous Compliance. Each unit shall be in compliance with the emission limitations and operating standards in this subsection at all times. [40 CFR 63.6605(a)]

**B.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**

**B.6.** Compliance Records. The owner or operator must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The records 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. [40 CFR 63.6655(f)]

**Reporting Requirements**

**B.7.** Emergency Situation. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in **Specific Condition B.2.** of this section, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the

schedule required and the federal, state or local law under which the risk was deemed unacceptable. [40 CFR 63 Table 2c, footnote 1]

**Other Federal Requirements**

**B.8.** 40 CFR 63, Subpart A. In addition to the above requirements, this emissions unit shall also comply with the applicable requirements listed below, which are contained in the attached Appendix NESHAP A: 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(b)(1)–(4) | Compliance dates for new and reconstructed sources |
| §63.6(j) | Presidential compliance exemption |
| §63.7(a)(3) | CAA section 114 authority |
| §63.7(e)(4) | Administrator may require other testing under section 114 of the CAA |
| §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) | Records 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(d)(4) | Progress reports |
| §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]

**Subsection C. The specific conditions in this section apply to the following emissions units:**

| EU No. | Brief Description |
|---|---|
| 004 | Emergency Diesel-Fired Fire Pump Engine |

This unit includes one 265 horse power (HP) diesel-fired stationary reciprocating internal combustion engine (RICE). This engine is a Clarke, Model No. DDFP – L6FA 8393V, six cylinder, 2-cycle engine and is associated with the emergency fire pump. This engine is regulated under NESHAP Subpart ZZZZ. This engine was installed in 1998. The emergency fire pump engine uses low sulfur fuel oil only. Emissions from this engine are uncontrolled.

The following table contains details for this emissions unit:

| Engine Brake HP | Date of Construction | Primary Fuel | Displacement liters/cylinder(l/c) | Serial Number | Applicable Requirements for Compression Ignition Type Engines |
|---|---|---|---|---|---|
| 265 | 10/1997 | Diesel | 9.1 L/V6<br>(1.5 L per cylinder) | 6VF - 218618 | 40 CFR 63, Subparts A and ZZZZ<br>This engine is an 'existing' unit. |

*{Permitting Note: This compression ignition (CI) engine used to drive an emergency fire pump is regulated under 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary RICE adopted in Rule 62.204.800(11)(b), F.A.C. Because this engine qualifies as an existing stationary RICE less than 500 HP operating at a major source of HAP, it is not subject to regulation under NSPS 40 CFR 60, Subpart IIII.}*

**Essential Potential to Emit (PTE) Parameters**

**C.1.** Hours of Operation.

a. *Emergency Situations*. There is no time limit on the use of this fire pump engine in emergency situations. [40 CFR 63.6640(f)(1)(i)]
b. *Maintenance and Readiness Testing*. This engine is 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. Operation for maintenance checks and readiness testing is limited to 100 hours per year. [40 CFR 63.6640(f)(2)(i)]
c. *Non-emergency Situations*. This engine is 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)(3)]
d. *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 the appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63.6625(h)]

**Emission Limitations and Operating Requirements**

**C.2.** Work or Management Practice Standards.

f. *Oil*. Change oil and filter every 500 hours of operation or annually, whichever comes first or use an oil analysis program to extend this interval, as provided in e., below. [40 CFR 63 Table 2c(1)(a) and footnote 2]
g. *Air Cleaner*. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first. [40 CFR 63 Table 2c(1)(b)]

h. *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 Table 2c(1)(c)]

i. *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)]

j. *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% of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20% 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**

**C.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**

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

**C.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**

**C.6.** Compliance Records. The owner or operator must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The records 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. [40 CFR 63.6655(f)]

**Reporting Requirements**

**C.7.** Emergency Situation. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in **Specific Condition C.2.** of this section, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice

should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable. [40 CFR 63 Table 2c, footnote 1]

**Other Federal Requirements**

**C.8.** 40 CFR 63, Subpart A. In addition to the above requirements, this emissions unit shall also comply with the applicable requirements listed below, which are contained in the attached Appendix NESHAP A: 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(b)(1)–(4) | Compliance dates for new and reconstructed sources |
| §63.6(j) | Presidential compliance exemption |
| §63.7(a)(3) | CAA section 114 authority |
| §63.7(e)(4) | Administrator may require other testing under section 114 of the CAA |
| §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) | Records 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(d)(4) | Progress reports |
| §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]

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

| E.U. No. | Brief Description of Power Block 2 |
|---|---|
| 014 | 170 MW Westinghouse 501FD CT2A with inlet air chiller & unfired HRSG |
| 015 | 170 MW Westinghouse 501FD CT2B with inlet air chiller & unfired HRSG |

Emission units 014 and 015 each consist of a combined cycle Westinghouse 501FD Combustion Turbine with an inlet air chiller at the compressor inlet of each turbine, each with a nominal generator rating of 170 MW and each with a maximum heat input rating of 2,048 MMBtu/hr (HHV), while firing natural gas, and 2,155 MMBtu/hr (HHV), while firing fuel oil, based on a compressor inlet air temperature of 59ºF, the HHV of each fuel, and 100% load. NOX emissions are controlled with DLN for natural gas firing and wet injection for fuel oil firing, complete with SCR. Each combustion turbine incorporates an unfired HRSG. Steam from both HRSGs is delivered to a single steam turbine-electrical generator, which has a generating capacity of 190 MW. The total generating capacity of the "2-on-1" combined cycle unit is approximately 530 MW.

The efficient combustion of natural gas and restricted firing of low sulfur distillate oil minimizes the emissions of CO, $PM/PM_{10}$, sulfuric acid mist (SAM), $SO_2$ and VOC. DLN combustion technology for gas firing and water injection for oil firing reduce $NO_X$ emissions. An SCR system – in combination with DLN combustion technology for gas firing and a water injection system for oil firing – reduces $NO_X$ emissions. The HRSGs are designed and constructed such that an oxidation catalyst can be readily installed if necessary to achieve compliance with CO emission limitations.

Each HRSG has a stack that is 125 feet tall and 19 feet in diameter. Each stack is equipped with CEMS to measure and record CO and $NO_X$ emissions as well as flue gas $O_2$ or $CO_2$ content. The following table summarizes the exhaust characteristics for the combined cycle systems. Heat input rate is based on the HHV of the fuel, assuming 1,030 Btu/scf of natural gas and 19,892 Btu/lb of fuel oil.

| Fuel | Heat Input Rate (HHV) | Compressor Inlet Temp | Exhaust Temperature | Exit Velocity | Flow Rate |
|---|---|---|---|---|---|
| Natural Gas | 2,048 MMBtu/hour | 59°F | 190°F | 59.2 ft/sec | 1,009,487 acfm |
| Oil | 2,155 MMBtu/hour | 59°F | 270°F | 67.0 ft/sec | 1,139,394 acfm |

*{Permitting notes: 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)41, F.A.C.; Rule 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD); PSD-FL-296 & revisions; and PPSA: PA 92-33; and, Rule 62-212.400, F.A.C.}*

**Essential Potential to Emit (PTE) Parameters**

**D.1.** Permitted Capacity. The maximum allowable heat input rates are as follows:

| EU No. | MMBtu/hr Heat Input | Fuel Type |
|---|---|---|
| 014 and 015 | 2,048 | Natural Gas |
| | 2,155 | Fuel Oil |

Maximum heat input rate is based on a compressor inlet air temperature of 59ºF, the HHV of each fuel, and 100% load. Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternate fuels, and evaporative cooling. The permittee shall provide updated manufacturer's performance curves (or equations) that correct for site conditions to the Compliance Authority within 45 days of completing a maintenance activity, tuning session or compliance testing that results in the need to reestablish the curves. 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 62-210.200(PTE) & 62-213.440(1), F.A.C.; and Permit Nos. 1050234-007-AC/PSD-FL-296A, Specific Condition III.7. & 1050234-011-AC/PSD-FL-296B]

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

**D.3.** Methods of Operation.

a. *Fuels.* The fuels that are allowed to be burned in this unit/these units are:

(1)Natural gas shall be the primary fuel and shall contain no more than 1.0 grains of sulfur per 100 standard cubic feet of natural gas.

(2) No. 2 distillate oil (or a superior grade) shall be the restricted alternative fuel and shall contain no more than 0.05% sulfur, by weight. Distillate fuel oil consumption of both emissions units shall not exceed 19,703,000 gallons in any consecutive 12-month period.

*{Permitting note: This condition limits annual average fuel oil consumption to the equivalent of approximately 720 hours of operation per year per turbine, based on 59 F annual average temperature. Fuel oil consumption is not limited per turbine, and the allowable fuel may be used in a single turbine.}*

b. *Combined Cycle Operation.* Each gas turbine/HRSG system may operate to produce direct, shaft-driven electrical power and steam-generated electrical power from the steam turbine-electrical generator as a "2-on-1" combined cycle unit subject to the restrictions of this permit. In accordance with the specifications of the SCR and HRSG manufacturers, the SCR system shall be on line and functioning properly during combined cycle operation or when the HRSG is producing steam.

c. *Ammonia Injection*. Ammonia injection shall begin as soon as operation of the gas turbine/HRSG system achieves the operating parameters specified by the manufacturer.

[Rules 62-210.200(PTE) & 62-212.400(BACT), F.A.C.; and, Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.8.]

*{Permitting Note: The fuel specifications listed in **Specific Condition D.3.** combined with the efficient combustion design and operation of each gas turbine represents the BACT determination for $PM/PM_{10}$ emissions. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. The fuel sulfur specifications also effectively limit the potential emissions of SAM and $SO_2$ from the gas turbines and represent the BACT determination for these pollutants. Compliance with the fuel sulfur specifications shall be determined by the requirements in **Specific Condition D.33.** }*

**D.4.** Hours of Operation. Subject to the other operational restrictions of this permit, the gas turbines may operate throughout the year (8,760 hours per year). [Rules 62-210.200(PTE) & 62-212.400(BACT), F.A.C.; and, Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.8.]

**Control Technology and Operating Procedures**

**D.5.** Equipment and Controls - Gas Turbines. The permittee is authorized to tune, operate, and maintain two Siemens Westinghouse Model 501 FD gas turbine-electrical generator sets each with a generating capacity of 170 MW. Each gas turbine includes the Siemens TXP automated gas turbine control system and has dual-fuel capability. The gas turbines utilize DLN combustors.

a. *Gas Turbine $NO_X$ Controls*.

(1) DLN Combustion. The permittee shall operate and maintain the DLN combustion system to control $NO_X$ emissions from each gas turbine when firing natural gas. Each system shall be maintained and tuned in accordance with the manufacturer's recommendations.

(2) Water Injection. The permittee shall operate and maintain the water injection system to reduce $NO_X$ emissions from each gas turbine when firing distillate oil. Each system shall be maintained and tuned in accordance with the manufacturer's recommendations.

(3) SCR System. The permittee shall operate and maintain the SCR system to control $NO_X$ emissions from each gas turbine when firing either natural gas or distillate oil. The SCR system consists of an

ammonia injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment. The SCR system shall be tuned, maintained and operated to achieve the permitted levels for $NO_X$ emissions and ammonia slip.
*{Permitting note: In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.}*

b. *HRSG*. The permittee is authorized to operate and maintain two unfired HRSGs. Each HRSG shall be maintained to recover heat energy from one of the two gas turbines (CT 2A or CT 2B) and deliver steam to the steam turbine-electrical generator through a common manifold.
*{Permitting note: The two HRSGs deliver steam to a single steam turbine-electrical generator with a generating capacity of 190 MW.}*

c. *CO Controls*. The permittee shall have designed and constructed the HRSGs such that an oxidation catalyst can be readily installed if necessary to achieve compliance with the CO emission limitations.

[Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.4.]

**D.6.** Operating Procedures. The BACT determinations established by Permit No. 1050234-007-AC/PSD-FL-296A, rely on "good operating practices" to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the gas turbines, HRSGs, 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 of minimizing excess emissions. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.10.]

**Emission Limitations and Standards**

Unless otherwise specified, the averaging times for **Specific Conditions D.7. – D.11.** are based on the specified averaging time of the applicable test method.

**D.7.** CO. Based on CEMS, CO emissions shall not exceed:
a. *While firing Natural Gas*: 16 ppmvd corrected to 15% oxygen on a 24-hour block averaging time.
b. *While firing Fuel Oil*: 30 ppmvd corrected to 15% oxygen on a 24-hour block averaging time.
Compliance with the 24-hour block CO CEMS standards shall be determined separately based on the hours of operation for each alternative fuel. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.9.]

*{Permitting note: A 24-hour block compliance average may be based on as little as 1-hour of CEMS data or as much as 24-hours of CEMS data.}*

**D.8.** $NO_X$. Based on CEMS, $NO_X$ emissions shall not exceed:
a. *While firing Natural Gas*: 3.5 ppmvd corrected to 15% oxygen on a 24- hour block averaging time.
b. *While firing Fuel Oil*: 12 ppmvd corrected to 15% oxygen on a 24-hour block averaging time.
$NO_X$ mass emission rates are defined as oxides of nitrogen expressed as $NO_2$. Compliance with the 24-hour block $NO_X$ CEMS standards shall be determined separately based on the hours of operation for each alternative fuel. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.9.]

*{Permitting Note: A 24-hour block (midnight-to-midnight) compliance average may be based on as little as 1-hour of CEMS data or as much as 24-hours of CEMS data, depending upon how many hours the unit actually ran during a given block. Compliance averages shall only include actual run hours during each 24-hour block.}*

**D.9.** VOC. Based on stack testing, VOC emissions shall not exceed:
a. *While firing Natural Gas*: 2 ppmvd corrected to 15% oxygen on a 3-hour averaging time.
b. *While firing Fuel Oil*: 10 ppmvd corrected to 15% oxygen on a 3-hour averaging time.

Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as propane. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.9.]

**D.10.** Ammonia. Based on stack testing, ammonia emissions shall not exceed:
a. *While firing Natural Gas*: 5 ppmvd corrected to 15% oxygen on a 3-hour averaging time.
b. *While firing Fuel Oil*: 9 ppmvd corrected to 15% oxygen on a 3-hour averaging time.
Subject to the requirements of **Specific Condition D.24.** , each SCR system shall be maintained and operated to meet the designed ammonia slip target of less than 5 ppmvd corrected to 15% oxygen when firing natural gas based on the average of three test runs. Compliance with the ammonia slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTM-027 or EPA Method 320. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.9.]

**D.11.** VE. As determined by stack testing, VE shall not exceed 10% opacity for each 6-minute block average. [Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.9.]

*{Permitting Note: The concentration limits and fuel specifications for the control of the above pollutants are equivalent to the following mass emission rates (at 20ºF):*

- *CO = 78.7 lbs/hr for natural gas firing and 119.5 lbs/hr for distillate fuel oil firing,*
- *$NO_X$ = 27.0 lbs/hr for natural gas firing and 99.7 lbs/hr for distillate fuel oil firing,*
- *VOC = 5.0 lbs/hr for natural gas firing and 23.5 lbs/hr for distillate fuel oil firing,*
- *$PM_{10}$ = 7.3 lbs/hr for natural gas firing and 64.8 lbs/hr for distillate fuel oil firing, and*
- *$SO_2$ = 5.6 lbs/hour for natural gas firing and 105.6 lbs/hr for distillate fuel oil firing.*

*SAM emissions are estimated to be less than 10% of the $SO_2$ emissions.}*

**Excess Emissions**

The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS, NESHAP, or Acid Rain program provision.

**D.12.** Excess Emissions Allowed. Except as provided in **Specific Conditions D.15. and D.16.** excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted provided that best operational practices to minimize emissions are adhered to and 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.13.** Excess Emissions Prohibited. Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that 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(1), F.A.C. and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.11.]

**D.14.** 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 Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.12.]

