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Suite 1200   Tampa, Florida 33607 	⊠ Certified Mail	
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DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF AIR RESOURCES MANAGEMENTALS BUREAU OF AIR REGULATION TALLAHASSEE, FLORIDA 32399-2400

M& 5505



# Department of Environmental Protection

Jeb Bush Governor Twin Towers Office Building 2600 Blair Stone Road Tallahassee, Florida 32399-2400

Colleen M. Castille Secretary

December 13, 2004

Benjamin M. H. Borsch, P.E. Calpine Construction Finance Company, LP Calpine Corporation 2701 North Rocky Point Drive, Suite 1200 Tampa, FL, 33607

Re:

Title V Air Operation Permit Revision

DRAFT Permit Project No.: 1050221-009-AV

Revision to Title V Air Operation Permit No.: 1050221-007-AV

Auburndale Cogeneration Facility

Dear Mr. Borsch:

One copy of the DRAFT Permit for a Title V Air Operation Permit Revision for the Auburndale Cogeneration Facility located at 1651 Derby Avenue, Auburndale, Polk County, is enclosed. The permitting authority's "INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION" and the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION" are also included.

An electronic version of the DRAFT Permit has been posted on the Division of Air Resource Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review. The web site address is:

"http://www.dep.state.fl.us/air/permitting/airpermits/AirSearch\_ltd.asp"

The "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION" must be published as soon as possible. Proof of publication, i.e., newspaper affidavit, must be provided to the permitting authority's office within 7 (seven) days of publication pursuant to Rule 62-110.106(5), F.A.C. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit revision pursuant to Rule 62-110.106(11), F.A.C.

Please submit any written comments you wish to have considered concerning the permitting authority's proposed action to Jim Pennington, P.E., at the above letterhead address. If you have any other questions, please contact Bobby Bull, at 850/921-9585.

Sincerely,

Trina Vielhauer, Chief Bureau of Air Regulation

Dem L Viehan

TV/jkp/rlb

Enclosures

"More Protection, Less Process"

Printed on recycled paper.

In the Matter of an Application for Permit Revision by:

Calpine Construction Finance Company, LP

2701 North Rocky Point Drive

Revision to Title V Air Operation Permit No.: 1050221-007-AV

Suite 1200

Auburndale Cogeneration Facility

Polk County

Tampa, FL 33607

#### INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION

The Department of Environmental Protection (permitting authority) gives notice of its intent to issue a Title V Air Operation Permit Revision (copy of DRAFT Permit attached) for the Title V source detailed in the application specified above, for the reasons stated below. This is a revision to Title V Air Operation Permit No. 1050221-007-AV.

The applicant, Calpine Construction Finance Company, LP, applied on September 17, 2004, to the permitting authority for a Title V Air Operation Permit Revision for the Auburndale Cogeneration Facility located at 1651 Derby Avenue, in Auburndale, Polk County.

This permit will be a revision of the Title V air operation permit 1050221-007-AV. The applicant will incorporate the newly constructed Osprey Energy Center (Air Construction Project 1050334-001-AC) into the current Auburndale Cogeneration Facility permit. The Osprey Energy Center was initially constructed with the intention of being a stand alone facility. However, it is contiguous with the Auburndale Cogeneration Facility, and will be incorporated in the Auburndale Cogeneration Facility permit, Facility ID No. 1050221. The Permit revision is being issued to allow continued commercial operation of the facility, as authorized by the initial Permit, No. 1050221-002-AV, and incorporate the terms of Air Construction Permits 1050334-001-AC. All units will operate under Facility ID No. 1050221. The emissions units (EU 007 through EU 011) have been built and the initial performance test has been conducted and compliance demonstrated.

The Auburndale Cogeneration Facility consists of four collocated combustion turbines along with ancillary and supporting equipment and facilities. Auburndale Cogeneration Facility operates all of the units at the facility; however, there are three different owners for the combustion turbines. EU 001 is owned by Auburndale Power Partners, L.P. EU 006 is owned by Auburndale Peaker Energy Center, LLC (APEC). EUs 007 and 008 are the newly constructed units, and are owned by Calpine Construction Finance Company, L.P.

The permitting authority has permitting jurisdiction 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. This source is not exempt from Title V permitting procedures. The permitting authority has determined that a Title V Air Operation Permit Revision is required to commence or continue operations at the described facility.

The permitting authority intends to issue this Title V Air Operation Permit Revision based on the belief that reasonable assurances have been provided to indicate that operation of the source will not adversely impact air quality, and the source will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62.214, 62-256, 62-257, 62-281, 62-296, and 62-297, F.A.C.

Pursuant to Sections 403.815 and 403.087, F.S., and Rules 62-110.106 and 62-210.350(3), F.A.C., you (the applicant) are required to publish at your own expense the enclosed "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION." The notice shall be published one time only as soon as possible in the legal

advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the permitting authority at the address or telephone number listed below. The applicant shall provide proof of publication to the 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax: 850/921-9533), within 7 (seven) days of publication pursuant to Rule 62-110.106(5), F.A.C. Failure to publish the notice and provide proof of publication may result in the denial of the permit revision pursuant to Rule 62-110.106(11), F.A.C.

The permitting authority will issue the PROPOSED Permit, and subsequent FINAL Permit, in accordance with the conditions of the attached DRAFT Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The permitting authority will accept written comments concerning the proposed permit revision issuance action for a period of 30 (thirty) days from the date of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION." Written comments should be provided to the permitting authority office. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit, the permitting authority shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the permit revision applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the permitting authority for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the permitting authority's action is based must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
- (c) A statement of how and when each petitioner received notice of the agency action or proposed action;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

- (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief;
- (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and,
- (g)-A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the permitting authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the permitting authority's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the permitting authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation will not be available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply to the Department of Environmental Protection for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542, F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information:

- (a) The name, address, and telephone number of the petitioner;
- (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any;
  - (c) Each rule or portion of a rule from which a variance or waiver is requested;
- (d) The citation to the statute underlying (implemented by) the rule identified in (c) above;
  - (e) The type of action requested;
  - (f) The specific facts that would justify a variance or waiver for the petitioner;
- (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and,
- (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2), F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the United States Environmental Protection Agency and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 (sixty) days of the expiration of the

Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to issuance of any permit revision. Any petition shall be based only on objections to the permit revision that were raised with reasonable specificity during the 30 (thirty) day public comment period provided in this notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

Executed in Tallahassee, Florida.

Department of Environmental Protection

Trina Vielhauer, Chief

Jun L Vulham

Bureau of Air Regulation

#### **CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION (including the PUBLIC NOTICE and the DRAFT Permit) and all copies were sent by certified mail before the close of business on the person(s) listed:

#### Benjamin M. H. Borsch, P.E., Calpine Construction Finance Company, LP

In addition, the undersigned duly designated deputy agency clerk hereby certifies that copies of this INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION (including the PUBLIC NOTICE and Statement of Basis) were sent by U.S. mail on the same date to the person(s) listed or as otherwise noted:

Thomas W. Davis, P.E., Environmental Consulting and Technology, Inc.

In addition, the undersigned duly designated deputy agency clerk hereby certifies that copies of this INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION (including the DRAFT Permit package) were sent by INTERNET E-mail on the same date to the person(s) listed:

Heidi Whidden, Osprey Energy Center Jerry Kissel, DEP-SWD U.S. EPA, Region 4

Clerk Stamp

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

#### PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Department of Environmental Protection
Draft Title V Major Source Air Operation Permit No. 1050221-009-AV
Calpine Construction Finance Company, LP- Osprey Energy Center
Polk County

**Applicant**: The applicant for this project is Calpine Construction Finance Company, LP, Calpine Corporation, 2701 North Rocky Point Drive, Suite 1200, Tampa, FL, 33607. The applicant's responsible official is Mr. Benjamin M. H. Borsch, P.E., Manager- Safety, Health and Environment.

Facility Location: The applicant owns the Osprey Energy Center and operated by the Auburndale Cogeneration Facility, which is located at 1651 Derby Avenue, in Auburndale, Polk County Florida. The Auburndale Cogeneration Facility consists of four collocated combustion turbines along with ancillary and supporting equipment and facilities. Auburndale Cogeneration Facility operates all of the units at the facility; however, there are three different owners for the combustion turbines. EU 001 is owned by Auburndale Power Partners, L.P. EU 006 is owned by Auburndale Peaker Energy Center, LLC (APEC). EUs 007 and 008 are the newly constructed units, and are owned by Calpine Construction Finance Company, L.P.

Project: The applicant submitted an application on September 17, 2004 for a Title V major source air operation permit revision. This permit will be a revision of the Title V air operation permit 1050221-007-AV. The applicant will incorporate the newly constructed Osprey Energy Center (Air Construction Project 1050334-001-AC) into the current Auburndale Cogeneration Facility permit (Facility ID No. 1050221). The Osprey Energy Center was initially constructed with the intention of being a stand alone facility. However, it is contiguous with the Auburndale Cogeneration Facility, and will be incorporated in the Auburndale Cogeneration Facility permit, Facility ID No. 1050221. The Permit revision is being issued to allow continued commercial operation of the facility, as authorized by the initial Permit, No. 1050221-002-AV, and incorporate the terms of Air Construction Permits 1050334-001-AC. All units will operate under Facility ID No. 1050221. The emissions units (EU 007 through EU 011) have been built and the initial performance test has been conducted and compliance demonstrated.