**D.15.** CEMS Data Exclusion. As provided in this paragraph, $NO_X$ and CO emissions data recorded during periods of startup, shutdown, fuel switches (oil-to-gas or gas-to-oil), and documented malfunctions may be excluded from the block average calculated to demonstrate compliance with the emission limits of this permit. (See **Specific Conditions D.7. – D.11.** )
a. *Startup.* Periods of excess emissions excluded due to startup shall not exceed 120 minutes per startup per unit except for the following cold startups. A "cold STG startup" is defined as a startup following a

complete steam turbine generator (STG) shutdown lasting a minimum of 48 hours. Periods of excess emissions excluded due to cold STG startup shall not exceed 360 minutes per startup per unit. A "cold CT-HRSG startup" is defined as startup following a complete shutdown of the combustion turbine-heat recovery steam generator (CT-HRSG) lasting a minimum of 8 hours. Periods of excess emissions excluded due to cold CT-HRSG startup shall not exceed 180 minutes per startup per unit.

b. *Shutdown.* Periods of data excluded for shutdown shall not exceed 120 minutes per shutdown per unit.
c. *Fuel Switching.* Periods of data excluded for fuel switches shall not exceed 120 minutes per fuel switch per unit.
d. *Malfunctions.* Periods of data excluded for documented malfunctions shall not exceed 120 minutes (non-continuous) per unit in any 24-hour block. A "documented malfunction" means a malfunction that meets the notification requirements specified in **Specific Condition D.28.**
e. *All Periods.* All periods of data excluded for any startup, shutdown, fuel switches or documented malfunction shall be consecutive for each episode.
f. *Duration*. The permittee shall minimize the duration of data excluded to the extent practicable. Data shall not be excluded if the startup, shutdown, or documented malfunction was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably have been prevented. Best operating practices shall be used to minimize hourly emissions that occur during episodes of startup, shutdown, fuel switching, or documented malfunction.
g. *Summary.* Allowable Excess Emissions Convenience Summary:

| Method of Operation | Excess Emissions Conditions | Period Authorized for Excess Emissions |
|---|---|---|
| Hot Start-up | Complete shutdown of CT-HRSG lasting ≤ 8 hours | ≤ 120 minutes/start-up/unit |
| Cold STG Start-up | STG shutdown lasting ≥ 48 hours | ≤ 360 minutes/start-up/unit |
| Cold CT-HRSG Start-up | Complete shutdown of CT-HRSG lasting ≥ 8 hours | ≤ 180 minutes/start-up/unit |
| Shutdown | Shutdown | ≤ 120 minutes/shutdown/unit |
| Fuel Switches | Oil-to-Gas or Gas-to-Oil | ≤ 120 minutes/fuel-switch/unit |
| Documented Malfunctions | Malfunctions | ≤ 120 minutes in any 24-hour block |

[Rules 62-212.400(BACT), 62-210.700 & 62-213.440(1), F.A.C.; and, Permit No. 1050234-015-AC/PSD-FL-296C, Specific Condition 13.]

**D.16.** CEMS Data Exclusion – Limited Use Operations. CEMS data collected during any of the following limited use operational periods shall be excluded from the compliance averages:

a. *DLN Tuning*. CEMS data collected during major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of a combustor change-out, a major repair or maintenance to a combustor, or circumstances as identified or requested by the equipment vendor. Prior to performing any major tuning session, the permittee shall provide the Department's Southwest District Compliance Authority with an advance notice that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.
b. *Full Speed No Load Testing*. As a periodic maintenance practice, the permittee may perform full speed no load tests with the combustion turbine generator in accordance with the manufacturer's recommendations (or industry standards). An example of work that may require full speed no load testing

includes, but is not limited to, testing and commissioning of synchronizing instrumentation, transformers and generation equipment to assure safe and reliable connection to the bulk electric system.
[Rule 62-4.070(3), F.A.C.; and Permit No. 1050234-024-AC, Section 3, Subsection B, Specific Condition 2.]

**Monitoring of Operations**

**D.17.** Water Injection Monitoring Requirements. In accordance with the manufacturer's specifications, the permittee shall operate and maintain a monitoring system to continuously measure and record the water-to-fuel ratio when firing distillate oil. The permittee shall document the water-to-fuel ratio required to meet permitted emissions levels over the range of load conditions allowed by this permit. The $NO_X$ CEMS is used to demonstrate compliance with the $NO_X$ emissions standards. During $NO_X$ CEMS downtimes or malfunctions, the permittee shall monitor the water-to-fuel ratio and operate at a level that is consistent with the documented flow rate for the gas turbine load condition. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.21.]

**D.18.** Ammonia Monitoring Requirements. In accordance with the manufacturer's specifications, the permittee shall operate and maintain an ammonia flow meter to measure and record the ammonia injection rate to the SCR system. The permittee shall document the general range of ammonia flow rates required to meet permitted emissions levels over the range of load conditions allowed by this permit by comparing $NO_X$ emissions recorded by the CEM system with ammonia flow rates recorded using the ammonia flow meter. During $NO_X$ monitor downtimes or malfunctions, the permittee shall operate at the ammonia flow rate that is consistent with the documented flow rate for the combustion turbine load condition. [Rules 62-4.070(3) & 62-212.400(BACT), F.A.C.; and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.22.]

**Continuous Monitoring Requirements**

**D.19.** CO and $NO_X$ CEMS. The permittee shall maintain and operate CEMS to measure and record the emissions of CO and $NO_X$ from the combined cycle gas turbine. The CEMS shall be used to demonstrate continuous compliance with the CEMS emission standards specified in this permit. Upon request by the Department's Southwest District Compliance Authority, the CEMS emission rates shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332. Within one working day of discovering emissions in excess of a CO or $NO_X$ standard (and subject to the specified averaging period), the permittee shall notify the Department's Southwest District Compliance Authority.

a. *CO Monitors.* Except as otherwise specified by this condition, the 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, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Department's Southwest District Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A, 40 CFR 60. The Method 10 analysis shall be based on a continuous sampling train, and the ascarite trap may be omitted or the interference trap of Section 10.1 may be used in lieu of the silica gel and ascarite traps. The CO monitor shall be a dual range monitor. The span for the lower range shall not be greater than 50 ppm. The span for the upper range shall be set at a level that provides for accurate measurement during startups and shutdowns.

b. *$NO_X$ Monitors.* Except as otherwise specified by this condition, the $NO_X$ monitor shall be certified pursuant to 40 CFR 75, and shall be operated and maintained in accordance with the applicable requirements of 40 CFR 75, Subparts B and C. Record keeping and reporting shall be conducted pursuant to 40 CFR 75, Subparts F and G. The RATA tests required for the $NO_X$ monitor shall be performed using EPA Method 20 or 7E in Appendix A, 40 CFR 60. The $NO_X$ monitor shall be a dual range monitor. The span for the lower range shall not be greater than 10 ppm. The span for the upper range shall be set at a level that provides for accurate measurement during startups and shutdowns.

c. *Diluent Monitors.* The $O_2$ or $CO_2$ 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 $CO_2$ 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.

d. *Moisture Correction*. Final results of the CEMS shall be expressed as ppmvd corrected to 15% oxygen. If the CEMS measures concentration on a wet basis, the CEMS shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the permittee may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). If the CEMS measures concentration on a wet basis and the diluent monitor measures $CO_2$ on a wet basis, then the permittee may develop an algorithm to enable correction of the CEMS results to a dry basis (0% moisture) without determining the corresponding moisture content.

e. *1-Hour Block Averages.* Hourly average values shall begin at the top of each hour. Each hourly average value 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, an hourly value 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, the hourly average value is not valid. An hour in which any oil is fired is attributed towards compliance with the permit standards for oil firing. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly average values. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour.

f. *24-hour Block Average*. A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive hourly average emission rate values. If a unit operates less than 24 hours during the block, the 24-hour block average shall be the average of available valid hourly average emission rate values for the 24-hour block. For purposes of determining compliance with the 24-hour CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block.

*{Permitting Note: There may be more than one 24-hour compliance demonstration required for CO and $NO_X$ emissions depending on the use of alternate fuels}.*

*{Permitting Note: Valid hours are as specified in paragraph e.}*

g. *Data Exclusion.* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, fuel switches, and DLN tuning. CEMS emissions data recorded during some of these episodes may be excluded from the corresponding CEMS compliance demonstration subject to the provisions of **Specific Conditions D.15. and D.16.**

h. *Availability*. Monitor availability for the CEMS shall be 95% or greater in any calendar quarter. The quarterly permit excess emissions report shall be used to demonstrate monitor availability. In the event 95% availability is not achieved, the permittee shall provide the Department's Southwest District Compliance Authority 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 Department's Southwest District Compliance Authority.

[Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.20.]

*{Permitting Note: Compliance with these requirements assures compliance with the other applicable CEMS requirements such as: NSPS Subpart GG; 40 CFR 60.7(a)(5); 40 CFR 60.13; 40 CFR 60, Appendix B - Performance Specifications; and, 40 CFR 60, Appendix F - Quality Assurance Procedures.}*

**Test Methods and Procedures**

**D.20.** Test Methods. Required tests shall be performed in accordance with the following reference methods:

| Method | Description of Method and Comments |
|---|---|
| 1-4 | Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content |
| CTM-027 or EPA Method 320 | *Procedure for Collection and Analysis of Ammonia in Stationary Sources*<br>This is an EPA conditional test method. The minimum detection limit shall be 1 ppm. |
| 7E | *Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)* |
| 9 | *Visual Determination of the Opacity of Emissions from Stationary Sources*<br>The test shall be conducted for a minimum of 30 minutes. |
| 10 | *Determination of Carbon Monoxide Emissions from Stationary Sources*<br>This method shall be based on a continuous sampling train. |
| 18 | *Measurement of Gaseous Organic Compound Emissions by Gas Chromatography*<br>(Optional) EPA Method 18 may be used concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions. |
| 20 | *Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines* |
| 25A | *Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer* |

Note: Method CTM-027 is published on EPA's Technology Transfer Network Web Site at http://www.epa.gov/ttn/emc/ctm.html. The above methods are described in Appendix A, 40 CFR 60, 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. [Rule 62-204.800, F.A.C.; 40 CFR 60, Appendix A; and, Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.15.]

**D.21.** 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.]

**D.22.** Continuous Compliance. The permittee shall demonstrate continuous compliance with the CO and $NO_X$ emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Department's Southwest District Compliance Authority summarizing results of the RATA. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.17.]

*{Permitting note: Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion, which reduces emissions of $PM/PM_{10}$ and VOC.}*

**D.23.** Annual Compliance Tests. During each calendar year (January 1st to December 31st), each gas turbine shall be tested to demonstrate compliance with the emission standards for visible emissions and ammonia.

a. *Visible Emissions*. Each unit shall be tested for visible emissions when firing natural gas and when firing distillate fuel oil. Annual emissions testing while firing fuel oil is not required during any calendar year in which less than 400 hours of distillate fuel oil is fired in both emission units combined. CO emissions recorded by the CEMS shall be reported for the visible emissions observation period.

b. *Ammonia*. Annual testing to determine the ammonia slip shall be conducted while firing natural gas. $NO_X$ emissions recorded by the CEMS shall be reported for each ammonia slip test run.

c. *VOC*. Annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions. A monitored exceedance of the CO standard does not necessarily indicate an exceedance of the VOC emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(8)(b), F.A.C.

[Rules 62-212.400(BACT), 62-213.440(1) & 62-297.310(8)(a)4., F.A.C.; and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.18.]

**D.24.** Additional Compliance Determinations. The Department may require the permittee to conduct additional tests following a major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, DLN combustors, etc. If required, each gas turbine shall be stack tested to demonstrate compliance with the emission standards for CO, $NO_X$, VOC, VE, and ammonia slip. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the unit is restarted. Each unit shall be tested when firing natural gas and when firing distillate fuel oil. CEMS data collected during the required Relative Accuracy Test Assessments (RATA) may be used to demonstrate compliance with the CO and $NO_X$ standards. CO and $NO_X$ emissions recorded by the CEMS shall also be reported for each run during tests for VE, VOC and ammonia slip. [40 CFR 60.8 and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.16.]

**D.25.** Additional Ammonia Slip Testing. If the tested ammonia slip rate for a gas turbine exceeds 5 ppmvd corrected to 15% oxygen when firing natural gas during the annual test, the permittee shall:

a. Begin testing and reporting the ammonia slip for each subsequent calendar quarter;

b. Before the ammonia slip exceeds 7 ppmvd corrected to 15% oxygen, take corrective actions that result in lowering the ammonia slip to less than 5 ppmvd corrected to 15% oxygen; and,

c. Test and demonstrate that the ammonia slip is no more than 5 ppmvd corrected to 15% oxygen within 15 days after completing the corrective actions.

Corrective actions may include, but are not limited to, adding catalyst, replacing catalyst, or other SCR system maintenance or repair. After demonstrating that the ammonia slip level is no more than 5 ppmvd corrected to 15% oxygen, testing and reporting shall resume on an annual basis. [Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.19.]

*{Permitting Note: Quarterly testing continues until corrective actions result in ammonia slip returning to less than 5 ppmvd, corrected to 15% oxygen. Test results greater than 7 ppmvd corrected to 15% oxygen are considered a violation of this permit condition.}*

**Recordkeeping and Reporting Requirements**

**D.26.** Reporting Schedule. The following reports and notifications shall be submitted to the Compliance Authority:

| Report | Reporting Deadline | Related Condition |
|---|---|---|
| Malfunction Notification | Within One Working Day | **D.28.** |
| Data Exclusion Report | Quarterly | **D.29.** |
| NSPS Excess Emissions Report | Semi-annually | **D.30.** |

[Rule 62-213.440(1)(b), F.A.C.]

**D.27.** Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

**D.28.** Malfunction Notification. Within one working day of a malfunction for which CEMS data is excluded pursuant to **Specific Condition D.15.** , the permittee shall notify the Department's Southwest District Compliance Authority by telephone, facsimile transmittal, or electronic mail. The notification shall include a preliminary report of: the nature, extent, and duration of the emissions; the probable cause of the emissions; and the actions taken to correct the problem. If requested by the Department's Southwest District Compliance Authority, the permittee shall submit written quarterly reports summarizing the malfunctions in lieu of the individual malfunction notifications otherwise required. [Rule 62-210.700, F.A.C. and Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.26.]

**D.29.** Quarterly Data Exclusion and Monitor Availability Report. The permittee shall submit a quarterly report to the Department's Southwest District Compliance Authority summarizing all periods of valid hourly CO and $NO_X$ emissions data excluded from the 24-hour block average compliance determinations pursuant to **Specific Conditions D.15. and D.16.** In addition, the quarterly report shall summarize the CEMS availability for the previous quarter. All reports shall be postmarked by the 30th day following the end of each calendar quarter. An example of an acceptable report format for monitoring systems availability is provided in Figure 1 - Summary Report-Gaseous And Opacity Excess Emissions and Monitoring System Performance. [Rules 62-4.130, 62-204.800 & 62-210.700(6), F.A.C.; 40 CFR 60.7(c) & (d); and, Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.28.]

**D.30.** Semiannual NSPS Excess Emissions Report. In accordance with 40 CFR 60.7(c), the permittee shall submit a semiannual report to the Department's Southwest District Compliance Authority summarizing any emissions in excess of the NSPS standards. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the information specified in 40 CFR 60.7(c)(1) through (c)(4). For purposes of reporting emissions in excess of 40 CFR 60, Subpart GG, excess emissions from the gas turbine are defined as: any CEMS hourly average value exceeding the NSPS $NO_X$ emission standard identified in Appendix GG - NSPS Subpart GG Requirements for Gas Turbines (i.e., 112.5 ppmvd corrected to 15% oxygen for both natural gas and fuel oil); and any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds the NSPS standard identified in Appendix GG - NSPS Subpart GG Requirements for Gas Turbines (i.e., sulfur in excess of 0.8% by weight). An example of an acceptable report format is provided in Figure 1 - Summary Report-Gaseous And Opacity Excess Emissions and Monitoring System Performance. [40 CFR 60.7(c) and Permit No.1050234-007-AC/PSD-FL-296A, Specific Condition III.27.]

**D.31.** Monitoring of Operation. To demonstrate compliance with the fuel consumption limits of this permit, the permittee shall record the distillate fuel oil consumption on a rolling 12-month basis. [Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.23.]

**D.32.** Frequency of Recordkeeping. **Specific Condition D.19.** requires the calculation of one or more 24-hour block average emission rates for each operating day. Within 24 hours of the conclusion of each operating day, the permittee shall complete the calculations and record the results for that operating day. [Permit No. 1050234-007-AC/PSD-FL-296A, Specific Condition III.24.]

**D.33.** Fuel Sulfur Records. The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.

a. 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 in accordance with 40 CFR 60, Subpart GG. (See Appendix NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines.)

b. Sampling and analysis for the fuel oil sulfur content shall be conducted in accordance with the methods in 40 CFR 60, Subpart GG, or their latest editions. For each subsequent fuel delivery, the permittee shall either (1) maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor, or (2) take and analyze a sample according to the above procedures and maintain a permanent file of the results of the analysis. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content. (See Appendix NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines.)

c. The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75, Appendix D.