One turbine, the Auburndale Cogeneration unit, owned by Auburndale Power Partners, L.P. (APP) is a 156 (nominal) MW unit (EU 001) operated in combined cycle with an unfired heat recovery steam generator. This unit also generates steam for use by two adjacent manufacturing facilities. The second turbine, owned by Auburndale Peaker Energy Center, LLC (APEC) is a 104 (nominal) MW unit (006) operated in simple cycle. Calpine Eastern Corporation operates both of these units. The third and fourth turbines (EU 007 and EÜ 008) are located at the Osprey Energy Center. EU 007 and 008 are owned by Calpine Construction Finance Company, L.P. These turbines are two (2) nominal 170-MW natural gasfired combustion turbines with two (2) HRSG equipped with duct burners and one (1) common nominal 200-MW steam generator.

The new combined cycle combustion turbine (CT) cogeneration systems (EUs 007 and 008) with each combined cycle system consists of one 170 MW Siemens Westinghouse "F" Class (501FD) combustion turbine (CT) with one 200 MW steam turbine-generator, and one HRSG. Each CT is fired solely with pipeline natural gas and equipped with evaporative coolers on the inlet air system. Each system employs Selective Catalytic Reduction (SCR) to control NO<sub>x</sub> emission. Continuous Emissions Monitors Systems are used to determine compliance with all NO<sub>x</sub> emission limits. CEMS serves as continuous compliance determination.

The two new Heat Recovery Steam Generators with 250 MMBtu duct burners (EU 009 and 010) are for supplemental firing and to achieve peak output. The Duct Burner can only fire pipeline natural gas. Low NO<sub>x</sub> burners (LNB) are used to control NO<sub>x</sub> emissions.

#### PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Permitting Authority: Applications for Title V major source air operation permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-213, and 62-214 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to operate the facility. The Department's Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination regarding this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301. The Permitting Authority's mailing address is: 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is: 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Statement of Basis, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above or at the following email address: <a href="http://www.dep.state.fl.us/air/eproducts/ards/">http://www.dep.state.fl.us/air/eproducts/ards/</a>. A copy of the complete project file is also available at the Southwest District Office at 3804 Coconut Palm Drive, Tampa, FL, 33619-1352 (Telephone: 813/744-6100).

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue a Title V major source air operation permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the facility will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-256, 62-257, 62-281, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Proposed Permit and subsequent Final Permit in accordance with the conditions of the Draft Permit unless a response received in accordance with the following procedures results in a different decision or a significant change of terms or conditions.

Permitting Authority:

Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0114

Fax: 850/921-9533

Affected District:

Department of Environmental Protection Southwest District 3804 Coconut Palm Drive Tampa, Florida

Telephone: 813/744-6100

Fax: 813/744-6084

Comments: The Permitting Authority will accept written comments concerning the Draft Permit for a period of thirty (30) days from the date of publication of this Public Notice. Written comments must be provided to the Permitting Authority at the above address. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location on the Department's official web site for notices (http://tlhora6.dep.state.fl.us/onw/) and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by any

#### PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of how and when the petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of intent. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available for this proceeding.

Objections: In addition to the above right to petition, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within sixty (60) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to the issuance of any Title V major source air operation permit. Any petition shall be based only on objections to the permit that were raised with reasonable specificity during the thirty (30) day public comment period provided in the Public Notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. For more information regarding objections, visit the EPA Region 4 web site at: www.epa.gov/region4/air/permits.

#### **STATEMENT OF BASIS**

Calpine Construction Finance Company, L.P.
Auburndale Cogeneration Facility
Facility ID No.: 1050221
Polk County

Title V Air Operation Permit Revision
DRAFT Permit Project No.: 1050221-009-AV
Revision to Title V Air Operation Permit No.: 1050221-007-AV

The initial Title V Air Operation Permit, No. 1050221-007-AV, was issued on December 31, 2002. This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

The subject of this permit revision is to incorporate the terms and conditions of air construction permit, No. 1050334-001-AC, for the newly constructed Osprey Energy Center. The Osprey Energy Center was initially constructed with the intention of being a stand alone facility. However, it is contiguous with the Auburndale Cogeneration Facility, and will be incorporated in the Auburndale Cogeneration Facility ID No. 1050221. This facility will be incorporated as part of the Auburndale Cogeneration Facility, and all units will operate under Facility ID No. 1050221. The emissions units (EU 007 through EU 011) have been built and the initial performance test has been conducted and compliance demonstrated.

The Auburndale Cogeneration Facility consists of four collocated combustion turbines along with ancillary and supporting equipment and facilities. Auburndale Cogeneration Facility operates all of the units at the facility; however, there are three different owners for combustion turbines. EU 001 is owned by Auburndale Power Partners, L.P. EU 006 is owned by Auburndale Peaker Energy Center, LLC (APEC). EUs 007 and 008 are the newly constructed units, and are owned by Calpine Construction Finance Company, L.P.

One turbine, the Auburndale Cogeneration unit, owned by Auburndale Power Partners, L.P. (APP) is a 156 (nominal) MW unit operated in combined cycle with an unfired heat recovery steam generator. This unit also generates steam for use by two adjacent manufacturing facilities. The second turbine, owned by Auburndale Peaker Energy Center, LLC (APEC) is a 104 (nominal) MW unit operated in simple cycle. Calpine Eastern Corporation operates both of these units. The third and fourth turbines are located at the Osprey Energy Center. Owned by Calpine Construction Finance Company, L.P., these turbines are two (2) nominal 170-MW natural gasfired combustion turbines with two (2) HRSG equipped with duct burners and one (1) common nominal 200-MW steam generator.

The new combined cycle combustion turbine (CT) cogeneration systems (EUs 007 and 008) with each combined cycle system consists of one 170 MW Siemens Westinghouse "F" Class (501FD) combustion turbine (CT) with one 200 MW steam turbine-generator, and one HRSG. Each CT is fired solely with pipeline natural gas and equipped with evaporative coolers on the inlet air system. Each system employs Selective Catalytic Reduction (SCR) to control NO<sub>x</sub> emission. Continuous Emission Monitoring Systems (CEMS) are used to determine compliance with all NO<sub>x</sub> emission limits. CEMS serves as the continuous compliance determination method.

The two new Heat Recovery Steam Generators with 250 MMBtu duct burners (EU 009 and 010) are for supplemental firing and to achieve peak output. The Duct Burner can only fire pipeline natural gas. Low NO<sub>x</sub> burners (LNB) are used to control NO<sub>x</sub> emissions.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Revision application received September 17, 2004, this facility is not a major source of hazardous air pollutants (HAPs).

Calpine Construction Finance Company, LP Auburndale Peaker Energy Center, LLC Auburndale Power Partners, L.P.

Auburndale Cogeneration Facility
Facility ID No.: 1050221
Polk County

### Title V Air Operation Permit Revision

DRAFT Permit No.: 1050221-009-AV Revision to Title V Air Operation Permit No.: 1050221-007-AV

# Permitting Authority:

State of Florida
Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Title V Section
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Tallahassee, Florida 32399-2400
Telephone: 850/488-0144

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\*

#### Compliance Authority:

State of Florida
Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-8218
Telephone: 813/744-6100

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# **Table of Contents**

<u>Section</u>	Page Number
Placard Page	1
I. Facility Information	2 - 3
B. Summary of Emissions Unit ID No(s). and Brief Description(s) C. Relevant Documents.	
II. Facility-wide Conditions	4 - 6
III. Emissions Unit(s) and Conditions	
A. Combined Cycle Combustion Turbine	7 - 18
B. Fuel Oil Storage Tanks (2)	
C. Simple Cycle Combustion Turbine	
D. Combined Cycle Combustion Turbine (2)	
E. Duct Burner with Supplementary HRSG (2)	
F. Cooling Tower	
IV. Acid Rain Part	
A. Acid Rain, Phase II	48 - 49



# Department of Environmental Protection

Jeb Bush Governor Twin Towers Office Building 2600 Blair Stone Road Tallahassee, Florida 32399-2400

Colleen M. Castille Secretary

#### Permittee:

Calpine Construction Finance Company, LP Auburndale Power Partners, L.P.

Auburndale Peaker Energy Center, LLC

**DRAFT Permit No.:** 1050221-009-AV

Facility ID No.: 1050221

SIC Nos.: 49, 4911

**Project:** Title V Air Operation Permit Revision

This draft permit revision is being issued for the purpose of incorporating the terms and conditions of the air construction permit, No. 1050334-001-AC, for two (2) combined cycle combustion turbines, two (2) duct burners with Heat Recovery Steam Generators (HRSG), one (1) common nominal 200-MW steam generator, and one (1) cooling tower at the Auburndale Cogeneration Facility. This facility is located at 1501 Derby Avenue, Auburndale, Polk County; UTM Coordinates: Zone 17, 420.8 km East and 3103.3 km North; Latitude: 28° 83' 15" North and Longitude: 81° 48' 21" West.

This 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 perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

#### Referenced attachments made a part of this permit:

Appendix I-1, List of Insignificant Emissions Units and/or Activities
Appendix U-1, List of Unregulated Emissions Units and/or Activities
APPENDIX TV-4, TITLE V CONDITIONS (version dated 2/12/02)
APPENDIX SS-1, STACK SAMPLING FACILITIES (version dated 10/07/96)
FIGURE 1 - SUMMARY REPORT-GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE (version dated 7/96)
TABLE 297.310-1, CALIBRATION SCHEDULE (version dated 10/07/96)
Phase II Acid Rain Application/Compliance Plan
W501D5 ECONOPAC SYSTEM PERFORMANCE GRAPH CURVE LABELED
"POWER" - FIGURE 2

Effective Date: ARMS Day 55

Renewal Application Due Date: July 5, 2007

Expiration Date: December 31, 2007

Michael G. Cooke, Director Division of Air Resource Management

MGC/jkp/rlb

"More Protection, Less Process"

#### Section I. Facility Information.

#### Subsection A. Facility Description.

The Auburndale Cogeneration Facility consists of four collocated combustion turbines along with ancillary and supporting equipment and facilities. Auburndale Cogeneration Facility operates all of the units at the facility; however, there are three different owners for the combustion turbines. EU 001 is owned by Auburndale Power Partners, L.P. EU 006 is owned by Auburndale Peaker Energy Center, LLC (APEC). EUs 007 and 008 are the newly constructed units, and are owned by Calpine Construction Finance Company, L.P.