[Rule 62-4.160(15), F.A.C.; 40 CFR 75, Appendix D; and, Permit No. 1050234-015-AC/PSD-FL-296C, Specific Condition 25.]

**Other Requirements**

**D.34.** Federal Requirements. In addition to the above conditions, these units shall also comply with all the applicable requirements of 40 CFR 60, Subparts A and GG. See Appendices NSPS, Subpart A - General Provisions and NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines. [Permit No. 1050234-015-AC/PSD-FL-296C]

**D.35.** National Emission Standards for Hazardous Air Pollutants (NESHAP). The Department determines that compliance with the stationary combustion turbine requirements of 40 CFR 63, Subpart YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (currently stayed) will be required once the final rule has been promulgated. See Appendix NESHAP, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines of this permit. [Rule 62-213.440(1), F.A.C. and 40 CFR 63.6085]

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

| E.U. No. | Brief Description of Power Block 3 |
|---|---|
| 016 | 170 MW Westinghouse 501FD CT3A with inlet air chiller & unfired HRSG |
| 017 | 170 MW Westinghouse 501FD CT3B with inlet air chiller & unfired HRSG |

Emission units 016 and 017 are each a Siemens Westinghouse 501 FD gas turbine-electrical generator set with an automated gas turbine control system, an unfired HRSG, and an inlet air chiller at the compressor inlet of each turbine. Each of the gas turbine-electrical generator sets has a generating capacity of 170 MW for gas firing. Each gas turbine fires natural gas as the primary fuel and distillate oil as a restricted alternate fuel. Steam from both HRSGs is delivered to a single steam turbine-electrical generator, which has a generating capacity of 190 MW. The total generating capacity of the "2-on-1" combined cycle unit is approximately 530 MW. The maximum heat input rate is based on the HHV of the fuel, which is 2,048 MMBtu/hr, while firing natural gas, and 2,155 MMBtu/hr, while firing fuel oil, based on a compressor inlet air temperature of 59ºF, and 100% load.

The efficient combustion of natural gas and restricted firing of low sulfur distillate oil minimizes the emissions of CO, $PM/PM_{10}$, SAM, $SO_2$ and VOC. DLN combustion technology for gas firing and water injection for oil firing reduce $NO_X$ emissions. SCR system – in combination with DLN combustion technology for gas firing and a water injection system for oil firing – reduces $NO_X$ emissions. The HRSGs are designed and constructed such that an oxidation catalyst can be readily installed if necessary to achieve compliance with CO emission limitations.

Each HRSG has a stack that is 125 feet tall and 19 feet in diameter. Each stack is equipped with CEMS to measure and record CO and $NO_X$ emissions as well as flue gas $O_2$ or $CO_2$ content. The following table summarizes the exhaust characteristics for the combined cycle systems. Heat input rate is based on the HHV of the fuel, assuming 1,030 Btu/scf of natural gas and 19,892 Btu/lb of fuel oil.

| Fuel | Heat Input Rate (HHV) | Compressor Inlet Temp | Exhaust Temperature | Exit Velocity | Flow Rate |
|---|---|---|---|---|---|
| Natural Gas | 2,048 MMBtu/hour | 59°F | 190°F | 59.2 ft/sec | 1,009,487 acfm |
| Oil | 2,155 MMBtu/hour | 59°F | 270°F | 67.0 ft/sec | 1,139,394 acfm |

*{Permitting Notes: 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)41, F.A.C.; Rule 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD); PSD-FL-330 and revisions; and, Rule 62-212.400, F.A.C.}*

**Essential Potential to Emit (PTE) Parameters**

**E.1.** Permitted Capacity. The maximum allowable heat input rates are as follows:

| EU No. | MMBtu/hr Heat Input | Fuel Type |
|---|---|---|
| 016 and 017 | 2,048 | Natural Gas |
| | 2,155 | Fuel Oil |

Maximum heat input rate is based on a compressor inlet air temperature of 59ºF, the HHV of each fuel, and 100% load. Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternate fuels, and evaporative cooling. The permittee shall provide updated manufacturer's performance curves (or equations) that correct for site conditions to the Compliance Authority within 45 days of completing a maintenance activity, tuning session or compliance testing that results in the need to reestablish the curves. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file

with the Department. [Rule 62-210.200(Definitions-PTE), F.A.C.; and, Permit Nos. 1050234-006-AC/PSD-FL-330, Specific Condition III.7. & 1050234-013-AC/PSD-FL-330A]

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

**E.3.** Methods of Operation.

a. *Fuels.* The fuels that are allowed to be burned in this unit/these units are:
   (1) Natural gas shall be the primary fuel and shall contain no more than 1.0 grains of sulfur per 100 standard cubic feet of natural gas.
   (2) No. 2 distillate oil (or a superior grade) shall be the restricted alternative fuel and shall contain no more than 0.05% sulfur, by weight. Distillate fuel oil consumption of both emissions units shall not exceed 19,703,000 gallons in any consecutive 12-month period.

   *{Permitting note: This condition limits annual average fuel oil consumption to the equivalent of approximately 720 hours of operation per year per turbine, based on 59 F annual average temperature. Fuel oil consumption is not limited per turbine, and the allowable fuel may be used in a single turbine.}*

b. *Combined Cycle Operation.* Each gas turbine/HRSG system may operate to produce direct, shaft-driven electrical power and steam-generated electrical power from the steam turbine-electrical generator as a "2-on-1" combined cycle unit subject to the restrictions of this permit. In accordance with the specifications of the SCR and HRSG manufacturers, the SCR system shall be on line and functioning properly during combined cycle operation or when the HRSG is producing steam.

c. *Ammonia Injection*. Ammonia injection shall begin as soon as operation of the gas turbine/HRSG system achieves the operating parameters specified by the manufacturer.

[Rules 62-210.200(PTE) & 62-212.400(BACT), F.A.C.; and, Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.8.]

*{Permitting Note: The fuel specifications listed in **Specific Condition E.3.** combined with the efficient combustion design and operation of each gas turbine represents the BACT determination for $PM/PM_{10}$ emissions. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. The fuel sulfur specifications also effectively limit the potential emissions of SAM and $SO_2$ from the gas turbines and represent the BACT determination for these pollutants. Compliance with the fuel sulfur specifications shall be determined by the requirements in **Specific Condition E.33.** }*

**E.4.** Hours of Operation. Subject to the other operational restrictions of this permit, the gas turbines may operate throughout the year (8,760 hours per year). [Rules 62-210.200(PTE) & 62-212.400(BACT), F.A.C.; and, Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.8.]

**Control Technology**

**E.5.** Equipment and Controls - Gas Turbines. The permittee is authorized to tune, operate, and maintain two Siemens Westinghouse Model 501FD gas turbine-electrical generator sets each with a generating capacity of 170 MW. Each gas turbine includes the Siemens TXP automated gas turbine control system and has dual-fuel capability. The gas turbines utilize DLN combustors.

a. *Gas Turbine $NO_X$ Controls*.
   (1) DLN Combustion. The permittee shall operate and maintain the DLN combustion system to control $NO_X$ emissions from each gas turbine when firing natural gas. Each system shall be maintained and tuned in accordance with the manufacturer's recommendations.
   (2) Water Injection. The permittee shall operate and maintain the water injection system to reduce $NO_X$ emissions from each gas turbine when firing distillate oil. Each system shall be maintained and tuned in accordance with the manufacturer's recommendations.
   (3) SCR System. The permittee shall operate and maintain the SCR system to control $NO_X$ emissions from each gas turbine when firing either natural gas or distillate oil. The SCR system consists of

an ammonia injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment. The SCR system shall be tuned, maintained and operated to achieve the permitted levels for $NO_X$ emissions and ammonia slip. *{Permitting note: In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.}*

b. *HRSG*. The permittee is authorized to operate and maintain two unfired HRSGs. Each HRSG shall be maintained to recover heat energy from one of the two gas turbines (CT 3A or CT 3B) and deliver steam to the steam turbine-electrical generator through a common manifold. *{Permitting note: The two HRSGs deliver steam to a single steam turbine-electrical generator with a generating capacity of 190 MW.}*

c. *CO Controls*. The permittee shall have designed and constructed the HRSGs such that an oxidation catalyst can be readily installed if necessary to achieve compliance with the CO emission limitations. The oxidation catalyst, should it be installed, shall be designed and operated to achieve a maximum outlet concentration of 3.5 ppmvd corrected to 15% oxygen when natural gas is fired and 7.0 ppmvd corrected to 15% oxygen when distillate oil is fired.

[Permit No. 1050234-006-AC/PSD-FL-330, Specific Conditions III.3. – 6.]

**E.6.** Operating Procedures. The BACT determinations established by Permit No. 1050234-006-AC/PSD-FL-330 rely on "good operating practices" to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the gas turbines, HRSGs, 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 of minimizing excess emissions. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.10.]

**Emission Limitations and Standards**

Unless otherwise specified, the averaging times for **Specific Conditions E.7. – E.11.** are based on the specified averaging time of the applicable test method.

**E.7.** CO. Based on continuous emissions monitoring systems (CEMS), CO emissions shall not exceed:

a. *While firing Natural Gas*: 10 ppmvd corrected to 15% oxygen on a 24-hour block averaging time.
b. *While firing Fuel Oil*: 20 ppmvd corrected to 15% oxygen on a 24-hour block averaging time.

Compliance with the 24-hour block CO CEMS standards shall be determined separately based on the hours of operation for each alternative fuel. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.9.]

*{Permitting note: A 24-hour block compliance average may be based on as little as 1-hour of CEMS data or as much as 24-hours of CEMS data. The Department shall revise the CO emissions standards following any future installation of an oxidation catalyst pursuant to **Specific Condition E.5. c.**}*

**E.8.** $NO_X$. Based on CEMS, $NO_X$ emissions shall not exceed:

a. *While firing Natural Gas*: 2.5 ppmvd corrected to 15% oxygen on a 24- hour block averaging time.
b. *While firing Fuel Oil*: 10 ppmvd corrected to 15% oxygen on a 24-hour block averaging time.

$NO_X$ mass emission rates are defined as oxides of nitrogen expressed as $NO_2$. Compliance with the 24-hour block $NO_X$ CEMS standards shall be determined separately based on the hours of operation for each alternative fuel. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.9.]

*{Permitting Note: A 24-hour block (midnight-to-midnight) compliance average may be based on as little as 1-hour of CEMS data or as much as 24-hours of CEMS data, depending upon how many hours the unit actually ran during a given block. Compliance averages shall only include actual run hours during each 24-hour block.}*

**E.9.** VOC. Based on stack testing, VOC emissions shall not exceed:

a. *While firing Natural Gas*: 2 ppmvd corrected to 15% oxygen on a 3-hour averaging time.
b. *While firing Fuel Oil*: 10 ppmvd corrected to 15% oxygen on a 3-hour averaging time.

Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as propane. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.9.]

**E.10.** Ammonia. Based on stack testing, ammonia emissions shall not exceed:
a. *While firing Natural Gas*: 5 ppmvd corrected to 15% oxygen on a 3-hour averaging time.
b. *While firing Fuel Oil*: 5 ppmvd corrected to 15% oxygen on a 3-hour averaging time.

Subject to the requirements of **Specific Condition E.24.** , each SCR system shall be maintained and operated to meet the designed ammonia slip target of less than 5 ppmvd corrected to 15% oxygen when firing natural gas based on the average of three test runs. Compliance with the ammonia slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTM-027 or EPA Method 320. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.9.]

**E.11.** VE. As determined by stack testing, visible emissions shall not exceed 10% opacity for each 6-minute block average. [Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.9.]

*{Permitting Note: The concentration limits and fuel specifications for the control of the above pollutants are equivalent to the following mass emission rates (at 20ºF):*

- *CO = 49.2 lbs/hr for natural gas firing and 80.0 lbs/hr for distillate fuel oil firing,*
- *$NO_X$ = 19.1 lbs/hr for natural gas firing and 82.0 lbs/hr for distillate fuel oil firing,*
- *VOC = 5.7 lbs/hr for natural gas firing and 23.5 lbs/hr for distillate fuel oil firing,*
- *$PM_{10}$ = 8.5 lbs/hr for natural gas firing and 64.8 lbs/hr for distillate fuel oil firing, and*
- *$SO_2$ = 5.6 lbs/hour for natural gas firing and 105.6 lbs/hr for distillate fuel oil firing.*

*SAM emissions are estimated to be less than 10% of the $SO_2$ emissions.}*

**Excess Emissions**

The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS, NESHAP, or Acid Rain program provision.

**E.12.** Excess Emissions Allowed. Except as provided in **Specific Conditions E.15. and E.16.**, excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted provided that best operational practices to minimize emissions are adhered to and 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.13.** Excess Emissions Prohibited. Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that 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(1), F.A.C. and Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.11.]

**E.14.** 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 Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.12.]

**E.15.** CEMS Data Exclusion. As provided in this paragraph, $NO_X$ and CO emissions data recorded during periods of startup, shutdown, fuel switches (oil-to-gas or gas-to-oil), and documented malfunctions may be

excluded from the block average calculated to demonstrate compliance with the emission limits of this permit. (**Specific Conditions E.7. – E.11.** )

a. *Startup*. Periods of excess emissions excluded due to startup shall not exceed 120 minutes per startup per unit except for the following cold startups. A "cold STG startup" is defined as a startup following a complete steam turbine generator (STG) shutdown lasting a minimum of 48 hours. Periods of excess emissions excluded due to cold STG startup shall not exceed 360 minutes per startup per unit. A "cold CT-HRSG startup" is defined as startup following a complete shutdown of the CT-HRSG lasting a minimum of 8 hours. Periods of excess emissions excluded due to cold CT-HRSG startup shall not exceed 180 minutes per startup per unit.
b. *Shutdown*. Periods of data excluded for shutdown shall not exceed 120 minutes per shutdown per unit.
c. *Fuel Switching*. Periods of data excluded for fuel switches shall not exceed 120 minutes per fuel switch per unit.
d. *Malfunctions*. Periods of data excluded for documented malfunctions shall not exceed 120 minutes per unit in any 24-hour block. A "documented malfunction" means a malfunction that meets the notification requirements specified in **Specific Condition E.28.**
e. *All Periods*. All periods of data excluded for any startup, shutdown, fuel switches or documented malfunction shall be consecutive for each episode.
f. *Duration*. The permittee shall minimize the duration of data excluded to the extent practicable. Data shall not be excluded if the startup, shutdown, or documented malfunction was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably have been prevented. Best operating practices shall be used to minimize hourly emissions that occur during episodes of startup, shutdown, fuel switching, or documented malfunction.
g. *Summary*. Allowable Excess Emissions Convenience Summary:

| Method of Operation | Excess Emissions Conditions | Period Authorized for Excess Emissions |
|---|---|---|
| Hot Start-up | Complete shutdown of CT-HRSG lasting ≤ 8 hours | ≤ 120 minutes/start-up/unit |
| Cold STG Start-up | STG shutdown lasting ≥ 48 hours | ≤ 360 minutes /start-up/unit |
| Cold CT-HRSG Start-up | Complete shutdown of CT-HRSG lasting ≥ 8 hours | ≤ 180 minutes/start-up/unit |
| Shutdown | Shutdown | ≤ 120 minutes/shutdown/unit |
| Fuel Switches | Oil-to-Gas or Gas-to-Oil | ≤ 120 minutes/fuel-switch/unit |
| Documented Malfunctions | Malfunctions | ≤ 120 minutes in any 24-hour block |

[Rules 62-212.400(BACT), 62-210.700 & 62-213.440(1), F.A.C.; and, Permit No. 1050234-015-AC/PSD-FL-330B, Specific Condition 13.]

**E.16.** <u>CEMS Data Exclusion – Limited Use Operations</u>. CEMS data collected during any of the following limited use operational periods shall be excluded from the compliance averages:

a. *DLN Tuning*. CEMS data collected during major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of a combustor change-out, a major repair or maintenance to a combustor, or circumstances as identified or requested by the equipment vendor. Prior to performing any major tuning session, the permittee shall provide the Department's Southwest District Compliance Authority with an advance notice that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.

b. *Full Speed No Load Testing*. As a periodic maintenance practice, the permittee may perform full speed no load tests with the combustion turbine generator in accordance with the manufacturer's recommendations (or industry standards). An example of work that may require full speed no load testing includes, but is not limited to, testing and commissioning of synchronizing instrumentation, transformers and generation equipment to assure safe and reliable connection to the bulk electric system.

[Rule 62-4.070(3), F.A.C.; and Permit No. 1050234-024-AC, Section 3, Subsection C, Specific Condition 2.]

**Monitoring of Operations**

**E.17.** Water Injection Monitoring Requirements. In accordance with the manufacturer's specifications, the permittee shall operate and maintain a monitoring system to continuously measure and record the water-to-fuel ratio when firing distillate oil. The permittee shall document the water-to-fuel ratio required to meet permitted emissions levels over the range of load conditions allowed by this permit. The $NO_X$ CEMS is used to demonstrate compliance with the $NO_X$ emissions standards. During $NO_X$ CEMS downtimes or malfunctions, the permittee shall monitor the water-to-fuel ratio and operate at a level that is consistent with the documented flow rate for the gas turbine load condition. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.21.]

**E.18.** Ammonia Monitoring Requirements. In accordance with the manufacturer's specifications, the permittee shall operate and maintain an ammonia flow meter to measure and record the ammonia injection rate to the SCR system. The permittee shall document the general range of ammonia flow rates required to meet permitted emissions levels over the range of load conditions allowed by this permit by comparing $NO_X$ emissions recorded by the CEM system with ammonia flow rates recorded using the ammonia flow meter. During $NO_X$ monitor downtimes or malfunctions, the permittee shall operate at the ammonia flow rate that is consistent with the documented flow rate for the combustion turbine load condition. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.; and, Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.22.]

**Continuous Monitoring Requirements**

**E.19.** CO and $NO_X$ CEMS. The permittee shall maintain and operate CEMS to measure and record the emissions of CO and $NO_X$ from the combined cycle gas turbine. The CEMS shall be used to demonstrate continuous compliance with the CEMS emission standards specified in this permit. Upon request by the Department's Southwest District Compliance Authority, the CEMS emission rates shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332. Within one working day of discovering emissions in excess of a CO or $NO_X$ standard (and subject to the specified averaging period), the permittee shall notify the Department's Southwest District Compliance Authority.

a. *CO Monitors.* Except as otherwise specified by this condition, the 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, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Department's Southwest District Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A, 40 CFR 60. The Method 10 analysis shall be based on a continuous sampling train, and the ascarite trap may be omitted or the interference trap of Section 10.1 may be used in lieu of the silica gel and ascarite traps. The CO monitor shall be a dual range monitor. The span for the lower range shall not be greater than 50 ppm. The span for the upper range shall be set at a level that provides for accurate measurement during startups and shutdowns.

b. *$NO_X$ Monitors*. Except as otherwise specified by this condition, the $NO_X$ monitor shall be certified pursuant to 40 CFR 75, and shall be operated and maintained in accordance with the applicable requirements of 40 CFR 75, Subparts B and C. Record keeping and reporting shall be conducted pursuant to 40 CFR 75, Subparts F and G. The RATA tests required for the $NO_X$ monitor shall be performed using EPA Method 20 or 7E in Appendix A, 40 CFR 60. The $NO_X$ monitor shall be a dual range monitor. The

span for the lower range shall not be greater than 10 ppm. The span for the upper range shall be set at a level that provides for accurate measurement during startups and shutdowns.

c. *Diluent Monitors.* The $O_2$ or $CO_2$ 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 $CO_2$ monitor is installed, the $O_2$ 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.

d. *Moisture Correction*. Final results of the CEMS shall be expressed as ppmvd corrected to 15% oxygen. If the CEMS measures concentration on a wet basis, the CEMS shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the permittee may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). If the CEMS measures concentration on a wet basis and the diluent monitor measures $CO_2$ on a wet basis, then the permittee may develop an algorithm to enable correction of the CEMS results to a dry basis (0% moisture) without determining the corresponding moisture content.

e. *1-Hour Block Averages.* Hourly average values shall begin at the top of each hour. Each hourly average value 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, an hourly value 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, the hourly average value is not valid. An hour in which any oil is fired is attributed towards compliance with the permit standards for oil firing. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly average values. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour.

f. *24-hour Block Average*. A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive hourly average emission rate values. If a unit operates less than 24 hours during the block, the 24-hour block average shall be the average of available valid hourly average emission rate values for the 24-hour block. For purposes of determining compliance with the 24-hour block CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. *{Permitting note: There may be more than one 24-hour block compliance demonstration required for CO and $NO_X$ emissions depending on the use of alternate fuels}.*

   *{Permitting Note: Valid hours are as specified in paragraph e.}*

g. *Data Exclusion.* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, fuel switches, and DLN tuning. CEMS emissions data recorded during some of these episodes may be excluded from the corresponding CEMS compliance demonstration subject to the provisions of **Specific Conditions E.15. and E.16.**

h. *Availability*. Monitor availability for the CEMS shall be 95% or greater in any calendar quarter. The quarterly permit excess emissions report shall be used to demonstrate monitor availability. In the event 95% availability is not achieved, the permittee shall provide the Department's Southwest District Compliance Authority 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 Department's Southwest District Compliance Authority.

[Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.20.]

*{Permitting note: Compliance with these requirements assures compliance with the other applicable CEM system requirements such as: NSPS Subpart GG; 40 CFR 60.7(a)(5) & 40 CFR 60.13; 40 CFR 60, Appendix B - Performance Specifications; and, 40 CFR 60, Appendix F - Quality Assurance Procedures.}*

**Test Methods and Procedures**

**E.20.** Test Methods. Required tests shall be performed in accordance with the following reference methods:

| Method | Description of Method and Comments |
|---|---|
| 1-4 | Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content |
| CTM-027 or EPA Method 320 | *Procedure for Collection and Analysis of Ammonia in Stationary Sources*<br>This is an EPA conditional test method. The minimum detection limit shall be 1 ppm. |
| 7E | *Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)* |
| 9 | *Visual Determination of the Opacity of Emissions from Stationary Sources*<br>The test shall be conducted for a minimum of 30 minutes. |
| 10 | *Determination of Carbon Monoxide Emissions from Stationary Sources*<br>This method shall be based on a continuous sampling train. |
| 18 | *Measurement of Gaseous Organic Compound Emissions by Gas Chromatography*<br>(Optional) EPA Method 18 may be used concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions. |
| 20 | *Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines* |
| 25A | *Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer* |

Note: Method CTM-027 is published on EPA's Technology Transfer Network Web Site at http://www.epa.gov/ttn/emc/ctm.html. The above methods are described in Appendix A, 40 CFR 60, 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. [Rules 62-204.800 & 62-297.401, F.A.C.; 40 CFR 60, Appendix A; and, Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.15.]

**E.21.** 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.]

**E.22.** Continuous Compliance. The permittee shall demonstrate continuous compliance with the CO and $NO_X$ emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Department's Southwest District Compliance Authority summarizing results of the RATA. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.17.]

*{Permitting note: Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion, which reduces emissions of $PM/PM_{10}$ and VOC.}*

**E.23.** Annual Compliance Tests. During each calendar year (January 1st to December 31st), each gas turbine shall be tested to demonstrate compliance with the emission standards for visible emissions and ammonia.

a. *Visible Emissions*. Each unit shall be tested for visible emissions when firing natural gas and when firing distillate fuel oil. Annual emissions testing while firing fuel oil is not required during any calendar year in which less than 400 hours of distillate fuel oil is fired in both emission units combined. CO emissions recorded by the CEMS shall be reported for the visible emissions observation period.
b. *Ammonia*. Annual testing to determine the ammonia slip shall be conducted while firing natural gas. $NO_X$ emissions recorded by the CEMS shall be reported for each ammonia slip test run.
c. *VOC*. Annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions. A monitored exceedance of the CO standard does not necessarily indicate an exceedance of the VOC emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(8)(b), F.A.C.

[Rules 62-212.400(BACT), 62-213.440(1) & 62-297.310(8)(a)4., F.A.C.; and, Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.18. and Permit No. 1050234-018-AC/PSD-FL-330C]

**E.24.** Additional Compliance Determinations. The Department may require the permittee to conduct additional tests following a major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, DLN combustors, etc. If required, each gas turbine shall be stack tested to demonstrate compliance with the emission standards for CO, $NO_X$, VOC, VE, and ammonia slip. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the unit is restarted. Each unit shall be tested when firing natural gas and when firing distillate fuel oil. CEMS data collected during the required RATA may be used to demonstrate compliance with the CO and $NO_X$ standards. CO and $NO_X$ emissions recorded by the CEMS shall also be reported for each run during tests for VE, VOC and ammonia slip. [40 CFR 60.8 and Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.16.]

**E.25.** Additional Ammonia Slip Testing. If the tested ammonia slip rate for a gas turbine exceeds 5 ppmvd corrected to 15% oxygen when firing natural gas during the annual test, the permittee shall:
a. Begin testing and reporting the ammonia slip for each subsequent calendar quarter;
b. Before the ammonia slip exceeds 7 ppmvd corrected to 15% oxygen, take corrective actions that result in lowering the ammonia slip to less than 5 ppmvd corrected to 15% oxygen; and,
c. Test and demonstrate that the ammonia slip is no more than 5 ppmvd corrected to 15% oxygen within 15 days after completing the corrective actions.

Corrective actions may include, but are not limited to, adding catalyst, replacing catalyst, or other SCR system maintenance or repair. After demonstrating that the ammonia slip level is no more than 5 ppmvd corrected to 15% oxygen, testing and reporting shall resume on an annual basis. [Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.19.]

**Recordkeeping and Reporting Requirements**

**E.26.** Reporting Schedule. The following reports and notifications shall be submitted to the Compliance Authority:

| Report | Reporting Deadline | Related Condition |
|---|---|---|
| Malfunction Notification | Within One Working Day | **E.28.** |
| Data Exclusion Report | Quarterly | **E.29.** |
| NSPS Excess Emissions Report | Semi-annually | **E.30.** |

[Rule 62-213.440(1)(b), F.A.C.]

**E.27.** Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

**E.28.** Malfunction Notification. Within one working day of a malfunction for which CEMS data is excluded pursuant to **Specific Condition E.15.** , the permittee shall notify the Department's Southwest District Compliance Authority by telephone, facsimile transmittal, or electronic mail. The notification shall include a preliminary report of: the nature, extent, and duration of the emissions; the probable cause of the emissions; and the actions taken to correct the problem. If requested by the Department's Southwest District Compliance Authority, the permittee shall submit written quarterly reports summarizing the malfunctions in lieu of the individual malfunction notifications otherwise required. [Rule 62-210.700, F.A.C.; and, Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.26.]

**E.29.** Quarterly Data Exclusion and Monitor Availability Report. The permittee shall quarterly submit a report to the Department's Southwest District Compliance Authority summarizing all periods of valid hourly CO and $NO_X$ emissions data excluded from the 24-hour block average compliance determinations pursuant to **Specific Conditions E.15. and E.16.** In addition, the quarterly report shall summarize the CEMS availability for the previous quarter. All reports shall be postmarked by the 30th day following the end of each calendar quarter. An example of an acceptable report format for monitoring systems availability is provided in Figure 1 - Summary Report-Gaseous And Opacity Excess Emissions and Monitoring System Performance. [Rules 62-4.130, 62-204.800 & 62-210.700(6), F.A.C.; 40 CFR 60.7(c) & (d); and, Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.28.]

**E.30.** Semiannual NSPS Excess Emissions Report. In accordance with 40 CFR 60.7(c), the permittee shall semiannually submit a report to the Department's Southwest District Compliance Authority summarizing any emissions in excess of the NSPS standards. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the information specified in 40 CFR 60.7(c)(1) through (c)(4). For purposes of reporting emissions in excess of 40 CFR 60, Subpart GG, excess emissions from the gas turbine are defined as: any CEMS hourly average value exceeding the NSPS $NO_X$ emission standard identified in Appendix GG - NSPS Subpart GG Requirements for Gas Turbines (i.e., 112.5 ppmvd corrected to 15% oxygen for both natural gas and fuel oil); and any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds the NSPS standard identified in Appendix GG - NSPS Subpart GG Requirements for Gas Turbines (i.e., sulfur in excess of 0.8% by weight). An example of an acceptable report format is provided in Figure 1 - Summary Report-Gaseous And Opacity Excess Emissions and Monitoring System Performance. [40 CFR 60.7(c) and Permit No.1050234-006-AC/PSD-FL-330, Specific Condition III.27.]

**E.31.** Monitoring of Operation. To demonstrate compliance with the fuel consumption limits of this permit, the permittee shall record the distillate fuel oil consumption on a rolling 12-month basis. [Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.23.]

**E.32.** Frequency of Recordkeeping. **Specific Condition E.19.** requires the calculation of one or more 24-hour block average emission rates for each operating day. Within 24 hours of the conclusion of each operating day, the permittee shall complete the calculations and record the results for that operating day. [Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.24.]

**E.33.** Fuel Sulfur Records. The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.

a. 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 in accordance with 40 CFR 60, Subpart GG. (See Appendix NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines.)

b. Sampling and analysis for the fuel oil sulfur content shall be conducted in accordance with the methods in 40 CFR 60, Subpart GG, or their latest editions. For each subsequent fuel delivery, the permittee shall either (1) maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor, or (2) take

and analyze a sample according to the above procedures and maintain a permanent file of the results of the analysis. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content. (See Appendix NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines.)

c. The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75, Appendix D.

[Rule 62-4.160(15), F.A.C.; 40 CFR 75, Appendix D; and, Permit No. 1050234-015-AC/PSD-FL-330B, Specific Condition 25.]

**Other Requirements**

**E.34.** Federal Requirement. In addition to the above conditions, these units shall also comply with all the applicable requirements of 40 CFR 60, Subparts A and GG. See Appendices NSPS, Subpart A - General Provisions and NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines. [Permit No. 1050234-015-AC/PSD-FL-330B]

**E.35.** National Emission Standards for Hazardous Air Pollutants (NESHAP). The Department determines that compliance with the stationary combustion turbine requirements of 40 CFR 63, Subpart YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (currently stayed) will be required once the final rule has been promulgated. See Appendix NESHAP, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines of this permit. [Rule 62-213.440(1), F.A.C. and 40 CFR 63.6085]

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

| E.U. No. | Brief Description of Power Block 4 |
|---|---|
| 018 | 170 MW General Electric Model 7FA CT4A with inlet air chiller & unfired HRSG |
| 019 | 170 MW General Electric Model 7FA CT4B with inlet air chiller & unfired HRSG |

Emission units 018 and 019 each consist of a General Electric Model 7FA gas turbine-electrical generator set, an automated gas turbine control system, an unfired HRSG, and an inlet air chiller at the compressor inlet of each turbine. In addition, Power Block 4 also includes a single steam turbine-electrical generator that serves both gas turbine/HRSG systems. Each gas turbine fires natural gas as the primary fuel and distillate oil as a restricted alternate fuel. Each of the gas turbine-electrical generator sets has a generating capacity of 170 MW for gas firing. Exhaust from each gas turbine passes through a separate HRSG unit. Steam from both HRSG units is delivered to the single steam turbine-electrical generator, which has a generating capacity of 190 MW. The total generating capacity of the "2-on-1" combined cycle unit is approximately 530 MW.

The efficient combustion of natural gas and restricted firing of low sulfur distillate oil minimizes the emissions of CO, $PM/PM_{10}$, SAM, $SO_2$ and VOC. DLN combustion technology for gas firing and water injection for oil firing reduce $NO_X$ emissions. SCR system – in combination with DLN combustion technology for gas firing and a water injection system for oil firing – reduces $NO_X$ emissions. The HRSG units are designed and constructed such that an oxidation catalyst can be readily installed if necessary to achieve compliance with CO emission limitations.

Each HRSG has a stack that is 125 feet tall and 18 feet in diameter. The following table summarizes the exhaust characteristics for the combined cycle systems. Nominal heat input values are based on the HHV of the fuel, assuming 1,021 Btu/scf of natural gas and 19,075 Btu/lb of fuel oil.

| Fuel | Nominal Heat Input (HHV) | Compressor Inlet Temp | Exhaust Temperature | Exit Velocity | Flow Rate |
|---|---|---|---|---|---|
| Gas | 1,915 MMBtu/hour | 59°F | 202°F | 67.9 ft/sec | 1,036,271 acfm |
| Oil | 2,122 MMBtu/hour | 59°F | 295°F | 80.0 ft/sec | 1,220,938 acfm |

Each stack is equipped with CEMS to measure and record CO and $NO_X$ emissions as well as flue gas $O_2$ or $CO_2$ content.