**DRAFT Permit No.:** 1050221-009-AV

One turbine, the Auburndale Cogeneration unit, owned by Auburndale Power Partners, L.P. (APP) is a 156 (nominal) MW unit (EU 001) operated in combined cycle with an unfired heat recovery steam generator. This unit also generates steam for use by two adjacent manufacturing facilities. The second turbine, owned by Auburndale Peaker Energy Center, LLC (APEC) is a 104 (nominal) MW unit (EU006) operated in simple cycle. Calpine Eastern Corporation operates both of these units. The third and fourth turbines (EU 007 and EU 008) are located at the Osprey Energy Center. EU 007 and 008 are owned by Calpine Construction Finance Company, L.P. These turbines are two (2) nominal 170-MW natural gas-fired combustion turbines with two (2) HRSG equipped with duct burners and one (1) common nominal 200-MW steam generator.

Also located at this facility are two distillate fuel oil storage tanks, one cooling tower, and miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Revision application received September 17, 2004, this facility is not a major source of hazardous air pollutants (HAPs).

#### Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

<u>E.U.</u>	
ID No.	Brief Description
-001	Combined Cycle Combustion Turbine
-002	Fuel Oil Storage Tanks (2)
-003	Emergency Generators
-004	Heating Units and Engines
-005	Surface Coating Operations
-006	Simple Cycle Combustion Turbine
-007	170 MW gas Combustion Turbine Electrical Generator
-008	170 MW gas Combustion Turbine Electrical Generator
-009	250 MMBtu Duct Burner with HRSG
-010	250 MMBtu Duct Burner with HRSG
-011	Cooling Tower

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

#### **DRAFT Permit No.:** 1050221-009-AV

#### Subsection C. Relevant Documents.

The documents listed below are not a part of this permit. However, they are specifically related to this permitting action.

#### These documents are provided to the permittee for information purposes only:

Table 1-1, Summary of Air Pollutant Standards and Terms
Table 2-1, Summary of Compliance Requirements
Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix H-1, Permit History / ID Number Changes
Statement of Basis

# These documents are on file with permitting authority:

Renewal Title V Permit Application received June 28, 2002
Additional Information Request dated July 30, 2002
Additional Information Response received August 12 & 14, 2002
DRAFT Title V Permit issued September 25, 2002
PROPOSED PERMIT DETERMINATION with PROPOSED Title V Permit dated November 13, 2002
Title V Revision Application received September 17, 2004

# Section II. Facility-wide Conditions.

#### The following conditions apply facility-wide:

1. APPENDIX TV-4, TITLE V CONDITIONS, is a part of this permit. {Permitting note: APPENDIX TV-4, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided one copy when requested or otherwise appropriate.}

**DRAFT Permit No.:** 1050221-009-AV

- 2. Not federally enforceable. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]
- 3. Prevention of Accidental Releases (Section 112(r) of CAA).
- a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 1515
Lanham-Seabrook, MD 20703-1515
Telephone: 301/429-5018

- **b.** The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C. [40 CFR 68]
- **4.** <u>Insignificant Emissions Units and/or Activities.</u> Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit. [Rules 62-213.440(1), 62-213.430(6) and 62-4.040(1)(b), F.A.C.]
- 5. <u>Unregulated Emissions Units and/or Activities.</u> Appendix U-1, List of Unregulated Emissions Units and/or Activities, is a part of this permit. [Rule 62-213.440(1), F.A.C.]
- 6. General Pollutant Emission Limiting Standards. 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 (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1)(a), F.A.C.]
- 7. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.

[Rule 62-296.320(4)(b)1., F.A.C.]

8. Not federally enforceable. The permittee shall take reasonable precautions, on an as needed basis, to prevent emissions of unconfined particulate matter at this facility to include:

**DRAFT Permit No.:** 1050221-009-AV

- a. Chemical or water application to unpaved roads and unpaved yard areas;
- **b.** Paying and maintenance of roads, parking areas and yards;
- c. Landscaping or planting of vegetation;
- d. Confining abrasive blasting where possible; and
- e. Other techniques, as necessary.

[Rule 62-296.320(4)(c)2., F.A.C.; Proposed by applicant in the renewal Title V permit application received June 28, 2002]

{Note: This condition implements the requirements of Rules 62-296.320(4)(c)1., 3., & 4. F.A.C., condition 57. of APPENDIX TV-4, TITLE V CONDITIONS).}

- 9. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one. [Rule 62-213.440, F.A.C.]
- 10. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C. [Rules 62-213.440(3) and 62-213.900, F.A.C.] {Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51. of APPENDIX TV-4, TITLE V CONDITIONS).}"
- 11. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.

  [Rule 62-213.420(4), F.A.C.]
- 12. The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Southwest District office:

Department of Environmental Protection Southwest District Office 3804 Coconut Palm Drive Tampa, Florida 33619-8218 Telephone: 813/744-6100

Fax: 813/744-6084

**DRAFT Permit No.:** 1050221-009-AV

13. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4

Air, Pesticides & Toxics Management Division
Air and EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303-8960

Telephone: 404/562-9155; Fax: 404/562-9163

14. <u>Annual Operating Report</u>: This report shall include the sulfur content and lower heating value of the fuel fired, fuel usage, and hours of operation for the combined cycle unit (EU-001). This report shall also include a summary report of the rolling 12-month NOx and CO calculations for the simple cycle unit (EU-006). This report shall also include a summary of each of the prior year 12-month emission limitations, which are required for EU-001 and EU-006 by this permit. [PSD-FL-185, Condition number 27. and 1050221-004-AC]

Section III. Emissions Unit(s).

Subsection A. This section addresses the following emissions unit.

E.U.

ID No. Brief Description

-001 Combined Cycle Combustion Turbine

This unit is a combined cycle combustion turbine (CT) cogeneration system with a combined total output of 156 MW. The combined cycle system consists of one 104 MW Westinghouse 501D5 combustion turbine (CT), one 52 MW steam turbine-generator, and one HRSG. The HRSG is not fuel fired. Water injection and/or Selective Catalytic Reduction, and good combustion practices are used to control air pollutant emissions. This unit may operate up to 8,760 hours per year and has historically operated at a capacity factor above 90%.

**DRAFT Permit No.:** 1050221-009-AV

{Permitting note: This emissions unit is regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 212.400, F.A.C., Prevention of Significant Deterioration (PSD) and Best Available Control Technology (BACT).}

The following conditions apply to the emissions unit(s) listed above:

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

- A.1. <u>Permitted Capacity.</u> The maximum heat input to the combustion turbine (CT) shall not exceed 1214 MMBtu/hr as determined using a lower heating value (LHV) at International Standards Organization (ISO) conditions while firing natural gas and 1170 MMBtu/hr as determined using a LHV at ISO conditions while firing No. 2 distillate fuel oil. [Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C., Definitions (PTE)]
- A.2. Methods of Operation Fuels. Only natural gas or distillate (No. 2) fuel oil having a maximum sulfur content of 0.05 percent by weight shall be fired in the combustion turbine. [Rules 62-4.160(2), F.A.C. and 62-213.410, F.A.C.]
- **A.3.1** Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. The total hours of operation of the combustion turbine while firing distillate fuel oil shall not exceed 400 hours/year.

[Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C., Definitions - (PTE)]

A.3.2 Wet Compression System. Operation of the wet compression system is approved for use on Unit 1 during any periods at which the ambient temperature is above 60 degrees F. Use of the wet compression system is limited to periods during the firing of natural gas only. [1050221-005-AC]

#### **Emission Limitations and Standards**

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

**DRAFT Permit No.:** 1050221-009-AV

{Permitting note: Unless otherwise specified, the averaging time for conditions A.4. - A.10. are based on the specified averaging time of the applicable test method.}

- **A.4.** Visible emissions (VE) at full load (i.e., 156 MW) shall not exceed 10% opacity. [Best Available Control Technology (BACT) Determination dated December 14, 1992.]
- **A.5.** Visible emissions (VE) at other than full load shall not be equal to or greater than 20% opacity.

[PSD-FL-185]

- A.6. Particulate matter ten (PM10) emissions shall not exceed:
  - a. while firing natural gas:

0.0134 lb/mmBtu (see note #2); 10.5 lbs./hour (see note #1); 46 TPY (see note #2); and

**b.** while firing distillate fuel oil:

0.0472 lb/mmBtu (see note #2); 36.8 lbs./hour (see note #1); 7.4 TPY (see note #2).

[Notes: #1 - BACT Determination dated December 14, 1992; #2 - PSD-FL-185]

- A.7. Sulfur dioxide (SO2) emissions shall not exceed:
  - a. while firing natural gas:

40.0 lbs./hour (see note #1); 175.2 TPY (see note #2)

**b.** while firing distillate fuel oil:

0.05 % sulfur content by weight (see note #1); 70.0 lbs./hour (see note #1); 14 TPY (see note #2).