*{Permitting Notes: These emissions unit 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)41, F.A.C.; Rule 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD); PSD-FL-342 & revisions; and, Rule 62-212.400, F.A.C.}*

**Essential Potential to Emit (PTE) Parameters**

**F.1.** Permitted Capacity. The maximum allowable heat input rates are as follows:

| EU No. | MMBtu/hr Heat Input | Fuel Type |
|---|---|---|
| 018 and 019 | 1,915 | Natural Gas |
| | 2,122 | Fuel Oil |

Maximum heat input rate is based on a compressor inlet air temperature of 59ºF, the HHV of each fuel, and 100% load. Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternate fuels, and evaporative cooling. The permittee shall provide updated manufacturer's performance curves (or equations) that correct for site conditions to the Compliance Authority within 45 days of completing a maintenance activity, tuning session or compliance testing that results in the need to reestablish the curves. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file

with the Department. [Rule 62-210.200(Definitions-PTE), F.A.C.; and, Permit Nos. 1050234-010-AC/PSD-FL-342, Specific Condition III.8.]

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

**F.3.** Methods of Operation.

a. *Fuels.* The fuels that are allowed to be burned in this unit/these units are:

(1) Natural gas shall be the primary fuel and shall contain no more than 1.0 grains of sulfur per 100 standard cubic feet of natural gas.

(2) No. 2 distillate oil (or a superior grade) shall be the restricted alternative fuel and shall contain no more than 0.05% sulfur, by weight. Distillate fuel oil consumption of both emissions units shall not exceed 30,700,000 gallons in any consecutive 12-month period. *{Permitting note: This condition limits annual average fuel oil consumption to the equivalent of approximately 1,000 hours of operation per year per turbine, based on 59 F annual average temperature. Fuel oil consumption is not limited per turbine, and the allowable fuel may be used in a single turbine.}*

b. *Combined Cycle Operation.* Each gas turbine/HRSG system may operate to produce direct, shaft-driven electrical power and steam-generated electrical power from the steam turbine-electrical generator as a "2-on-1" combined cycle unit subject to the restrictions of this permit. In accordance with the specifications of the SCR and HRSG manufacturers, the SCR system shall be on line and functioning properly during combined cycle operation or when the HRSG is producing steam.

c. *Ammonia Injection.* Ammonia injection shall begin as soon as operation of the gas turbine/HRSG system achieves the operating parameters specified by the manufacturer.

[Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.; and, Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.9.]

*{Permitting Note: The fuel specifications listed in **Specific Condition F.3.** combined with the efficient combustion design and operation of each gas turbine represents the BACT determination for $PM/PM_{10}$ emissions. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. The fuel sulfur specifications also effectively limit the potential emissions of SAM and $SO_2$ from the gas turbines and represent the BACT determination for these pollutants. Compliance with the fuel sulfur specifications shall be determined by the requirements in **Specific Condition F.33.** }*

**F.4.** Hours of Operation. Subject to the other operational restrictions of this permit, the gas turbines may operate throughout the year (8,760 hours per year). [Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.; and, Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.9.]

**Control Technology**

**F.5.** Equipment and Controls - Gas Turbines. The permittee is authorized to tune, operate, and maintain two General Electric Model 7FA gas turbine-electrical generator sets each with a generating capacity of 170 MW. Each gas turbine has dual-fuel capability. The gas turbines utilize DLN combustors.

a. *Gas Turbine $NO_X$ Controls.*

(1) DLN Combustion. The permittee shall operate and maintain the DLN combustion system to control $NO_X$ emissions from each gas turbine when firing natural gas. Each system shall be maintained and tuned in accordance with the manufacturer's recommendations.

(2) Water Injection. The permittee shall operate and maintain the water injection system to reduce $NO_X$ emissions from each gas turbine when firing distillate oil. Each system shall be maintained and tuned in accordance with the manufacturer's recommendations.

(3) SCR System. The permittee shall operate and maintain the SCR system to control $NO_X$ emissions from each gas turbine when firing either natural gas or distillate oil. The SCR system consists of an ammonia injection grid, catalyst, ammonia storage, monitoring and control system, electrical,

piping and other ancillary equipment. The SCR system shall be tuned, maintained and operated to achieve the permitted levels for $NO_X$ emissions and ammonia slip. *{Permitting note: In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.}*

*b.* *HRSG*. The permittee is authorized to operate and maintain two unfired HRSGs. Each HRSG shall be maintained to recover heat energy from one of the two gas turbines (CT 4A or CT 4B) and deliver steam to the steam turbine-electrical generator through a common manifold. *{Permitting note: The two HRSGs deliver steam to a single steam turbine-electrical generator with a generating capacity of 190 MW.}*

c. *CO Controls*. The permittee shall have designed and constructed the HRSGs such that an oxidation catalyst can be readily installed if necessary to achieve compliance with the CO emission limitations. The oxidation catalyst, should it be installed, shall be designed and operated to achieve a maximum outlet concentration of 2.5 ppmvd corrected to 15% oxygen when natural gas is fired and 5.0 ppmvd corrected to 15% oxygen when distillate oil is fired.

[Permit No. 1050234-010-AC/PSD-FL-342, Specific Conditions III.4. – 7.]

**F.6.** Operating Procedures. The BACT determinations established by Permit No. 1050234-010-AC/PSD-FL-342 rely on "good operating practices" to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the gas turbines, HRSGs, 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 of minimizing excess emissions. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.11.]

**Emission Limitations and Standards**

Unless otherwise specified, the averaging times for **Specific Conditions F.7. – F.11.** are based on the specified averaging time of the applicable test method. Emission limits listed in **Specific Conditions F.7.** and **F.8.** shall not apply during periods of startup and shutdown. Emissions during periods of startup and shutdown shall be limited to those included in **Specific Condition F.15.**

**F.7.** CO. Based on continuous emissions monitoring systems (CEMS), CO emissions shall not exceed:

a. *While firing Natural Gas*: 8.0 ppmvd corrected to 15% oxygen on a 24-hour block averaging time.
b. *While firing Fuel Oil*: 12.0 ppmvd corrected to 15% oxygen on a 24-hour block averaging time.

Compliance with the 24-hour block CO CEMS standards shall be determined separately based on the hours of operation for each alternative fuel. For emission limits that apply during periods of startup and shutdown, excluding malfunction, see **Specific Condition F.15.** [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.10.]

*{Permitting Note: A 24-hour block (midnight-to-midnight) compliance average may be based on as little as 1-hour of CEMS data or as much as 24-hours of CEMS data, depending upon how many hours the unit actually ran during a given block. Compliance averages shall only include actual run hours during each 24-hour block. The Department shall revise the CO emissions standards following any future installation of an oxidation catalyst pursuant to* ***Specific Condition F.5. c****}*

**F.8.** $NO_X$. Based on CEMS, $NO_X$ emissions shall not exceed:

a. *While firing Natural Gas*: 2.5 ppmvd corrected to 15 % oxygen on a 24- hour block averaging time.
b. *While firing Fuel Oil*: 10.0 ppmvd corrected to 15 % oxygen on a 24-hour block averaging time.

$NO_X$ mass emission rates are defined as oxides of nitrogen expressed as $NO_2$. Compliance with the 24-hour block $NO_X$ CEMS standards shall be determined separately based on the hours of operation for each alternative fuel. For emission limits that apply during periods of startup and shutdown excluding, malfunction, see **Specific Condition F.15.** [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.10.]

*{Permitting note: A 24-hour block compliance average may be based on as little as 1-hour of CEMS data or as much as 24-hours of CEMS data.}*

**F.9.** Volatile Organic Compound (VOC). Based on stack testing, VOC emissions shall not exceed:

a. *While firing Natural Gas*: 1.3 ppmvd corrected to 15% oxygen on a 3-hour averaging time.
b. *While firing Fuel Oil*: 3.0 ppmvd corrected to 15% oxygen on a 3-hour averaging time.

Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as propane. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.10.] *{Permitting Note: Compliance with this standard is adequate to avoid a PSD/BACT review.}*

**F.10.** Ammonia. Based on stack testing, ammonia emissions shall not exceed:

a. *While firing Natural Gas*: 5.0 ppmvd corrected to 15% oxygen on a 3-hour averaging time.
b. *While firing Fuel Oil*: 5.0 ppmvd corrected to 15% oxygen on a 3-hour averaging time.

Each SCR system shall be maintained and operated with an ammonia slip of less than 5 ppmvd corrected to 15% oxygen when firing natural gas based on the average of three test runs. Compliance with the ammonia slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTM-027 or EPA Method 320. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.10.d.]

**F.11.** Visible Emissions (VE). As determined by stack testing, visible emissions shall not exceed 10% opacity for each 6-minute block average. [Permit No. 1050234-006-AC/PSD-FL-330, Specific Condition III.9.]

*{Permitting Note: The concentration limits and fuel specifications for the control of the above pollutants are equivalent to the following mass emission rates (at 20ºF):*

- *CO = 32.1 lbs/hr for natural gas firing and 57.2 lbs/hr for distillate fuel oil firing,*
- *$NO_X$ = 17.7 lbs/hr for natural gas firing and 82.4 lbs/hr for distillate fuel oil firing,*
- *VOC = 3.1 lbs/hr for natural gas firing and 8.1 lbs/hr for distillate fuel oil firing,*
- *$PM_{10}$ = 10.1 lbs/hr for natural gas firing and 39.1 lbs/hr for distillate fuel oil firing, and*
- *$SO_2$ = 5.4 lbs/hour for natural gas firing and 109.2 lbs/hr for distillate fuel oil firing.*

*SAM emissions are estimated to be less than 10% of the $SO_2$ emissions.}*

**Excess Emissions**

The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS, NESHAP, or Acid Rain program provision.

**F.12.** Excess Emissions Allowed. 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. Best operating practices shall be used to minimize hourly emissions that occur during episodes of startup, shutdown, fuel switching or documented malfunction. Except as provided in **Specific Conditions F.14. – F.17.**, excess emissions shall in no case exceed two hours in any 24-hour period. [Rule 62-210.700(1), F.A.C. and Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.15.]

**F.13.** Excess Emissions Prohibited. Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that 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(1), F.A.C. and Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.12.]

**F.14.** 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 Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.13.]

**F.15.** Alternate CO and $NO_X$ Emissions Standard. During any 24-hour block period (midnight-to-midnight), in which at least one hour of startup or shutdown operation has occurred, the following alternative emission limits shall apply:

a. An alternative $NO_X$ limit of 3,000 lb shall apply if natural gas is the exclusively fired fuel;
b. An alternative $NO_X$ limit of 8,880 lb shall apply if any fuel oil is fired; and
c. An alternative CO limit of 4,200 lb shall apply when firing either natural gas or fuel oil.

[Permit No. 1050234-010-AC/PAD-FL-342, Specific Condition III.14. and Permit No. 1050234-018-AC/PSD-FL-342A]

**F.16.** CEMS Data Exclusion. As provided in this paragraph, $NO_X$ and CO emissions data recorded during periods of startup, shutdown, fuel switches (oil-to-gas or gas-to-oil), and documented malfunctions may be excluded from the block average calculated to demonstrate compliance with the emission limits of this permit. (See **Specific Conditions F.7. – F.11.** )

a. Periods of data excluded for fuel switches shall not exceed two hours in any 24-hour block.
b. Periods of data excluded for documented malfunctions shall not exceed two hours in any 24-hour block. A "documented malfunction" means a malfunction that meets the notification requirements specified in **Specific Condition F.27.** The permittee shall minimize the duration of data excluded to the extent practicable. Data shall not be excluded if the documented malfunction was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably have been prevented.
c. Data collected during periods covered by the alternate emissions standard provisions of **Specific Condition F.15.** may be excluded from the compliance determination calculation requirements of **Specific Conditions F.7. – F.11.**

[Rules 62-212.400(BACT) & 62-210.700, F.A.C.; and, Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.16.]

**F.17.** CEMS Data Exclusion – Limited Use Operations. CEMS data collected during any of the following limited use operational periods shall be excluded from the compliance averages:

a. *DLN Tuning*. CEMS data collected during major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of a combustor change-out, a major repair or maintenance to a combustor, or circumstances as identified or requested by the equipment vendor. Prior to performing any major tuning session, the permittee shall provide the Department's Southwest District Compliance Authority with an advance notice that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.
b. *Full Speed No Load Testing*. As a periodic maintenance practice, the permittee may perform full speed no load tests with the combustion turbine generator in accordance with the manufacturer's recommendations (or industry standards). An example of work that may require full speed no load testing includes, but is not limited to, testing and commissioning of synchronizing instrumentation, transformers and generation equipment to assure safe and reliable connection to the bulk electric system.

[Rule 62-4.070(3), F.A.C.; and Permit No. 1050234-024-AC, Section 3, Subsection D, Specific Condition 2.]

**Monitoring of Operations**

**F.18.** Ammonia Monitoring Requirements. In accordance with the manufacturer's specifications, the permittee shall operate and maintain an ammonia flow meter to measure and record the ammonia injection rate to the SCR system. The permittee shall document the general range of ammonia flow rates required to meet permitted emissions levels over the range of load conditions allowed by this permit by comparing $NO_X$ emissions recorded by the CEM system with ammonia flow rates recorded using the ammonia flow meter.

During $NO_X$ monitor downtimes or malfunctions, the permittee shall operate at the ammonia flow rate that is consistent with the documented flow rate for the combustion turbine load condition. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.; and, Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.23.]

**Continuous Monitoring Requirements**

**F.19.** CO and $NO_X$ CEMS. The permittee shall maintain and operate CEMS to measure and record the emissions of CO and $NO_X$ from the combined cycle gas turbine. The CEMS shall be used to demonstrate continuous compliance with the CEMS emission standards specified in this permit. Upon request by the Department's Southwest District Compliance Authority, the CEMS emission rates shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332. Within one working day of discovering emissions in excess of a CO or $NO_X$ standard (and subject to the specified averaging period), the permittee shall notify the Department's Southwest District Compliance Authority.

a. *CO Monitors.* Except as otherwise specified by this condition, the 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, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Department's Southwest District Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A, 40 CFR 60. The Method 10 analysis shall be based on a continuous sampling train, and the ascarite trap may be omitted or the interference trap of Section 10.1 may be used in lieu of the silica gel and ascarite traps. The CO monitor shall be a dual range monitor. The span for the lower range shall not be greater than 50 ppm. The span for the upper range shall be set at a level that provides for accurate measurement during startups and shutdowns.

b. *$NO_X$ Monitors.* Except as otherwise specified by this condition, the $NO_X$ monitor shall be certified pursuant to 40 CFR 75, and shall be operated and maintained in accordance with the applicable requirements of 40 CFR 75, Subparts B and C. Record keeping and reporting shall be conducted pursuant to 40 CFR 75, Subparts F and G. The RATA tests required for the $NO_X$ monitor shall be performed using EPA Method 20 or 7E in Appendix A, 40 CFR 60. The $NO_X$ monitor shall be a dual range monitor. The span for the lower range shall not be greater than 10 ppm. The span for the upper range shall be set at a level that provides for accurate measurement during startups and shutdowns.

c. *Diluent Monitors.* The oxygen or carbon dioxide ($CO_2$) 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 $CO_2$ 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.

d. *Moisture Correction.* Final results of the CEMS shall be expressed as ppmvd corrected to 15% oxygen. If the CEMS measures concentration on a wet basis, the CEMS shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the permittee may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). If the CEMS measures concentration on a wet basis and the diluent monitor measures $CO_2$ on a wet basis, then the permittee may develop an algorithm to enable correction of the CEMS results to a dry basis (0% moisture) without determining the corresponding moisture content.

e. *1-Hour Block Averages.* Hourly average values shall begin at the top of each hour. Each hourly average value 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, an hourly value 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, the hourly average value is not valid. An hour in which any oil is fired is attributed towards compliance with the permit standards for oil firing. The permittee shall use all valid measurements or

data points collected during an hour to calculate the hourly average values. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour.

*f.* *24-hour Block Averages*. A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive hourly average emission rate values. If a unit operates less than 24 hours during the block, the 24-hour block average shall be the average of available valid hourly average emission rate values for the 24-hour block. For purposes of determining compliance with the 24-hour CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. *{Permitting note: There may be more than one 24-hour compliance demonstration required for CO and $NO_X$ emissions depending on the use of alternate fuels}.*
*{Permitting Note: Valid hours are as specified in paragraph e.}*

g. *Data Exclusion.* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, fuel switches, and DLN tuning. CEMS emissions data recorded during some of these episodes may be excluded from the corresponding CEMS compliance demonstration subject to the provisions of **Specific Conditions F.16. and F.17.**

h. *Availability*. Monitor availability for the CEMS shall be 95% or greater in any calendar quarter. The quarterly permit excess emissions report shall be used to demonstrate monitor availability. In the event 95% availability is not achieved, the permittee shall provide the Department's Southwest District Compliance Authority 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 Department's Southwest District Compliance Authority.

[Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.22.]

*{Permitting note: Compliance with these requirements assures compliance with the other applicable CEM system requirements such as: NSPS Subpart GG; Rule 62-297.520, F.A.C.; 40 CFR 60.7(a)(5) and 40 CFR 60.13; 40 CFR 60, Appendix B - Performance Specifications; and, 40 CFR 60, Appendix F - Quality Assurance Procedures. Water injection monitoring is no longer necessary due to the NSPS, Subpart GG revisions.}*

**Test Methods and Procedures**

**F.20.** Test Methods. Required tests shall be performed in accordance with the following reference methods:

| **Method** | Description of Method and Comments |
|---|---|
| 1-4 | Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content |
| CTM-027 or EPA Method 320 | *Procedure for Collection and Analysis of Ammonia in Stationary Sources*<br>This is an EPA conditional test method. The minimum detection limit shall be 1 ppm. |
| 7E | *Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)* |
| 9 | *Visual Determination of the Opacity of Emissions from Stationary Sources*<br>The test shall be conducted for a minimum of 30 minutes. |
| 10 | *Determination of Carbon Monoxide Emissions from Stationary Sources*<br>This method shall be based on a continuous sampling train. |

| **Method** | Description of Method and Comments |
|---|---|
| 18 | *Measurement of Gaseous Organic Compound Emissions by Gas Chromatography* (Optional) EPA Method 18 may be used concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions. |
| 20 | *Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines* |
| 25A | *Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer* |

Method CTM-027 is published on EPA's Technology Transfer Network Web Site at http://www.epa.gov/ttn/emc/ctm.html. The above methods are described in Appendix A, 40 CFR 60, 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. [Rules 62-204.800 & 62-297.401, F.A.C.; 40 CFR 60, Appendix A; and, Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.18.]

**F.21.** 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.22.** Continuous Compliance. The permittee shall demonstrate continuous compliance with the CO and $NO_X$ emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Department's Southwest District Compliance Authority summarizing results of the RATA. [Rule 62-212.400(BACT), F.A.C. and Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.20.]

*{Permitting note: Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion, which reduces emissions of PM/$PM_{10}$ and VOC.}*

**F.23.** Annual Compliance Tests. During each Calendar year (January 1st to December 31st), each gas turbine shall be tested to demonstrate compliance with the emission standards for visible emissions and ammonia.

a. *Visible Emissions*. Each unit shall be tested for visible emissions when firing natural gas and when firing distillate fuel oil. Annual emissions testing while firing fuel oil is not required during any calendar year in which less than 400 hours of distillate fuel oil is fired in both emission units combined. CO emissions recorded by the CEMS shall be reported for the visible emissions observation period.

b. *Ammonia*. Annual testing to determine the ammonia slip shall be conducted while firing natural gas. $NO_X$ emissions recorded by the CEMS shall be reported for each ammonia slip test run.

c. *VOC*. Annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions. A monitored exceedance of the CO standard does not necessarily indicate an exceedance of the VOC emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(8)(b), F.A.C.

[Rules 62-212.400(BACT), 62-213.440(1) & 62-297.310(8)(a)4., F.A.C.; and, Permit No. 1050234-010-AC/PSD-FL-342 Specific Condition III.21. & Permit No. 1050234-018-AC/PSD-FL-342A Section 2, Specific Condition 5.c.]

**F.24.** Additional Compliance Determinations. The Department may require the permittee to conduct additional tests following a major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, DLN combustors, etc. If required, each gas turbine shall be stack tested to demonstrate compliance with the emission standards for CO, $NO_X$, VOC, visible emissions, and ammonia slip. The tests shall be

conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the unit is restarted. Each unit shall be tested when firing natural gas and when firing distillate fuel oil. CEMS data collected during the required Relative Accuracy Test Assessments (RATA) may be used to demonstrate compliance with the CO and $NO_X$ standards. CO and $NO_X$ emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. [40 CFR 60.8 and Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.19.]

**Recordkeeping and Reporting Requirements**

**F.25.** Reporting Schedule. The following reports and notifications shall be submitted to the Compliance Authority:

| Report | Reporting Deadline | Related Condition |
|---|---|---|
| Malfunction Notification | Within One Working Day | **F.27.** |
| Data Exclusion Report | Quarterly | **F.28.** |
| NSPS Excess Emissions Report | Semi-annually | **F.29.** |

[Rule 62-213.440(1)(b), F.A.C.]

**F.26.** Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

**F.27.** Malfunction Notification. Within one working day of a malfunction for which CEMS data is excluded pursuant to **Specific Condition F.16.** , the permittee shall notify the Department's Southwest District Compliance Authority by telephone, facsimile transmittal, or electronic mail. The notification shall include a preliminary report of: the nature, extent, and duration of the emissions; the probable cause of the emissions; and the actions taken to correct the problem. If requested by the Department's Southwest District Compliance Authority, the permittee shall submit written quarterly reports summarizing the malfunctions in lieu of the individual malfunction notifications otherwise required. [Rule 62-210.700, F.A.C.; and, Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.27.]

**F.28.** Quarterly Data Exclusion and Monitor Availability Report. The permittee shall quarterly submit a report to the Department's Southwest District Compliance Authority summarizing all periods of valid hourly CO and $NO_X$ emissions data excluded from the 24-hour block average compliance determinations pursuant to **Specific Conditions F.16. . and F.17.** In addition, the quarterly report shall summarize the CEMS availability for the previous quarter. All reports shall be postmarked by the 30th day following the end of each calendar quarter. An example of an acceptable report format for monitoring systems availability is provided in Figure 1 - Summary Report-Gaseous and Opacity Excess Emissions and Monitoring System Performance. [Rules 62-4.130, 62-204.800 and 62-210.700(6), F.A.C.; 40 CFR 60.7(c) & (d); and, Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.29.]

**F.29.** Semiannual NSPS Excess Emissions Report. In accordance with 40 CFR 60.7(c), the permittee shall semiannually submit a report to the Department's Southwest District Compliance Authority summarizing any emissions in excess of the NSPS standards. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the information specified in 40 CFR 60.7(c)(1) through (c)(4). For purposes of reporting emissions in excess of 40 CFR 60, Subpart GG, excess emissions from the gas turbine are defined as: any CEMS hourly average value exceeding the NSPS $NO_X$ emission standard identified in Appendix GG - NSPS Subpart GG Requirements for Gas Turbines (i.e., 112.5 ppmvd corrected to 15% oxygen for both natural gas and fuel oil); and any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds the NSPS standard identified in Appendix GG - NSPS Subpart GG Requirements for Gas Turbines (i.e., sulfur in excess of 0.8% by weight). An example of an acceptable report format is provided in Figure 1 - Summary Report-Gaseous And Opacity Excess Emissions and Monitoring System Performance. [40 CFR 60.7(c) and Permit No.1050234-010-AC/PSD-FL-342, Specific Condition III.28.]

**F.30.** Monitoring of Operation. To demonstrate compliance with the fuel consumption limits of this permit, the permittee shall record the distillate fuel oil consumption on a rolling 12-month basis. [Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.24.]

**F.31.** Frequency of Recordkeeping. **Specific Condition F.19. .** requires the calculation of one or more 24-hour block average emission rates for each operating day. Within 24 hours of the conclusion of each operating day, the permittee shall complete the calculations and record the results for that operating day. [Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.25.]

**F.32.** Fuel Sulfur Records. The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.

a. 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 listed under 40 CFR 60 Subpart GG (as incorporated by reference under 40 CFR 60.17), 40 CFR Part 75 Appendix D, or more recent versions.

b. Compliance with the distillate oil sulfur limit shall be demonstrated by sampling the fuel oil sulfur content in accordance with ASTM methods listed under 40 CFR 60 Subpart GG (as incorporated by reference under 40 CFR 60.17), 40 CFR Part 75 Appendix D, or more recent versions, and one of the test methods for sulfur in petroleum products listed under 40 CFR 60 Subpart GG (as incorporated by reference under 40 CFR 60.17), 40 CFR Part 75 Appendix D. More recent versions of these methods may be used. For each subsequent fuel delivery, the permittee shall either (1) maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor, or (2) take and analyze a sample according to the above procedures and maintain a permanent file of the results of the analysis. At the request of the Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content.

The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75, Appendix D. [Rule 62-4.160(15), F.A.C.; 40 CFR 75, Appendix D; and, Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.26.]

**Other Requirements**

**F.33.** Federal Requirement. The Department determines that compliance with the BACT emissions performance and monitoring requirements also assures compliance with the NSPS for gas turbines at 40 CFR 60, subpart GG. In addition to the above conditions, these units shall also comply with all the applicable requirements of 40 CFR 60, Subparts A and GG. See Appendices NSPS, Subpart A - General Provisions and NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines. [Permit No. 1050234-010-AC/PSD-FL-342, Specific Condition III.2.]

**F.34.** National Emission Standards for Hazardous Air Pollutants (NESHAP). The Department determines that compliance with the stationary combustion turbine requirements of 40 CFR 63, Subpart YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (currently stayed) will be required once the final rule has been promulgated. See Appendix NESHAP, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines of this permit. [40 CFR 63.6085 and Permit No. 1050234-010-AC, Specific Condition III.3.]

## SECTION IV. ACID RAIN PART.

### Federal Acid Rain Provisions

**Operated By:** Duke Energy Florida, LLC
**Plant:** Hines Energy Complex
**ORIS Code:** 7302

The emissions units listed below are regulated under Acid Rain, Phase II.

| E.U. No. | Brief Description |
|---|---|
| 001 | 170 MW Combined Cycle Westinghouse Model 501FC CT1A with unfired HRSG |
| 002 | 170 MW Combined Cycle Westinghouse Model 501FC CT1B with unfired HRSG |
| 014 | 170 MW Combined Cycle Westinghouse Model 501FD CT2A with unfired HRSG |
| 015 | 170 MW Combined Cycle Westinghouse Model 501FD CT2B with unfired HRSG |
| 016 | 170 MW Combined Cycle Westinghouse Model 501FD CT3A with unfired HRSG |
| 017 | 170 MW Combined Cycle Westinghouse Model 501FD CT3B with unfired HRSG |
| 018 | 170 MW Combined Cycle General Electric Model 7FA CT4A with unfired HRSG |
| 019 | 170 MW Combined Cycle General Electric Model 7FA CT4B with unfired HRSG |

**A.1.** Sulfur dioxide ($SO_2$) Emission Allowances. $SO_2$ emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.
b. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.
c. Allowances shall be accounted for under the Federal Acid Rain Program.

[Rule 62-213.440(1)(c)1., 2. & 3., F.A.C.]

**A.2.** Fast-Track Revisions of Acid Rain Parts. Those Acid Rain sources making a change described at Rule 62-214.370(4), F.A.C., may request such change as provided in Rule 62-213.413, F.A.C., Fast-Track Revisions of Acid Rain Parts. [Rules 62-213.413 and 62-214.370(4), F.A.C.]

**A.3.** Comments, notes, and justifications: None.

**A.4.** Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be incorporated into the permit and shall be enforceable by the Administrator. [40 CFR 70.6(a)(1)(ii); and, Rule 62-210.200(Definitions-Applicable Requirements), F.A.C.]

# Acid Rain Part Application

For more information, see instructions and refer to 40 CFR 72.30, 72.31, and 74; and Chapter 62-214, F.A.C.

This submission is: ☐ New ☐ Revised X Renewal

**STEP 1**

**Identify the source by plant name, state, and ORIS or plant code.**

| Hines Energy Complex<br>Plant name | FL<br>State | 7302<br>ORIS/Plant Code |
|---|---|---|

**STEP 2**
**Enter the unit ID# for every Acid Rain unit at the Acid Rain source in column "a."**

**If unit a $SO_2$ Opt-in unit, enter "yes" in column "b".**

**For new units or $SO_2$ Opt-in units, enter the requested information in columns "d" and "e."**

| a | b | c | d | e |
|---|---|---|---|---|
| Unit ID# | $SO_2$ Opt-in Unit?<br>(Yes or No) | Unit will hold allowances in accordance with 40 CFR 72.9(c)(1) | New or $SO_2$ Opt-in Units<br>Commence Operation Date | New or $SO_2$ Opt-in Units<br>Monitor Certification Deadline |
| 1A | No | Yes | N/A | N/A |
| 1B | No | Yes | N/A | N/A |
| 2A | No | Yes | N/A | N/A |
| 2B | No | Yes | N/A | N/A |
| 3A | No | Yes | N/A | N/A |
| 3B | No | Yes | N/A | N/A |
| 4A | No | Yes | N/A | N/A |
| 4B | No | Yes | N/A | N/A |
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DEP Form No. 62-210.900(1)(a) – Form
Effective: 3/16/08

1

| Hines Energy Complex |
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| Plant Name (from STEP 1) |

**STEP 3**

**Read the standard requirements.**

Acid Rain Part Requirements.

(1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
(I) Submit a complete Acid Rain Part application (including a compliance plan) under 40 CFR Part 72 and Rules 62-214.320 and 330, F.A.C., in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
(II) Submit in a timely manner any supplemental information that the DEP determines is necessary in order to review an Acid Rain Part application and issue or deny an Acid Rain Part;
(2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
(I) Operate the unit in compliance with a complete Acid Rain Part application or a superseding Acid Rain Part issued by the DEP; and
(II) Have an Acid Rain Part.

Monitoring Requirements.

(1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR Part 75, and Rule 62-214.420, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
(3) The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.
(4) For applications including a $SO_2$ Opt-In unit, a monitoring plan for each $SO_2$ Opt-In unit must be submitted with this application pursuant to 40 CFR 74.14(a). For renewal applications for $SO_2$ Opt-In units include an updated monitoring plan if applicable under 40 CFR 75.53(b).

Sulfur Dioxide Requirements.

(1) The owners and operators of each source and each Acid Rain unit at the source shall:
(I) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)), or in the compliance subaccount of another Acid Rain unit at the same source to the extent provided in 40 CFR 73.35(b)(3), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
(II) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
(3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
(I) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
(II) Starting on the later of January 1, 2000, or the deadline for monitor certification under 40 CFR Part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain Part application, the Acid Rain Part, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements.

(1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77.
(2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
(I) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR Part 77; and
(II) Comply with the terms of an approved offset plan, as required by 40 CFR Part 77.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the EPA or the DEP:
(I) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
(II) All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply;
(III) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

| Hines Energy Complex |
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| Plant Name (from STEP 1) |

**STEP 3, Continued.**

Recordkeeping and Reporting Requirements (cont)

(iv) Copies of all documents used to complete an Acid Rain Part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 72, Subpart I, and 40 CFR Part 75.

Liability.

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain Part application, an Acid Rain Part, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
(5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.
(6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 ($NO_x$ averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR Part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
(7) Each violation of a provision of 40 CFR Parts 72, 73, 74, 75, 76, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities.

No provision of the Acid Rain Program, an Acid Rain Part application, an Acid Rain Part, or an exemption under 40 CFR 72.7or 72.8 shall be construed as:
(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
(2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
(3) Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding such state regulation, or limiting such state regulation, including any prudence review requirements under such state law;
(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
(5) Interfering with or impairing any program for competitive bidding for power supply in a state in which such program is established.