[Notes: #1 - BACT Determination dated December 14, 1992; #2 - PSD-FL-185]

- A.8. Nitrogen oxides (NOx) emissions shall not exceed:
  - a. while firing natural gas:

15 ppmvd @15% O2, 24-hour block average (see note #1);

9 ppmvd @ 15% O2, 12-month rolling average;

78.6 lbs./hour (see note #2); and,

177 TPY; combined total of natural gas and distillate fuel oil firing (see note #2 and #4);

**b.** while firing distillate fuel oil:

42 ppmvd @15% O2, 24-hour block average (see note #1);

230.0 lbs./hour (see note #2);

46 TPY (see note #2); and,

177 TPY; combined total of natural gas and distillate fuel oil firing (see note #2 and #4).

c. 24-hour block averages: 24-hour block averages are calculated as follows:

At the same time each day, a 24-hour block average shall be calculated for the monitored operating hours in the previous 24-hour period. The 24-hour block average shall be determined by summing the hourly average NO<sub>X</sub> concentrations for all valid monitored operating hours and dividing by the number of hourly average NO<sub>X</sub> concentrations in the previous 24-hour period. A monitored operating hour is each hour in which fuel is fired in the combustion turbine and at least two continuous emissions monitoring systems (CEMS) emission measurements are recorded at least 15 minutes apart. CEMS data taken during periods of: startup, shutdown, or malfunction as defined in Rules 62-210.200 and 62-210.700 F.A.C., when fuel is not

**DRAFT Permit No.:** 1050221-009-AV

fired in the unit, or during CEMS quality assurance checks or when the CEMS is out of control shall be excluded from the 24-hour block average.

- d. For the annual (TPY) emissions limits of NO<sub>X</sub>, measurements shall be in pounds (converted to tons) and be based on a 12-month rolling total starting at the first day of each calendar month. Each monthly total shall be calculated by adding each valid 24-hour block average (as determined above) from valid operating days (all fuels) within the calendar month. This monthly total shall be combined with the emissions from the previous valid 11 calendar months and shall comprise a 12-month rolling total.
- e. For the 9 ppmvd annual equivalent emissions limit measurements shall be in ppmvd and be based on a 12-month rolling total starting at the first day of each calendar month. Each monthly total shall be calculated by adding each valid gas firing 24-hour block average (as determined above) from valid operating days within the calendar month. This monthly total shall be combined with the emissions from the previous valid 11 calendar months and shall comprise a 12-month rolling total.

In order to convert each 12-month rolling total to an annual equivalent limit, the following formula shall be utilized:

```
ppmvd<sub>e</sub> = ppmvd<sub>a</sub> * [hours<sub>g</sub>/8760] where:

ppmvd<sub>e</sub> = the equivalent annual short-term emissions for nitrogen oxides (ppmvd

corrected to 15% O_2)

ppmvd<sub>a</sub> = the measured (CEMS) 12-month rolling short-term emissions for NO_X

(ppmvd corr. to 15% O_2)

hours<sub>g</sub> = 12-month rolling total valid hours of operation combusting natural gas
```

[Notes: #1 - BACT Determination dated December 14, 1992; #2 - PSD-FL-185; #4 - 1050221-004-AC]

A.9. Volatile organic compound (VOC) emissions shall not exceed

a. while firing natural gas: 6.0 lbs./hour (see note #1); 26.3 TPY (see note #2); and b. while firing distillate fuel oil: 10.0 lbs./hour (see note #1); 2.0 TPY (see note #2).

[Notes: #1 - BACT Determination dated December 14, 1992; #2 - PSD-FL-185]

A.10. Carbon monoxide (CO) emissions shall not exceed

a. while firing natural gas: 21 ppmvd @ minimum load (see note #2); 15 ppmvd @ base load (see note #2); 43.5 lbs./hour (see note #1); 190.5 TPY (see note #2). and
b. while firing distillate fuel oil: 25 ppmvd (see note #2); 73.0 lbs./hour (see note #1); 14.6 TPY (see note #2).

[Notes: #1 - BACT Determination dated December 14, 1992; #2 - PSD-FL-185]

#### A.11. <reserved>

#### **Excess Emissions**

{Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.}

A.12. Excess emissions from this emissions unit resulting from startup, shutdown or malfunction 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.]

DRAFT Permit No.: 1050221-009-AV

A.13. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

#### **Monitoring of Operations**

- A.14. 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 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 Administrator 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.15. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG and using water injection to control  $NO_X$  emissions shall install and operate a continuous monitoring system (CMS) to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within  $\pm 5.0$  percent and shall be approved by the Administrator. The  $NO_X$  CEMS will be used in lieu of the water/fuel monitoring system and fuel bound nitrogen (FBN) monitoring, which are required in 40 CFR 60.334.

[40 CFR 60.334(a); PSD-FL-185]

- A.16. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. Pursuant to the custom monitoring schedule provisions of 40 CFR 60.334(b)(2), the frequency of determination of these values shall be as follows:
  - (a) Monitoring of the nitrogen content of distillate fuel oil is not required. Sulfur content of distillate fuel oil shall be determined for each shipment of distillate fuel oil received; and
  - (b) Monitoring of the nitrogen content of pipeline natural gas is not required. Sulfur content of pipeline natural gas will be based on twice-monthly analyses provided by the natural gas supplier.

[40 CFR 60.334(b)(1) and (2)]

#### A.17. Determination of Process Variables.

(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

**DRAFT Permit No.:** 1050221-009-AV

#### **Test Methods and Procedures**

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

**A.18.** <u>Visible Emissions (VE).</u> The test method for VE shall be EPA Method 9, incorporated by reference in Chapter 62-297, F.A.C.

[Rules 62-213.440, 62-297.310, and 62-297.401, F.A.C.; and, PSD-FL-185, revised March 18, 1996]

**A.19.** Particulate Matter Ten (PM10). The test methods for PM10 emissions, for distillate fuel oil-firing only, shall be Methods 5, 17, 201, or 201A, incorporated by reference in Chapter 62-297, F.A.C.

[Rules 62-213.440, 62-297.310, and 62-297.401, F.A.C.; and, PSD-FL-185, revised March 18, 1996]

**A.20.** To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Department to determine the nitrogen content of the fuel being fired. In lieu of the above mentioned NOx emissions calculations based on nitrogen content, a NOx CEMS will be installed.

[40 CFR 60.335(a)]

- A.21. For purposes, of demonstrating compliance with NSPS 40 CFR 60, Subpart GG, the monitoring device of 40 CFR 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with the permitted  $NO_X$  standard at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer. In lieu of the above mentioned water/fuel monitoring system, a NOx CEMS will be installed. [40 CFR 60.335(c)(2)]
- **A.22.** a. The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in 40 CFR 60.332 as follows: U.S. EPA. Method 20 (40 CFR 60, Appendix A) shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The  $NO_X$  emissions shall be determined at each of the load conditions specified in 40 CFR 60.335(c)(2).
- **b.** For purposes of demonstrating compliance with the NO<sub>x</sub> emission limits (in lbs/hr and tons/yr) specified in Condition A.8, either EPA Method 20 (at 90 100% of permitted maximum capacity load only) or the relative accuracy (RA) test data pursuant to 40 CFR 60 Appendix B Performance Specification 2 Section 7 shall be used. The NO<sub>x</sub> CEMS shall be used for the

purpose of demonstrating continuous compliance with the  $NO_x$  emission limit (24-hour block average concentration limit) specified in Condition A.8.

c. For purposes of demonstrating compliance with the annual (TPY) NOx limit see Condition A.8.

**DRAFT Permit No.:** 1050221-009-AV

[40 CFR 60.335(c)(3); PSD-FL-185 and 1050221-004-AC]

A.23. The owner or operator shall determine compliance with the sulfur content standard of 0.05 percent, by weight, as follows: ASTM D129-91; D1552-90; D2280-71; D2880-96; D2622-92; D4292; D4294-90; or the latest edition(s) shall be used to determine the sulfur content of liquid fuels and ASTM D1072-80, 90, 94; D3031-81, 86; D3246-81, 92; D4084-82, 94; D4468-85; D5504-94; or the latest edition(s) shall be used for the sulfur content of gaseous fuels (incorporated by reference-see 40 CFR 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

[40 CFR 60.335(d); PSD-FL-185]

A.24. To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the methods specified in 40 CFR 60.335(a) and 40 CFR 60.335(d) of 40 CFR 60.335 or the latest edition(s) to determine the sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

[40 CFR 60.335(e); PSD-FL-185]

A.25 <u>Volatile organic compound (VOC).</u> Compliance with the VOC standard shall be demonstrated using EPA Method 25A.

[Rules 62-213.440, 62-297.310, and 62-297.401, F.A.C.; and, PSD-FL-185, revised March 18, 1996]

**A.26.** Carbon monoxide (CO). Compliance with the CO standard shall be demonstrated using EPA Method 10.

[Rules 62-213.440, 62-297.310, and 62-297.401, F.A.C.; and, PSD-FL-185, revised March 18, 1996]

#### A.27. <reserved>

A.28. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission

limiting standards. [Rule 62-297.310(1), F.A.C.]

#### A.29. Operating Rate During Testing.

a. This emissions unit shall operate between 90% and 100% of permitted capacity during the compliance test(s) as adjusted for ambient temperature (compressor inlet temperature) (See attached W501D5 ECONOPAC SYSTEM PERFORMANCE GRAPH, CURVE LABELED "POWER" - FIGURE 2.)

DRAFT Permit No.: 1050221-009-AV

- b. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [PSD-FL-185; and, Rule 62-297.310(2), F.A.C.]
- A.30. <u>Calculation of Emission Rate</u>. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

#### A.31. Applicable Test Procedures.

- (a) Required Sampling Time.
- 1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
- 2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
- a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
- b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
- c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
- (b) <u>Minimum Sample Volume</u>. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.
- (c) <u>Required Flow Rate Range</u>. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) <u>Calibration of Sampling Equipment</u>. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in TABLE 297.310-1, CALIBRATION SCHEDULE (attached).