**STEP 4**
**For $SO_2$ Opt-in units only.**

**In column "f" enter the unit ID# for every $SO_2$ Opt-in unit identified in column "a" of STEP 2.**

**For column "g" describe the combustion unit and attach information and diagrams on the combustion unit's configuration.**

**In column "h" enter the hours.**

| f | g | h (not required for renewal application) |
|---|---|---|
| Unit ID# | Description of the combustion unit | Number of hours unit operated in the six months preceding initial application |
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DEP Form No. 62-210.900(1)(a) – Form
Effective: 3/16/08

3

**Hines Energy Complex**

**Plant Name (from STEP 1)**

**STEP 5**

**For $SO_2$ Opt-in units only.**
**(Not required for $SO_2$ Opt-in renewal applications.)**

**In column "i" enter the unit ID# for every $SO_2$ Opt-in unit identified in column "a" (and in column "f").**

**For columns "j" through "n," enter the information required under 40 CFR 74.20-74.25 and attach all supporting documentation required by 40 CFR 74.20-74.25.**

| i | j | k | l | m | n |
|---|---|---|---|---|---|
| Unit ID# | Baseline or Alternative Baseline under 40 CFR 74.20 (mmBtu) | Actual $SO_2$ Emissions Rate under 40 CFR 74.22 (lbs/mmBtu) | Allowable 1985 $SO_2$ Emissions Rate under 40 CFR 74.23 (lbs/mmBtu) | Current Allowable $SO_2$ Emissions Rate under 40 CFR 74.24 (lbs/mmBtu) | Current Promulgated $SO_2$ Emissions Rate under 40 CFR 74.25 (lbs/mmBtu) |
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**STEP 6**

**For $SO_2$ Opt-in units only.**

**Attach additional requirements, certify and sign.**

A. If the combustion source seeks to qualify for a transfer of allowances from the replacement of thermal energy, a thermal energy plan as provided in 40 CFR 74.47 for combustion sources must be attached.
B. A statement whether the combustion unit was previously an affected unit under 40 CFR 74.
C. A statement that the combustion unit is not an affected unit under 40 CFR 72.6 and does not have an exemption under 40 CFR 72.7, 72.8, or 72.14.
D. Attach a complete compliance plan for $SO_2$ under 40 CFR 72.40.
E. The designated representative of the combustion unit shall submit a monitoring plan in accordance with 40 CFR 74.61. For renewal application, submit an updated monitoring plan if applicable under 40 CFR 75.53(b).
F. The following statement must be signed by the designated representative or alternate designated representative of the combustion source: "I certify that the data submitted under 40 CFR Part 74, Subpart C, reflects actual operations of the combustion source and has not been adjusted in any way."

Signature [signature] Date 5/13/2016

**STEP 7**

**Read the certification statement; provide name, title, owner company name, phone, and e-mail address; sign, and date.**

**Certification (for designated representative or alternate designated representative only)**

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name **Jeffrey Swartz** Title **VP Florida – Power Generation Operations**

Company Name **Duke Energy Florida, Inc.** Owner

Phone **727-820-5188** E-mail address **Jeffrey.Swartz@duke-energy.com**

Signature [signature] Date 5/13/2016

DEP Form No. 62-210.900(1)(a) – Form
Effective: 3/16/08

4

## ~~SECTION V. CAIR PART.~~

### ~~Clean Air Interstate Rule Provisions~~

~~**Operated by:** Duke Energy Florida, LLC~~
~~**Plant:** Hines Energy Complex~~
~~**ORIS Code:** 7302~~

~~The emissions units listed below are regulated under the Clean Air Interstate Rule (CAIR).~~

| ~~E.U. No.~~ | ~~Brief Description~~ |
|---|---|
| ~~001~~ | ~~170 MW Combined Cycle Westinghouse Model 501FC CT1A with unfired HRSG~~ |
| ~~002~~ | ~~170 MW Combined Cycle Westinghouse Model 501FC CT1B with unfired HRSG~~ |
| ~~014~~ | ~~170 MW Combined Cycle Westinghouse Model 501FD CT2A with unfired HRSG~~ |
| ~~015~~ | ~~170 MW Combined Cycle Westinghouse Model 501FD CT2B with unfired HRSG~~ |
| ~~016~~ | ~~170 MW Combined Cycle Westinghouse Model 501FD CT3A with unfired HRSG~~ |
| ~~017~~ | ~~170 MW Combined Cycle Westinghouse Model 501FD CT3B with unfired HRSG~~ |
| ~~018~~ | ~~170 MW Combined Cycle General Electric Model 7FA CT4A with unfired HRSG~~ |
| ~~019~~ | ~~170 MW Combined Cycle General Electric Model 7FA CT4B with unfired HRSG~~ |

~~**A.1.** Clean Air Interstate Rule Application. The Clean Air Interstate Rule Part Form submitted for this facility is a part of this permit. The owners and operators of these CAIR units as identified in this form must comply with the standard requirements and special provisions set forth in the CAIR Part Form (DEP Form No. 62-210.900(1)(b) - Form, Effective: 3/16/08), which is attached at the end of this subsection. [Chapter 62-213, F.A.C. and Rule 62-210.200, F.A.C.]~~

~~**A.2.** Comments, Notes, and Justifications. None.~~

# Clean Air Interstate Rule (CAIR) Part

For more information, see instructions and refer to 40 CFR 96.121, 96.122, 96.221, 96.222, 96.321 and 96.322; and Rule 62-296.470, F.A.C.

This submission is: ☐ New ☐ Revised X Renewal

**STEP 1**

**Identify the source by plant name and ORIS or EIA plant code**

| Plant Name: | State: Florida | ORIS or EIA Plant Code: |
|---|---|---|
| Hines Energy Complex | | 7302 |

**STEP 2**

**In column "a" enter the unit ID# for every CAIR unit at the CAIR source.**

**In columns "b," "c," and "d," indicate to which CAIR program(s) each unit is subject by placing an "X" in the column(s).**

**For new units, enter the requested information in columns "e" and "f.**

| a | b | c | d | e | f |
|---|---|---|---|---|---|
| Unit ID# | Unit will hold nitrogen oxides ($NO_X$) allowances in accordance with 40 CFR 96.106(c)(1) | Unit will hold sulfur dioxide ($SO_2$) allowances in accordance with 40 CFR 96.206(c)(1) | Unit will hold $NO_X$ Ozone Season allowances in accordance with 40 CFR 96.306(c)(1) | New Units Expected Commence Commercial Operation Date | New Units Expected Monitor Certification Deadline |
| 1A (EU001) | X | X | X | N/A | N/A |
| 1B (EU002) | X | X | X | N/A | N/A |
| 2A (EU014) | X | X | X | N/A | N/A |
| 2B (EU015) | X | X | X | N/A | N/A |
| 3A (EU016) | X | X | X | N/A | N/A |
| 3B (EU017) | X | X | X | N/A | N/A |
| 4A (EU018) | X | X | X | N/A | N/A |
| 4B (EU019) | X | X | X | N/A | N/A |
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DEP Form No. 62-210.900(1)(b) – Form
Effective: 3/16/08

1

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| **Hines Energy Complex**<br><br>Plant Name (from STEP 1) |

**STEP 3**

**Read the standard requirements.**

## CAIR $NO_X$ ANNUAL TRADING PROGRAM

### CAIR Part Requirements.

(1) The CAIR designated representative of each CAIR $NO_X$ source and each CAIR $NO_X$ unit at the source shall:
(i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.122 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and
(ii) [Reserved];
(2) The owners and operators of each CAIR $NO_X$ source and each CAIR $NO_X$ unit at the source shall have a CAIR Part included in the Title V operating permit issued by the DEP under 40 CFR Part 96, Subpart CC, and operate the source and the unit in compliance with such CAIR Part.

### Monitoring, Reporting, and Recordkeeping Requirements.

(1) The owners and operators, and the CAIR designated representative, of each CAIR $NO_X$ source and each CAIR $NO_X$ unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96, Subpart HH, and Rule 62-296.470, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HH, shall be used to determine compliance by each CAIR $NO_X$ source with the following CAIR $NO_X$ Emissions Requirements.

### $NO_X$ Emission Requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR $NO_X$ source and each CAIR $NO_X$ unit at the source shall hold, in the source's compliance account, CAIR $NO_X$ allowances available for compliance deductions for the control period under 40 CFR 96.154(a) in an amount not less than the tons of total $NO_X$ emissions for the control period from all CAIR $NO_X$ units at the source, as determined in accordance with 40 CFR Part 96, Subpart HH.
(2) A CAIR $NO_X$ unit shall be subject to the requirements under paragraph (1) of the $NO_X$ Requirements starting on the later of January 1, 2009, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.170(b)(1) or (2) and for each control period thereafter.
(3) A CAIR $NO_X$ allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the $NO_X$ Requirements, for a control period in a calendar year before the year for which the CAIR $NO_X$ allowance was allocated.
(4) CAIR $NO_X$ allowances shall be held in, deducted from, or transferred into or among CAIR $NO_X$ Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FF and GG.
(5) A CAIR $NO_X$ allowance is a limited authorization to emit one ton of $NO_X$ in accordance with the CAIR $NO_X$ Annual Trading Program. No provision of the CAIR $NO_X$ Annual Trading Program, the CAIR Part, or an exemption under 40 CFR 96.105 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.
(6) A CAIR $NO_X$ allowance does not constitute a property right.
(7) Upon recordation by the Administrator under 40 CFR Part 96, Subpart EE, FF, or GG, every allocation, transfer, or deduction of a CAIR $NO_X$ allowance to or from a CAIR $NO_X$ unit's compliance account is incorporated automatically in any CAIR Part of the source that includes the CAIR $NO_X$ unit.

### Excess Emissions Requirements.

If a CAIR $NO_X$ source emits $NO_X$ during any control period in excess of the CAIR $NO_X$ emissions limitation, then:
(1) The owners and operators of the source and each CAIR $NO_X$ unit at the source shall surrender the CAIR $NO_X$ allowances required for deduction under 40 CFR 96.154(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AA, the Clean Air Act, and applicable state law.

### Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the CAIR $NO_X$ source and each CAIR $NO_X$ unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the DEP or the Administrator.
(i) The certificate of representation under 40 CFR 96.113 for the CAIR designated representative for the source and each CAIR $NO_X$ unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under 40 CFR 96.113 changing the CAIR designated representative.
(ii) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HH, of this part, provided that to the extent that 40 CFR Part 96, Subpart HH, provides for a 3-year period for recordkeeping, the 3-year period shall apply.
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR $NO_X$ Annual Trading Program.
(iv) Copies of all documents used to complete a CAIR Part form and any other submission under the CAIR $NO_X$ Annual Trading Program or to demonstrate compliance with the requirements of the CAIR $NO_X$ Annual Trading Program.
(2) The CAIR designated representative of a CAIR $NO_X$ source and each CAIR $NO_X$ unit at the source shall submit the reports required under the CAIR $NO_X$ Annual Trading Program, including those under 40 CFR Part 96, Subpart HH.

DEP Form No. 62-210.900(1)(b) – Form
Effective: 3/16/08 2

| Hines Energy Complex |
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| Plant Name (from STEP 1) |

**STEP 3, Continued**

Liability.

(1) Each CAIR $NO_X$ source and each CAIR $NO_X$ unit shall meet the requirements of the CAIR $NO_X$ Annual Trading Program.
(2) Any provision of the CAIR $NO_X$ Annual Trading Program that applies to a CAIR $NO_X$ source or the CAIR designated representative of a CAIR
$NO_X$ source shall also apply to the owners and operators of such source and of the CAIR $NO_X$ units at the source.
(3) Any provision of the CAIR $NO_X$ Annual Trading Program that applies to a CAIR $NO_X$ unit or the CAIR designated representative of a CAIR $NO_X$ unit shall also apply to the owners and operators of such unit.

Effect on Other Authorities.

No provision of the CAIR $NO_X$ Annual Trading Program, a CAIR Part, or an exemption under 40 CFR 96.105 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR $NO_X$ source or CAIR $NO_X$ unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

**CAIR $SO_2$ TRADING PROGRAM**

CAIR Part Requirements.

(1) The CAIR designated representative of each CAIR $SO_2$ source and each CAIR $SO_2$ unit at the source shall:
(i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.222 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and
(ii) [Reserved];
(2) The owners and operators of each CAIR $SO_2$ source and each CAIR $SO_2$ unit at the source shall have a CAIR Part included in the Title V operating permit issued by the DEP under 40 CFR Part 96, Subpart CCC, for the source and operate the source and each CAIR unit in compliance with such CAIR Part.

Monitoring, Reporting, and Recordkeeping Requirements.

(1) The owners and operators, and the CAIR designated representative, of each CAIR $SO_2$ source and each $SO_2$ CAIR unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96 ,Subpart HHH, and Rule 62-296.470, F.A.C.
(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HHH, shall be used to determine compliance by each CAIR $SO_2$ source with the following CAIR $SO_2$ Emission Requirements.

$SO_2$ Emission Requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR $SO_2$ source and each CAIR $SO_2$ unit at the source shall hold, in the source's compliance account, a tonnage equivalent in CAIR $SO_2$ allowances available for compliance deductions for the control period, as determined in accordance with 40 CFR 96.254(a) and (b), not less than the tons of total sulfur dioxide emissions for the control period from all CAIR $SO_2$ units at the source, as determined in accordance with 40 CFR Part 96, Subpart HHH.
(2) A CAIR $SO_2$ unit shall be subject to the requirements under paragraph (1) of the Sulfur Dioxide Emission Requirements starting on the later of January 1, 2010 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.270(b)(1) or (2) and for each control period thereafter.
(3) A CAIR $SO_2$ allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the $SO_2$ Emission Requirements, for a control period in a calendar year before the year for which the CAIR $SO_2$ allowance was allocated.
(4) CAIR $SO_2$ allowances shall be held in, deducted from, or transferred into or among CAIR $SO_2$ Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FFF and GGG.
(5) A CAIR $SO_2$ allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR $SO_2$ Trading Program. No provision of the CAIR $SO_2$ Trading Program, the CAIR Part, or an exemption under 40 CFR 96.205 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.
(6) A CAIR $SO_2$ allowance does not constitute a property right.
(7) Upon recordation by the Administrator under 40 CFR Part 96, Subpart FFF or GGG, every allocation, transfer, or deduction of a CAIR $SO_2$ allowance to or from a CAIR $SO_2$ unit's compliance account is incorporated automatically in any CAIR Part of the source that includes the CAIR $SO_2$ unit.

Excess Emissions Requirements.

If a CAIR $SO_2$ source emits $SO_2$ during any control period in excess of the CAIR $SO_2$ emissions limitation, then:
(1) The owners and operators of the source and each CAIR $SO_2$ unit at the source shall surrender the CAIR $SO_2$ allowances required for deduction under 40 CFR 96.254(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AAA, the Clean Air Act, and applicable state law.

| Hines Energy Complex |
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| Plant Name (from STEP 1) |

STEP 3, Continued

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the CAIR $SO_2$ source and each CAIR $SO_2$ unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Department or the Administrator.

(i) The certificate of representation under 40 CFR 96.213 for the CAIR designated representative for the source and each CAIR $SO_2$ unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under 40 CFR 96.213 changing the CAIR designated representative.

(ii) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HHH, of this part, provided that to the extent that 40 CFR Part 96, Subpart HHH, provides for a 3-year period for recordkeeping, the 3-year period shall apply.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR $SO_2$ Trading Program.

(iv) Copies of all documents used to complete a CAIR Part form and any other submission under the CAIR $SO_2$ Trading Program or to demonstrate compliance with the requirements of the CAIR $SO_2$ Trading Program.

(2) The CAIR designated representative of a CAIR $SO_2$ source and each CAIR $SO_2$ unit at the source shall submit the reports required under the CAIR $SO_2$ Trading Program, including those under 40 CFR Part 96, Subpart HHH.

Liability.

(1) Each CAIR $SO_2$ source and each CAIR $SO_2$ unit shall meet the requirements of the CAIR $SO_2$ Trading Program.

(2) Any provision of the CAIR $SO_2$ Trading Program that applies to a CAIR $SO_2$ source or the CAIR designated representative of a CAIR $SO_2$ source shall also apply to the owners and operators of such source and of the CAIR $SO_2$ units at the source.

(3) Any provision of the CAIR $SO_2$ Trading Program that applies to a CAIR $SO_2$ unit or the CAIR designated representative of a CAIR $SO_2$ unit shall also apply to the owners and operators of such unit.

Effect on Other Authorities.

No provision of the CAIR $SO_2$ Trading Program, a CAIR Part, or an exemption under 40 CFR 96.205 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR $SO_2$ source or CAIR $SO_2$ unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

**CAIR $NO_x$ OZONE SEASON TRADING PROGRAM**

CAIR Part Requirements.

(1) The CAIR designated representative of each CAIR $NO_X$ Ozone Season source and each CAIR $NO_X$ Ozone Season unit at the source shall:

(i) Submit to the DEP a complete and certified CAIR Part form under 40 CFR 96.322 and Rule 62-296.470, F.A.C., in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and

(ii) [Reserved];

(2) The owners and operators of each CAIR $NO_X$ Ozone Season source required to have a Title V operating permit or air construction permit, and each CAIR $NO_X$ Ozone Season unit required to have a Title V operating permit or air construction permit at the source shall have a CAIR Part included in the Title V operating permit or air construction permit issued by the DEP under 40 CFR Part 96, Subpart CCCC, for the source and operate the source and the unit in compliance with such CAIR Part.

Monitoring, Reporting, and Recordkeeping Requirements.

(1) The owners and operators, and the CAIR designated representative, of each CAIR $NO_X$ Ozone Season source and each CAIR $NO_X$ Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 96, Subpart HHHH, and Rule 62-296.470, F.A.C.

(2) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HHHH, shall be used to determine compliance by each CAIR $NO_X$ Ozone Season source with the following CAIR $NO_X$ Ozone Season Emissions Requirements.

$NO_x$ Ozone Season Emission Requirements.

(1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR $NO_X$ Ozone Season source and each CAIR $NO_X$ Ozone Season unit at the source shall hold, in the source's compliance account, CAIR $NO_X$ Ozone Season allowances available for compliance deductions for the control period under 40 CFR 96.354(a) in an amount not less than the tons of total $NO_X$ emissions for the control period from all CAIR $NO_X$ Ozone Season units at the source, as determined in accordance with 40 CFR Part 96, Subpart HHHH.

(2) A CAIR $NO_X$ Ozone Season unit shall be subject to the requirements under paragraph (1) of the $NO_X$ Ozone Season Emission Requirements starting on the later of May 1, 2009 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 96.370(b)(1),(2), or (3) and for each control period thereafter.

(3) A CAIR $NO_X$ Ozone Season allowance shall not be deducted, for compliance with the requirements under paragraph (1) of the $NO_X$ Ozone Season Emission Requirements, for a control period in a calendar year before the year for which the CAIR $NO_X$ Ozone Season allowance was allocated.

(4) CAIR $NO_X$ Ozone Season allowances shall be held in, deducted from, or transferred into or among CAIR $NO_X$ Ozone Season Allowance Tracking System accounts in accordance with 40 CFR Part 96, Subparts FFFF and GGGG.

(5) A CAIR $NO_X$ Ozone Season allowance is a limited authorization to emit one ton of $NO_X$ in accordance with the CAIR $NO_X$ Ozone Season Trading Program. No provision of the CAIR $NO_X$ Ozone Season Trading Program, the CAIR Part, or an exemption under 40 CFR 96.305 and no provision of law shall be construed to limit the authority of the state or the United States to terminate or limit such authorization.

(6) A CAIR $NO_X$ Ozone Season allowance does not constitute a property right.

(7) Upon recordation by the Administrator under 40 CFR Part 96, Subpart EEEE, FFFF or GGGG, every allocation, transfer, or deduction of a CAIR $NO_X$ Ozone Season allowance to or from a CAIR $NO_X$ Ozone Season unit's compliance account is incorporated automatically in any CAIR Part of the source that includes the CAIR $NO_X$ Ozone Season unit.

| Hines Energy Complex |
|---|
| Plant Name (from STEP 1) |

**STEP 3, Continued**

Excess Emissions Requirements.

If a CAIR $NO_X$ Ozone Season source emits $NO_X$ during any control period in excess of the CAIR $NO_X$ Ozone Season emissions limitation, then:
(1) The owners and operators of the source and each CAIR $NO_X$ Ozone Season unit at the source shall surrender the CAIR $NO_X$ Ozone Season allowances required for deduction under 40 CFR 96.354(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable state law; and
(2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AAAA, the Clean Air Act, and applicable state law.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the CAIR $NO_X$ Ozone Season source and each CAIR $NO_X$ Ozone Season unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the DEP or the Administrator.
(i) The certificate of representation under 40 CFR 96.313 for the CAIR designated representative for the source and each CAIR $NO_X$ Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under 40 CFR 96.113 changing the CAIR designated representative.
(ii) All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HHHH, of this part, provided that to the extent that 40 CFR Part 96, Subpart HHHH, provides for a 3-year period for recordkeeping, the 3-year period shall apply.
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR $NO_X$ Ozone Season Trading Program.
(iv) Copies of all documents used to complete a CAIR Part form and any other submission under the CAIR $NO_X$ Ozone Season Trading Program or to demonstrate compliance with the requirements of the CAIR $NO_X$ Ozone Season Trading Program.
(2) The CAIR designated representative of a CAIR $NO_X$ Ozone Season source and each CAIR $NO_X$ Ozone Season unit at the source shall submit the reports required under the CAIR $NO_X$ Ozone Season Trading Program, including those under 40 CFR Part 96, Subpart HHHH.

Liability.

(1) Each CAIR $NO_X$ Ozone Season source and each CAIR $NO_X$ Ozone Season unit shall meet the requirements of the CAIR $NO_X$ Ozone Season Trading Program.
(2) Any provision of the CAIR $NO_X$ Ozone Season Trading Program that applies to a CAIR $NO_X$ Ozone Season source or the CAIR designated representative of a CAIR $NO_X$ Ozone Season source shall also apply to the owners and operators of such source and of the CAIR $NO_X$ Ozone Season units at the source.
(3) Any provision of the CAIR $NO_X$ Ozone Season Trading Program that applies to a CAIR $NO_X$ Ozone Season unit or the CAIR designated representative of a CAIR $NO_X$ Ozone Season unit shall also apply to the owners and operators of such unit.

Effect on Other Authorities.

No provision of the CAIR $NO_X$ Ozone Season Trading Program, a CAIR Part, or an exemption under 40 CFR 96.305 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR $NO_X$ Ozone Season source or CAIR $NO_X$ Ozone Season unit from compliance with any other provision of the applicable, approved State Implementation Plan, a federally enforceable permit, or the Clean Air Act.

**STEP 4**

**Read the certification statement; provide name, title, owner company name, phone, and e-mail address; sign, and date.**

**Certification (for designated representative or alternate designated representative only)**

I am authorized to make this submission on behalf of the owners and operators of the CAIR source or CAIR units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

| | |
|---|---|
| Name **Jeffrey Swartz** | Title **VP Florida – Power Generation Operations** |
| Owner Name **Duke Energy Florida, Inc.** | Company |
| Phone **727-820-5188** | E-mail Address **Jeffrey.Swartz@duke-energy.com** |
| Signature | Date 5/13/2016 |

DEP Form No. 62-210.900(1)(b) – Form
Effective: 3/16/08

5

## TRANSPORT RULE (TR) TRADING PROGRAM TITLE V REQUIREMENTS

**Operated by:** Duke Energy Florida, LLC
**Plant:** Hines Energy Complex
**ORIS Code:** 7302

**Description of TR Monitoring Provisions**

The TR subject units, and the unit-specific monitoring provisions at this source, are identified in the following table. These units are subject to the requirements for the TR $NO_X$ Ozone Season Trading Program.

| Unit ID: 001(CT1A), 002(CT1B), 014(CT2A), 015(CT2B), 016(CT3A), 017(CT3B), 018(CT4A) & 019(CT4B) | | | | | |
|---|---|---|---|---|---|
| Parameter | Continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR part 75, subpart B (for $SO_2$ monitoring) and 40 CFR part 75, subpart H (for $NO_X$ monitoring) | Excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR part 75, appendix D | Excepted monitoring system requirements for gas- and oil-fired peaking units pursuant to 40 CFR part 75, appendix E | Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19 | EPA-approved alternative monitoring system requirements pursuant to 40 CFR part 75, subpart E |
| $SO_2$ | No | 40 CFR Part 75 Appendix D | No | No | No |
| $NO_X$ | 40 CFR Part 75 Subpart H | No | No | No | No |
| Heat input | No | 40 CFR Part 75 Appendix D | No | No | No |

1. The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR 97.530 through 97.535 (TR $NO_X$ Ozone Season Trading Program). The monitoring, recordkeeping and reporting requirements applicable to each unit are included below in the standard conditions for the applicable TR trading programs.

2. Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA's website at http://www2.epa.gov/airmarkets/monitoring-plans.

3. Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR 75, Subpart E, 40 CFR 75.66 and 40 CFR 97.535 (TR $NO_X$ Ozone Season Trading Program). The Administrator's response approving or disapproving any petition for an alternative monitoring system is available on the EPA's website at http://www.epa.gov/airmarkets/emissions/petitions.html. http://www2.epa.gov/airmarkets/part-75-petition-responses.

4. Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR 97.530 through 97.534 (TR $NO_X$ Ozone Season Trading Program) must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR 75.66 and 40

CFR 97.535 (TR $NO_X$ Ozone Season Trading Program). The Administrator's response approving or disapproving any petition for an alternative to a monitoring, recordkeeping, or reporting requirement is available on EPA's website at http://www.epa.gov/airmarkets/emissions/petitions.html.

**5.** The descriptions of monitoring applicable to the units included above meet the requirement of 40 CFR 97.530 through 97.534 (TR $NO_X$ Ozone Season Trading Program), and therefore minor permit modification procedures, in accordance with 40 CFR 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B), may be used to add to or change this unit's monitoring system description.

**TR $NO_X$ Ozone Season Trading Program Requirements (40 CFR 97.506)**

**6.** Designated Representative Requirements. The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.513 through 97.518.

**7.** Emissions Monitoring, Reporting, and Recordkeeping Requirements.

a. The owners and operators, and the designated representative, of each TR $NO_X$ Ozone Season source and each TR $NO_X$ Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.530 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.531 (initial monitoring system certification and recertification procedures), 97.532 (monitoring system out-of-control periods), 97.533 (notifications concerning monitoring), 97.534 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.535 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

b. The emissions data determined in accordance with 40 CFR 97.530 through 97.535 shall be used to calculate allocations of TR $NO_X$ Ozone Season allowances under 40 CFR 97.511(a)(2) and (b) and 97.512 and to determine compliance with the TR $NO_X$ Ozone Season emissions limitation and assurance provisions under Condition **8** below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.530 through 97.535 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**8.** $NO_X$ Emissions Requirements.

a. *TR $NO_X$ Ozone Season Emissions Limitation*.

(1) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR $NO_X$ Ozone Season source and each TR $NO_X$ Ozone Season unit at the source shall hold, in the source's compliance account, TR $NO_X$ Ozone Season allowances available for deduction for such control period under 40 CFR 97.524(a) in an amount not less than the tons of total $NO_X$ emissions for such control period from all TR $NO_X$ Ozone Season units at the source.

(2) If total $NO_X$ emissions during a control period in a given year from the TR $NO_X$ Ozone Season units at a TR $NO_X$ Ozone Season source are in excess of the TR $NO_X$ Ozone Season emissions limitation set forth in paragraph (1) above, then:

(a) The owners and operators of the source and each TR $NO_X$ Ozone Season unit at the source shall hold the TR $NO_X$ Ozone Season allowances required for deduction under 40 CFR 97.524(d); and

(b) The owners and operators of the source and each TR $NO_X$ Ozone Season unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBB and the Clean Air Act.

b. *TR $NO_X$ Ozone Season Assurance Provisions*.

(1) If total $NO_X$ emissions during a control period in a given year from all TR $NO_X$ Ozone Season units at TR $NO_X$ Ozone Season sources in the state (and Indian country within the borders of such state) exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such $NO_X$ emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR $NO_X$ Ozone Season allowances available for deduction for such control period under 40 CFR 97.525(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.525(b), of multiplying—

(a) The quotient of the amount by which the common designated representative's share of such $NO_X$ emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state (and Indian country within the borders of such state) for such control period, by which each common designated representative's share of such $NO_X$ emissions exceeds the respective common designated representative's assurance level; and

(b) The amount by which total $NO_X$ emissions from all TR $NO_X$ Ozone Season units at TR $NO_X$ Ozone Season sources in the state (and Indian country within the borders of such state) for such control period exceed the state assurance level.

(2) The owners and operators shall hold the TR $NO_X$ Ozone Season allowances required under paragraph (1) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(3) Total $NO_X$ emissions from all TR $NO_X$ Ozone Season units at TR $NO_X$ Ozone Season sources in the state (and Indian country within the borders of such state) during a control period in a given year exceed the state assurance level if such total $NO_X$ emissions exceed the sum, for such control period, of the State $NO_X$ Ozone Season trading budget under 40 CFR 97.510(a) and the state's variability limit under 40 CFR 97.510(b).

(4) It shall not be a violation of 40 CFR part 97, subpart BBBBB or of the Clean Air Act if total $NO_X$ emissions from all TR $NO_X$ Ozone Season units at TR $NO_X$ Ozone Season sources in the state (and Indian country within the borders of such State) during a control period exceed the state assurance level or if a common designated representative's share of total $NO_X$ emissions from the TR $NO_X$ Ozone Season units at TR $NO_X$ Ozone Season sources in the state (and Indian country within the borders of such state) during a control period exceeds the common designated representative's assurance level.

(5) To the extent the owners and operators fail to hold TR $NO_X$ Ozone Season allowances for a control period in a given year in accordance with paragraphs (1) through (3) above,

(a) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(b) Each TR $NO_X$ Ozone Season allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (1) through (3) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBB and the Clean Air Act.

c. *Compliance Periods*.

(1) A TR $NO_X$ Ozone Season unit shall be subject to the requirements under paragraph (a) above for the control period starting on the later of May 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.

(2) A TR $NO_X$ Ozone Season unit shall be subject to the requirements under paragraph (b) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.

d. *Vintage of Allowances Held for Compliance*.

(1) A TR $NO_X$ Ozone Season allowance held for compliance with the requirements under paragraph (a)(1) above for a control period in a given year must be a TR $NO_X$ Ozone Season allowance that was allocated for such control period or a control period in a prior year.

(2) A TR $NO_X$ Ozone Season allowance held for compliance with the requirements under paragraphs a.(2)(a) and b.(1) through (3) above for a control period in a given year must be a TR $NO_X$ Ozone Season allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

e. *Allowance Management System Requirements*. Each TR $NO_X$ Ozone Season allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart BBBBB.

f. *Limited Authorization*. A TR $NO_X$ Ozone Season allowance is a limited authorization to emit one ton of $NO_X$ during the control period in one year. Such authorization is limited in its use and duration as follows:

(1) Such authorization shall only be used in accordance with the TR $NO_X$ Ozone Season Trading Program; and

(2) Notwithstanding any other provision of 40 CFR part 97, subpart BBBBB, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

g. *Property Right*. A TR $NO_X$ Ozone Season allowance does not constitute a property right.

**9.** Title V Permit Revision Requirements.

a. No Title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR $NO_X$ Ozone Season allowances in accordance with 40 CFR part 97, subpart BBBBB.

b. This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.530 through 97.535, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.506(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**10.** Additional Recordkeeping and Reporting Requirements.

a. Unless otherwise provided, the owners and operators of each TR $NO_X$ Ozone Season source and each TR $NO_X$ Ozone Season unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(1) The certificate of representation under 40 CFR 97.516 for the designated representative for the source and each TR $NO_X$ Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.516 changing the designated representative.

(2) All emissions monitoring information, in accordance with 40 CFR part 97, subpart BBBBB.

(3) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR $NO_X$ Ozone Season Trading Program.

b. The designated representative of a TR $NO_X$ Ozone Season source and each TR $NO_X$ Ozone Season unit at the source shall make all submissions required under the TR $NO_X$ Ozone Season Trading Program, except as provided in 40 CFR 97.518. This requirement does not change, create an exemption from, or otherwise

affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**11.** Liability.

a. Any provision of the TR $NO_X$ Ozone Season Trading Program that applies to a TR $NO_X$ Ozone Season source or the designated representative of a TR $NO_X$ Ozone Season source shall also apply to the owners and operators of such source and of the TR $NO_X$ Ozone Season units at the source.

b. Any provision of the TR $NO_X$ Ozone Season Trading Program that applies to a TR $NO_X$ Ozone Season unit or the designated representative of a TR $NO_X$ Ozone Season unit shall also apply to the owners and operators of such unit.

**12.** Effect on Other Authorities. No provision of the TR $NO_X$ Ozone Season Trading Program or exemption under 40 CFR 97.505 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR $NO_X$ Ozone Season source or TR $NO_X$ Ozone Season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**13.** Effect on Units in Indian Country. Notwithstanding the provisions of Conditions **6.** through **12.** above, Conditions **6.** through **12.** shall be deemed not to impose any requirements on any source or unit, or any owner, operator, or designated representative with regard to any source or unit, in Indian country within the borders of the state.

Link to 40 CFR 97