**DRAFT Permit No.:** 1050221-009-AV

- (e) <u>Allowed Modification to EPA Method 5</u>. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube. [Rule 62-297.310(4), F.A.C.]
- **A.32.** The permittee shall comply with the requirements contained in APPENDIX SS-1, Stack Sampling Facilities, attached to this permit. [Rule 62-297.310(6), F.A.C.]
- **A.33.** Frequency of Compliance Tests. The following provisions apply only to the combustion turbine system and only for the pollutants listed in Conditions A.4 through A.11 for which compliance testing is required.

#### (a) Compliance Testing.

- 3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. A compliance test shall be conducted for nitrogen oxides/oxygen, volatile organic compounds, carbon monoxide, and sulfuric acid mist prior to obtaining a renewed operation permit. Compliance testing is only required during the combustion of natural gas fuel. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
  - a Did not operate; or
- b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
- 4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
  - a. Visible emissions (VE);
  - b. Carbon monoxide (CO); and
- 5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
- 8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.
- 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) <u>Special Compliance Tests</u>. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a baghouse or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply: [Rule 62-297.310(7), F.A.C.; SIP approved; PSD-FL-185]

**DRAFT Permit No.:** 1050221-009-AV

#### A.34. Test Reports.

- (a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- (b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- (c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
  - 1. The type, location, and designation of the emissions unit tested.
  - 2. The facility at which the emissions unit is located.
  - 3. The owner or operator of the emissions unit.
- 4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
- 5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
- 6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
- 7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
  - 8. The date, starting time and duration of each sampling run.
- 9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
  - 10. The number of points sampled and configuration and location of the sampling plane.
- 11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
  - 12. The type, manufacturer and configuration of the sampling equipment used.
  - 13. Data related to the required calibration of the test equipment.
  - 14. Data on the identification, processing and weights of all filters used.
  - 15. Data on the types and amounts of any chemical solutions used.
- 16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
  - 17. The names of individuals who furnished the process variable data, conducted the test,

analyzed the samples and prepared the report.

18. All measured and calculated data required to be determined by each applicable test procedure for each run.

**DRAFT Permit No.:** 1050221-009-AV

- 19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
- 20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
- 21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge. [Rule 62-297.310(8), F.A.C.]

# Record Keeping and Reporting Requirements

- **A.35.** For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as follows:
- a. Nitrogen Oxides. Any period during which the NOx emissions exceed the limits listed in Condition A.8. The  $NO_x$  CEMS will be used in lieu of the water/fuel monitoring system and fuel bound nitrogen (FBN) monitoring, which are required in 40 CFR 60.334. The  $NO_x$  CEMS shall be used to report excess emissions during periods of startup, shutdown, and malfunction in lieu of FBN monitoring and the water/fuel monitoring system described in 40 CFR 60.334(c)(1).
- b. Sulfur dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.05 percent by weight.

  [40 CFR 60.334(c); PSD-FL-185]
- A.36. The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form [see 40 CFR 60.7(d)] to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or, the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or, the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:
- (1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
- (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
- (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report. [40 CFR 60.7(c)(1), (2), (3), and (4)]

affected facility.

**A.37.** The summary report form shall contain the information and be in the format shown in FIGURE 1 - SUMMARY REPORT-GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE (attached) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each

**DRAFT Permit No.:** 1050221-009-AV

- (1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.
- (2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted. [40 CFR 60.7(d)(1) and (2)]
- **A.38.** (1) Notwithstanding the frequency of reporting requirements specified in 40 CFR 60.7(c), an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:
- (i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;
- (ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in 40 CFR 60, Subpart A, and the applicable standard; and
- (iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in 40 CFR 60.7(e)(2).
- (2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.
- (3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another

**DRAFT Permit No.:** 1050221-009-AV

full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in 40 CFR 60.7(e)(1) and (e)(2). [40 CFR 60.7(e)]

- **A.39.** Any owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and, all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least 5 (**five**) years following the date of such measurements, maintenance, reports, and records. [40 CFR 60.7(f); Rule 62-213.440(1)(b)2.b., F.A.C.]
- A.40. <u>Malfunction Reporting.</u> In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]

#### Miscellaneous Requirements

- **A.41.** <u>Definitions.</u> For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee. [40 CFR 60.2; and, Rule 62-204.800(7)(a), F.A.C.]
- A.42. <u>Circumvention.</u> No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

  [40 CFR 60.12]

A.43. <reserved>

**DRAFT Permit No.:** 1050221-009-AV

# Subsection B. This section addresses the emissions unit(s).

E.U.

ID No. Brief Description

-002 Fuel oil storage tanks (2)

The facility operates two 623,280 gallon distillate (No. 2) fuel oil storage tanks referred to as "STR-001" and "STR-002". Each tank has a fixed cone roof and is equipped with pressure/vacuum conservation vents.

{Permitting note: These emissions units are 'unregulated emissions units.' The tanks are subject to a recordkeeping requirement under NSPS - 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels; adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.}

#### The following conditions apply to the emissions unit(s) listed above:

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

**B.1.** Hours of Operation. These emissions units are allowed to operate continuously, i.e., 8,760 hours/year.

[Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C., Definitions - (PTE)]

#### **Recordkeeping Requirements**

**B.2.** The permittee shall maintain records on site for storage vessels identification numbers STR-001 and STR-002 to include the date of construction, the material storage capacity, and type of material stored for the life of these storage vessels.

[40 CFR 60.116b(b)]

4

#### Subsection C. This section addresses the following emissions unit.

 $\frac{E.U.}{ID \ No.} \qquad \underline{Brief \ Description}$ 

-006 Simple Cycle Combustion Turbine

This unit is a Siemens Westinghouse 501D5A combustion turbine (CT) configured for simple cycle operation. Water injection technology is utilized for  $NO_X$  control. Heat inputs are 1369 MMBtu/hr for natural gas and 1412 MMBtu/hr for number 2 fuel oil (0.05% S), both during ISO conditions. The combustion turbine has an electric generation capacity of a nominal 104 MW. The simple cycle unit operates in peaking service and is expected to operate near its permitted operating capacity, between 20 and 25% of available hours.

**DRAFT Permit No.:** 1050221-009-AV

{Permitting note: This emissions unit is regulated and shall comply with Acid Rain, Phase II; NSPS - 40 CFR 60 Subpart A (60.7, 60.8, 60.11, 60.12, 60.13, 60.19), and Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C. Subpart GG provisions include a requirement to correct test data to ISO conditions; however, such corrections are not used for compliance determination with the BACT standard.}

The following conditions apply to the emissions unit(s) listed above:

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

C.1. Permitted Capacity. The maximum heat input to the combustion turbine from firing natural gas shall not exceed 1591 MMBtu/hr based on the following: 100% base load, a higher heating value (HHV) for natural gas and a compressor inlet air temperature of 32° F. The maximum heat input to the combustion turbine from firing No. 2 fuel oil shall not exceed 1546 MMBtu/hr based on the following: 100% base load and a compressor inlet air temperature of 32° F. Heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. [Design; Rule 62-210.200, F.A.C., Definitions - (PTE)]

# C.2. Methods of Operation - Fuels.

- a. Only pipeline-quality natural gas containing no more than 2 grains of sulfur per 100 dry standard feet of gas, monthly average, or distillate (No. 2) fuel oil having a maximum sulfur content of 0.05 percent by weight.
   [Applicant Request, Rules 62-210.200, F.A.C. Definition (PTE)]
- b. The combustion turbine shall utilize no more than 2,227,400 MMBtu of natural gas during any consecutive 12-month period. The total hours of operation of the combustion turbine while firing distillate fuel oil shall not exceed 400 hours per consecutive 12-month period. The permittee shall install, calibrate, operate and maintain a monitoring system to measure and accumulate the amount and heat inputs of natural gas as well as fuel oil fired and the hours of operation. [Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C., Definitions (PTE) and 1050221-004-AC]

#### **C.3.1** Allowable Operation.

a. The combustion turbine shall operate only in simple cycle mode not to exceed the permitted hours of operation, nor the permitted short and long-term emission limits

**DRAFT Permit No.:** 1050221-009-AV

allowed by this permit. This restriction is based on the permittee's request, which formed the basis of the PSD non-applicability determination and resulted in the emission standards specified in this permit. Specifically, these restrictions eliminated several control alternatives based on technical as well as regulatory considerations. For any request to modify this emission unit in any way (whether a physical or operational modification, including a change in the allowable hours of operation or heat input, or to alter any short or long-term emission) the permittee shall submit a full PSD permit application complete with a new proposal of the best available control technology as if the unit had never been built. Alternately, the permittee shall submit a determination of PSD applicability for proposed permit changes, which the Department shall consider in making its determination.

[Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C., Definitions - (PTE) and 1050221-004-AC]

- b. The permittee is authorized to, tune, operate and maintain one new combustion turbine with electrical generator set (Siemens/Westinghouse Model 501D5A). The system shall be maintained and tuned in accordance with the manufacturer's recommendations to minimize permitted pollutant emissions. The unit is designed to produce a maximum 135 MW of electrical power.
  - [Rule 62-212.400, F.A.C. (PSD Avoidance);1050221-004-AC]
- c. The permittee shall calibrate, tune, operate, and maintain a water injection system for the unit. The system shall be designed and operated so as to ensure that NO<sub>X</sub> emissions do not exceed 25 ppmvd @15% O<sub>2</sub>.
   [Rule 62-212.400, F.A.C. (PSD Avoidance);1050221-004-AC
- C.3.2 Wet Compression System. A wet compression system may be installed on Unit 6. The use of wet compression as an alternate means of evaporative cooling is authorized for up to 7000 hours during natural gas firing (only) for any consecutive 12-month period.

  [1050221-006-AC]

#### **Emission Limitations and Standards**

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

C.4. Visible emissions (VE) shall not be equal to or greater than 20% opacity. [Rule 62.296.320(4)(b)1, F.A.C. and Permit 1050221-004-AC]

#### C.5. <reserved>

- C.6. Particulate matter ten (PM10) emissions shall not exceed
  - a. while firing natural gas:
    - 2.9 lbs./hour; and
  - **b.** while firing distillate fuel oil: 58.5 lbs./hour.

[Rule 62-212.400, F.A.C (PSD Avoidance) and Permit 1050221-004-AC]

- C.7. Sulfur dioxide (SO2) emissions shall not exceed
  - a. while firing natural gas:

2 grains / 100 scf, monthly average; and

b. while firing distillate fuel oil:
0.05 % sulfur content by weight, and
74.9 lbs./hour.

[Rule 62-4.070(3), F.A.C and Permit 1050221-004-AC]

- C.8. Nitrogen oxides (NOx) emissions shall not exceed
  - a. while firing natural gas: 25.0 ppmvd @15% O2, 24-hour block average;
  - b. while firing distillate fuel oil: 42.0 ppmvd @15% O2, 24-hour block average;
  - c. <u>Unit Total:</u> 115 TPY;
  - d. 24-hour block averages: 24-hour block averages are calculated as follows: starting at midnight of each operating day, a 24-hour block average shall be calculated from 24 valid hourly average emission rate values. Each hourly 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). The owner or operator shall use all valid measurements or data points collected during an hour to calculate the hourly averages. All data points collected during an hour shall be, to the extent practicable, evenly spaced over the hour. If the CEM system measures concentration on a wet basis, the CEM system 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 owner or operator 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). Final results of the CEM system shall be expressed as ppmvd, corrected to 15% oxygen. CEMS data taken during periods of: startup, shutdown, or malfunction as defined in Rules 62-210.200 and 62-210.700 F.A.C., when fuel is not fired in the unit, or during CEMS quality assurance checks or when the CEMS is out of control shall be excluded from the 24-hour block average; and
  - e. Annual (TPY) emissions limits: Annual (TPY) emissions limits of NO<sub>X</sub> and CO, measurements shall be in pounds (converted to tons) and be based on a 12-month rolling total starting at the first day of each calendar month. Each monthly total shall be calculated by adding each valid 24-hour block average (as determined above) from valid operating days (all fuels) within the calendar month. This monthly total shall be combined with the emissions from the previous valid 11 calendar months and shall comprise a 12-month rolling total.

[Rule 62-212.400, F.A.C. (PSD Avoidance) and Permit 1050221-004-AC]

- C.9. Volatile organic compound (VOC) emissions shall not exceed
  - a. while firing natural gas: 4.0 ppmvd @15% O2; and
  - b. while firing distillate fuel oil: 5.0 ppmvd @ 15% O2.

[Rule 62-4.070(3), F.A.C and Permit 1050221-004-AC]

C.10. Carbon monoxide (CO) emissions shall not exceed 10 ppmvd @ 15% O2 @ base load;

and 99 TPY, based on a 12-month rolling average, while burning all fuels. [Rule 62-212.400, F.A.C. (PSD Avoidance) and Permit 1050221-004-AC]

C.11. <reserved>

#### **Excess Emissions**

{Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.}

- C.12. Excess Emissions Allowed: Providing the permittee adheres to best operational practices to minimize the amount and duration of excess emissions, the following conditions shall apply:
  - a. During startup and shutdown, visible emissions excluding water vapor may exceed 20% opacity for up to 2 hours in any 24-hour period.

DRAFT Permit No.: 1050221-009-AV

- b. During all startups, shutdowns, and malfunctions, the continuous emissions monitor (CEM) shall monitor and record emissions. However, up to 2 hours of monitoring data during any 24-hour period may be excluded from continuous compliance demonstrations as a result of startups, shutdowns, and documented malfunctions. CEMS data exclusion and replacement methods shall be in accordance with EPA's Acid Rain requirements. However, missing data shall not be substituted. Additionally, the permittee's record-keeping for the EU-001 and EU-006 NO<sub>X</sub> emissions caps (TPY) shall be in full agreement with data submitted for inclusion on EPA's Acid Rain website.
- c. In case of malfunctions, the permittee shall notify the Compliance Authorities within one working day. A full written report on the malfunctions shall be submitted in a quarterly report.

[Design; Rules 62-210.700(1),(5), and 62-4.130, F.A.C.]

C.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. These emissions shall be included in the calculation of the 12-month rolling and 24-hour averages to demonstrate compliance with the continuous emissions standards.

[Rule 62-210.700(4), F.A.C.]

#### **Monitoring of Operations**

**C.14.** Best operational practices shall be used to minimize hourly emissions that occur during episodes of startup, shutdown and malfunction. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited. [Rule 62-210.700, F.A.C.]

# C.15. Continuous Monitoring Systems (CMS)

a. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG and using water injection to control NO<sub>X</sub> emissions shall install and operate a continuous monitoring system (CMS) to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within ±5.0 percent and shall be approved by the Administrator. In lieu

- **DRAFT Permit No.:** 1050221-009-AV
- of the water/fuel monitoring system and fuel bound nitrogen (FBN) monitoring, which are required in 40 CFR 60.334, a NOx CEMS will be installed.
- b. The owner or operator shall calibrate, maintain, and operate a continuous emission monitoring (CEM) system in the exhaust stack of this emissions unit to measure and record the emissions of NO<sub>X</sub> and CO from the emissions units, and the oxygen (O<sub>2</sub>) content of the flue gas at the location where NO<sub>X</sub> and CO are monitored, in a manner sufficient to demonstrate compliance with the emission limits of this permit. The CEM system shall be used to demonstrate compliance with the emission limits for NO<sub>X</sub> and CO within this permit.
- Certification: The NO<sub>x</sub> monitor shall be certified and operated in accordance with the following requirements. The NO<sub>x</sub> monitor shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75, Subparts B and C. For purposes of determining compliance with the emission limits of this permit, missing data shall not be substituted. Instead the block average shall be determined using the remaining hourly data in the 24-hour block. Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75, Subparts F and G. The RATA tests required for the NO<sub>X</sub> monitor shall be performed using EPA Method 20 or 7E, of Appendix A of 40 CFR 60. The NO<sub>X</sub> monitor shall be a dual range monitor. The span for the lower range shall not be greater than 30 ppm, and the span for the upper range shall not be greater than 100 ppm, as corrected to 15% O<sub>2</sub>. The CO monitor and O<sub>2</sub> monitor shall be certified and operated in accordance with the following requirements. The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4. The O<sub>2</sub> monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 3. 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 semi-annually to the Department's Southwest District Office. The RATA tests required for the CO monitor shall be performed using EPA Method 10, of Appendix A of 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 span for the CO monitor shall not be greater than 100 ppm, as corrected to 15% O<sub>2</sub>. The RATA tests required for the O<sub>2</sub> monitor shall be performed using EPA Method 3B, of Appendix A of 40 CFR 60. The span for the O<sub>2</sub> monitor shall not be greater than 21 percent.
  - [Rule 62-212.400, F.A.C. (PSD Avoidance);1050221-004-AC]
- d. NO<sub>X</sub>/CO CEMS Data Requirements: NO<sub>X</sub>, CO and O<sub>2</sub> emissions data shall be recorded by the CEM system during episodes of startup, shutdown and malfunction. NO<sub>X</sub> and CO emissions data recorded during these episodes may be excluded from the block average calculated to demonstrate compliance with the emission limits of this permit as provided in this paragraph. Periods of data excluded for startup and shutdown shall not exceed two hours in any block 24-hour period. Periods of data excluded for malfunctions shall not exceed two hours in any 24-hour block period. All periods of data excluded for any startup, shutdown or malfunction episode shall be consecutive for each episode. Periods of data excluded for all startup, shutdown or malfunction episodes shall not exceed four hours in any 24-hour block period. The owner or operator shall minimize the duration of data excluded for startup, shutdown and malfunctions, to the extent practicable. Data recorded during startup, shutdown or malfunction episode was caused entirely or in part by poor maintenance, poor operation, or any

other equipment or process failure, which may reasonably be prevented. [Rules 62-4.070(3) and 62-212.400., F.A.C., and PSD avoidance] [Note: Compliance with these requirements will ensure compliance with the other CEM system requirements of this permit to comply with Subpart GG requirements, as well as the applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.7(a)(5) and 40 CFR 60.13, and with 40 CFR Part 51, Appendix P, 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60, Appendix F, Quality Assurance Procedures.]

e. <u>Alternate Monitoring Plan</u>: Subject to EPA approval, the following alternate monitoring may be used to demonstrate compliance. When requested by the Department, the CEMS emission rates for NO<sub>X</sub> on this unit shall be corrected to ISO conditions to demonstrate compliance with the NO<sub>X</sub> standard established in 40 CFR 60.332. Data collected from the NO<sub>X</sub> CEM shall be used to report excess emissions in accordance with 40 CFR 60.334(c)(1) of NSPS, Subpart GG.

[1050221-004-AC]

- C.16. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine.
  - a. Pursuant to the custom monitoring schedule provisions of 40 CFR 60.334(b)(2), the frequency of determination of these values shall be as follows:
    - Monitoring of the nitrogen content of distillate fuel oil is not required. Sulfur content of distillate fuel oil shall be determined for each shipment of distillate fuel oil received; and
    - 2. Monitoring of the nitrogen content of pipeline natural gas is not required. Sulfur content of pipeline natural gas will be based on twice-monthly analyses provided by the natural gas supplier.
  - b. A custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D may be used in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2) as provided for in PSD-FL-185.

[40 CFR 60.334(b)(1) and (2)]

#### C.17. Determination of Process Variables.

- a. Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
- b. Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5)(a), F.A.C. and 62-297.310(5)(b), F.A.C.]

#### **Test Methods and Procedures**

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this

Auburndale Cogeneration Facility Page 26

permit.}

C.18. <u>Visible Emissions (VE)</u>. The test method for annual compliance testing shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C. [Rule 62-204.800, F.A.C. and Rule 62.297.620, F.A.C.]

**DRAFT Permit No.:** 1050221-009-AV

C.19. Particulate Matter/Particulate Matter Ten (PM/PM10). Continuous emissions of PM/PM<sub>10</sub> shall be limited by the use of pipeline-quality natural gas containing no more than 2 grain per standard cubic feet, the use of 0.05% sulfur oil and good combustion techniques as specified in this permit. The permittee shall demonstrate compliance with the oil and gas fuel sulfur limits by maintaining the records specified by this permit.

[Rule 62-212.400, F.A.C]

C.20. <reserved>

C.21. <reserved>

#### C.22. NOx Compliance Demonstration

- a. For purposes of demonstrating annual compliance with the NO<sub>x</sub> emission limits, specified in Condition C.8, either EPA Method 20 or the annual RATA testing at 100% output. The NO<sub>x</sub> CEMS shall be used for the purpose of demonstrating continuous compliance with the NO<sub>x</sub> emission limit (24-hour block average concentration limit) specified in Condition C.8.
- b. For purposes of demonstrating compliance with the annual (TPY) NOx limit see Condition C.8.

[40 CFR 60.335(c)(3) and 1050221-004-AC]

- C.23. The permittee shall demonstrate compliance with the fuel sulfur limit for natural gas specified in this permit by maintaining records of the sulfur content of the natural gas being supplied for each month of operation. The owner or operator shall determine compliance with the sulfur content standard of 0.05 percent, by weight, as follows: ASTM D129-91; D1552-90; D2280-71; D2880-96; D2622-92; D4292; D4294-90; or the latest edition(s) shall be used to determine the sulfur content of liquid fuels and ASTM D1072-80, 90, 94; D3031-81, 86; D3246-81, 92; D4084-82, 94; D4468-85; D5504-94; or the latest edition(s) shall be used for the sulfur content of gaseous fuels. These methods shall be used to determine the sulfur content of the natural gas fired in accordance with any EPA-approved custom fuel monitoring schedule or natural gas supplier data or the natural gas sulfur content referenced in 40 CFR 75 Appendix D. The analysis may be performed by the permittee, a service contractor retained by the permittee, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e). However, the permittee is responsible for ensuring that the procedures in 40 CFR 60.335 or 40 CFR 75 are used to determine the fuel sulfur content for compliance with the 40 CFR 60.333 SO2 standard. [Rules 62-4.070(3) and 62-4.160(15), F.A.C.1050221-004-AC]
- C.24. To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the methods specified in 40 CFR 60.335(a) and 40 CFR 60.335(d) of 40 CFR 60.335 or the latest edition(s) to determine the sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency. [40 CFR 60.335(e)]

C.25 <u>Volatile organic compound (VOC)</u>. The permittee shall demonstrate compliance with these standards by conducting tests in accordance with EPA Method 25A and the performance testing requirements of this permit. Optional testing in accordance with EPA Method 18 may be conducted to account for the actual methane fraction of the measured VOC emissions, if specifically requested.

[Rule 62-204.800, F.A.C, and Rule 62-297.620, F.A.C.]

C.26. <u>Carbon monoxide (CO)</u>. The permittee shall demonstrate compliance with this standard by conducting annual performance tests and emissions monitoring in accordance with EPA Method 10 or the annual RATA, and the CEMS requirement of this permit. [Rule 62-204.800, F.A.C, and Rule 62-297.620, F.A.C.]

#### C.27. <reserved>

C.28. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

#### C.29. Operating Rate During Testing.

Other required performance tests for compliance with standards specified in this permit shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. However, subsequent operation is limited by adjusting the entire heat input vs. ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for inlet temperature) and 110 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Emissions performance tests shall meet all applicable requirements of Chapters 62-204 and 62-297, F.A.C.

[Rule 62-297.310(2), F.A.C.]

C.30. <u>Calculation of Emission Rate</u>. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate

test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

# C.31. Applicable Test Procedures.

- a. Required Sampling Time.
  - 1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. [Rule 62-297.310(4)(a)1., F.A.C.]

**DRAFT Permit No.:** 1050221-009-AV

- 2. The minimum observation period for a visible emissions compliance test shall be sixty (60) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)2., F.A.C.]
- b. Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]
- c. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]
- **C.32.** The permittee shall comply with the requirements contained in APPENDIX SS-1, Stack Sampling Facilities, attached to this permit. [Rule 62-297.310(6), F.A.C.]
- **C.33.** Frequency of Compliance Tests. The following provisions apply only to the combustion turbine system and only for the pollutants listed in Conditions C.4 through C.11 for which compliance testing is required.
  - a. Compliance Testing.
    - 1. Prior to renewing the air operation permit, the permittee shall conduct performance tests for CO, NO<sub>X</sub>, VOC, and visible emissions from the combustion turbine. These tests shall be conducted within the 12-month period prior to renewing the air operation permit. For pollutants that are required to be tested annually, the permittee may submit the most recent annual compliance test to satisfy the requirements of this provision. Compliance testing is only required during the combustion of natural gas fuel. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
      - i. Did not operate; or
    - ii. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.

[Rule 62-297.310(7)(a)3., F.A.C.]

- 2. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
  - i. Visible emissions (VE);
  - ii. Carbon monoxide (CO); and
  - iii. Nitrogen Oxide (NOx).
- 3. The permittee shall notify the Compliance Authority in writing at least 30 days prior to initial NSPS performance tests and at least 15 days prior to any other

required tests.

[40 CFR 60.7, 40 CFR 60.8 and Rule 62-297.310(7)(a)9., F.A.C.]

b. Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

[Rule 62-297.310(7)(b),F.A.C.]

**DRAFT Permit No.:** 1050221-009-AV

- c. Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a baghouse or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

  [Rule 62-297.310(7), F.A.C.; SIP approved; PSD-FL-185]
- d. <u>Sampling Facilities</u>: The permittee shall design the combustion turbine stack to accommodate adequate testing and sampling locations in order to determine compliance with the applicable emission limits specified by this permit. Permanent stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C. [Rules 62-4.070 and 62-204.800, F.A.C., and 40 CFR 60.40a(b)]
- e. <u>Tests After Substantial Modifications</u>: All performance tests required for initial startup shall also be conducted after any substantial modification and appropriate shakedown period of air pollution control equipment. Shakedown periods shall not exceed 100 days after re-starting the combustion turbine. [Rule 62-297.310(7)(a)4., F.A.C.]
- C.34. Test Reports: A report indicating the results of any required emissions performance test shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.].

#### **Record Keeping and Reporting Requirements**

- C.35. Annual (12-month rolling total) NO<sub>X</sub> and CO limits shall be recalculated monthly and available on site for inspection purposes. Additionally, each year the facility shall submit all 12 months worth of calculations as part of the AOR submission. [1050221-004-AC]
- C.36. Monthly Operations Summary: By the fifth calendar day of each month, the permittee shall record the hours of operation by fuel type, 12-month emission totals for NO<sub>X</sub> and CO and

Auburndale Cogeneration Facility
Page 30

**DRAFT Permit No.:** 1050221-009-AV

amount of each fuel fired for the combustion turbine. Likewise, by the fifth calendar day of each month, the 12-month emission totals for the NO<sub>X</sub> requirements that have been placed upon the existing EU-001 by this permit shall be recorded. The information shall be recorded in a written or electronic log and shall summarize the previous month of operation and the previous 12 months of operation. Information recorded and stored as an electronic file shall be available for inspection and/or printing within at least one day of a request from the Compliance Authority. [Rule 62-4.160(15), F.A.C. and 1050221-004-AC]

C.37. Following the NSPS format in 40 CFR 60.7, Subpart A, FIGURE 1 - SUMMARY REPORT-GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE (attached), periods of startup, shutdown and malfunction, shall be monitored, recorded and reported as excess emissions when emission levels exceed the standards specified in this permit. Within thirty (30) days following each calendar quarter, the permittee shall submit a report on any periods of excess emissions that occurred during the previous calendar quarter to the Compliance Authority.

[Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7

C.38. <reserved>

C.39. <reserved>

C.40. Malfunction Reporting. If excess CO,  $NO_X$  or visible emissions occur due to malfunction, the permittee shall notify the Compliance Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.

#### Miscellaneous Requirements

C.41. <reserved>

C.42. <reserved>

C.43. <reserved>

# Subsection D. This section addresses the following emissions unit(s).

E.U. ID No.	Brief Description
-007	170 Megawatt Gas Combustion Turbine-Electrical Generator
-008	170 Megawatt Gas Combustion Turbine-Electrical Generator

These units are combined cycle combustion turbine (CT) cogeneration systems with each combined cycle system consisting of one 170 MW Siemens Westinghouse "F" Class (501FD) combustion turbine (CT) with one 200 MW steam turbine-generator, and one HRSG. Each CT is fired solely with pipeline natural gas and equipped with evaporative coolers on the inlet air system. Each system employs Selective Catalytic Reduction (SCR) to control NO<sub>x</sub> emission. Continuous Emissions Monitors Systems are used to determine compliance with all NO<sub>x</sub> emission limits. CEMS serves as continuous compliance determination, therefore CAM does not apply.

{Permitting note: This emissions unit is regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 212.400, F.A.C., Prevention of Significant Deterioration (PSD) and Best Available Control Technology (BACT).}

# The following conditions apply to the emissions unit(s) listed above:

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

- D.1. Combustion Turbine Capacity: The maximum heat input rates, based on the lower heating value (LHV) of the fuel to this Unit at ISO conditions shall not exceed 1,669 million Btu per hour (mmBtu/hr) when firing natural gas without power augmentation. This maximum heat input rate will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing.

  [Design, Rule 62-210.200, F.A.C. (Definitions Potential Emissions), PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **D.2.** <u>Fuels</u>: Only pipeline natural gas shall be fired in these units. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions Potential Emissions), and PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **D.3.** Maximum allowable hours of operation for the Combined Cycle Plant are 8760 hours per year while firing natural gas. Fuel oil firing of the combustion turbine is not permitted. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions Potential Emissions), and PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **D.4.** Simple Cycle Operation: The plant may not be operated without the use of the SCR system except during periods of startup and shutdown.

  [PSD-FL-287/Air Construction Permit 1050334-001-AC]

### **Emission Limitations and Standards**

#### **D.5.** Nitrogen Oxides (NO<sub>X</sub>) Emissions:

• The concentration of NO<sub>X</sub> in the stack exhaust gas, with the combustion turbine operating, the duct burner on or off, shall not exceed 3.5 ppmvd @15% O<sub>2</sub> on a 24-hr block average. This limit shall apply whether or not each unit is operating with duct burner on and/or in power augmentation mode. Compliance shall be determined by the continuous emission monitoring system (CEMS).

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

**DRAFT Permit No.:** 1050221-009-AV

- The emissions of NO<sub>X</sub> shall not exceed 27.5 lb/hr (at 95°F ambient temperature) while operating in the power augmentation mode with the duct burner on, to be demonstrated by annual stack test.
   [PSD-FL-287/Air Construction Permit 1050334-001-AC]
- The concentration of ammonia in the exhaust gas from each CT/HRSG shall not exceed 9.0 ppmvd @15% O<sub>2</sub>. The compliance procedures are described in Specific Conditions E.19 and E.28. [BACT, Rules 62-212.400 and 62-4.070, F.A.C.; Air Construction Permit 1050334-001-AC]
- When NO<sub>X</sub> monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time. [PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **D.6.** Carbon Monoxide (CO) Emissions: Emissions of CO in the stack exhaust gas (at ISO conditions) with the combustion turbine operating on gas shall exceed neither 10 ppmvd @15% O<sub>2</sub> on a 24-hr block average to be demonstrated by CEMS for those days when no valid hour includes the use of duct burner firing, power augmentation or 60-70% operation (otherwise, the limit is 17 ppmvd @15% O<sub>2</sub> on a 24-hr block average to be demonstrated by CEMS); and neither 10 ppmvd @15% O<sub>2</sub> nor 45 lb/hr per unit at 100% output with the duct burner off and no power augmentation to be demonstrated by annual stack test using EPA Method 10 or through annual RATA testing.

[PSD-FL-287/Air Construction Permit 1050334-001-AC, Rule 62-212.400, F.A.C.]

- **D.7.** Volatile Organic Compounds (VOC) Emissions: Emissions of VOC in the stack exhaust gas (baseload at ISO conditions) with the combustion turbine operating on gas shall exceed neither 2.3 ppmvd @15% O<sub>2</sub> nor 5.8 lb/hr per unit with the duct burner off and neither 4.6 ppmvd @15% O<sub>2</sub> nor 12.4 lb/hr per unit with the duct burner on and operating in the power augmentation mode to be demonstrated by initial stack test using EPA Method 18, 25 or 25A. [PSD-FL-287/Air Construction Permit 1050334-001-AC, Rule 62-212.400, F.A.C.]
- **D.8.** Sulfur Dioxide (SO<sub>2</sub>) emissions: SO<sub>2</sub> emissions shall be limited by firing pipeline natural gas (sulfur content not greater than 2 grains per 100 standard cubic foot). Compliance with this requirement in conjunction with implementation of the Custom Fuel Monitoring Schedule in Specific Condition 43 will demonstrate compliance with the applicable NSPS SO<sub>2</sub> emissions limitations from the duct burner or the combustion turbine. Note: This will effectively limit the combined SO<sub>2</sub> emissions for EU-001 and EU-002 at 95.4 tons per year. [PSD-FL-287/Air Construction Permit 1050334-001-AC, 40CFR60 Subpart GG and Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.]

**D.9.** PM/PM<sub>10</sub> and Visible emissions (VE): VE emissions shall not exceed 10 percent opacity from the stack in use. PM/PM<sub>10</sub> emissions from each combustion turbine and HRSG train shall not exceed 24.1 lb/hr at 100% output with the duct burner on and operating in the power augmentation mode to be demonstrated by initial stack test using EPA Method 5. [PSD-FL-287/Air Construction Permit 1050334-001-AC, Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.]

**DRAFT Permit No.:** 1050221-009-AV

#### **Excess Emissions**

- **D.10.** Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period except during both "cold start-up" to and shutdowns from combined cycle plant operation. During cold start-up to combined cycle operation, up to four hours of excess emissions are allowed. During shutdowns from combined cycle operation, up to three hours of excess emissions are allowed. Cold start-up is defined as a startup to combined cycle operation following a complete shutdown lasting at least 48 hours. Operation below 60% output per turbine shall otherwise be limited to 2 hours in any 24-hour period. [Rule 62-210.700, F.A.C., and PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **D.11.** Excess emissions 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 pursuant to Rule 62-210.700, F.A.C. These emissions shall be included in the 24-hr average for NO<sub>X</sub> and the 24-hr average for CO. [PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **D.12.** Excess Emissions Report: If excess emissions occur for more than two hours due to malfunction, the owner or operator shall notify DEP's Southwest District office within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, all excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. Following this format, 40 CFR 60.7, and using the monitoring methods listed in Specific Conditions D.14. through D.18., periods of startup, shutdown, malfunction, shall be monitored, recorded, and reported as excess emissions when emission levels exceed the permitted standards listed in Specific Condition D.5. through D.9.

[Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7 (1998 version) and PSD-FL-287/Air Construction Permit 1050334-001-AC]

#### **Monitoring of Operations**

**D.13.** 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 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 Administrator 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)]

**D.14.** Continuous Monitoring System: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides and carbon monoxide from these units. Periods when emissions (ppmvd @ 15% oxygen) are above the permitted limits, listed in Specific Conditions No. 20 and 21 shall be reported to the DEP Southwest District Office in accordance with the requirements of Specific Condition 27. [Rules 62-204.800, 62-210.700, 62-4.130, 62-4.160(8), F.A.C and 40 CFR 60.7 (1998 version), and PSD-FL-287/Air Construction Permit 1050334-001-AC].

**DRAFT Permit No.:** 1050221-009-AV

**D.15.** CEMS for reporting excess emissions: The CEMS shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c), Subpart GG (2004 version). Upon request from DEP, the CEMS emission rates shall be corrected to ISO conditions to demonstrate compliance with the applicable standards listed within this permit and established in 40 CFR 60.332.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

D.16. Continuous Monitoring System Reports: The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) or 40 CFR Part 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40 CFR 75. The monitoring plan, consisting of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the DEP Bureau of Ambient Monitoring & Mobile Sources (BAMMS) as well as the EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

- **D.17.** Natural Gas Monitoring Schedule: A custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2) provided the following requirements are met:
  - The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.
  - The permittee shall submit a monitoring plan, certified by signature of the Designated Representative, that commits to the sole use of pipeline supplied natural gas (sulfur content less than 20 gr/100 scf pursuant to 40 CFR 75.11(d)(2)) for the CT's.
  - Each unit shall be monitored for SO<sub>2</sub> emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

# D.18. Determination of Process Variables:

- The permittee shall operate and maintain equipment and/or instruments necessary to determine process variables, such as process weight input or heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards. No later than 90 days prior to operation, the permittee shall submit for the Department's approval a list of process variables that will be measured to comply with this permit condition.
- Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weigh hoppers, flow meters, and tank

scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value [Rule 62-297.310(5), F.A.C]

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

#### **Test Methods and Procedures**

**D.19.** Annual compliance tests shall be performed during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.310(7), F.A.C., on these units as indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing. Where initial tests only are indicated, these tests shall be repeated prior to renewal of each operation permit.

- EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources".
- EPA reference Method 5, "Determination of Particulate Emissions from Stationary Sources." Initial test only.
- EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources".
- EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines" (EPA reference Method 7E, "Determination of Nitrogen Oxides Emissions from Stationary Sources" or RATA test data may be used to demonstrate compliance for annual test requirement). EPA Method 26A (modified) for ammonia sample collection.
- EPA Draft Method 206 for ion chromatographic analysis for ammonia. The applicant shall calculate and report the ppmvd ammonia slip (@ 15%  $O_2$ ) at the measured lb/hr  $NO_X$  emission rate as a means of compliance with the BACT standard. The applicant shall also be capable of calculating ammonia slip at the Department's request, according to Specific Condition D.28.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

**D.20.** Continuous compliance with the CO and NO<sub>X</sub> emission limits: Continuous compliance with the CO and NO<sub>X</sub> emission limits shall be demonstrated by the CEM system on the specified hour average basis. Based on CEMS data, a separate compliance determination is conducted at the end of each period and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous period. Valid hourly emission rates shall not include periods of start up or shutdown unless prohibited by 62-210.700 F.A.C. A valid hourly emission rate shall be calculated for each hour in which at least two measurements are obtained at least 15 minutes apart. Excess emissions periods shall be reported as required in Specific Condition D.12. [Rules 62-4.070 F.A.C., 62-210.700, F.A.C., 40 CFR 75 and PSD-FL-287/Air Construction Permit 1050334-001-AC]

**D.21.** Compliance with the SO<sub>2</sub> and PM/PM<sub>10</sub> emission limits: For the purposes of demonstrating compliance with the 40 CFR 60.333 SO<sub>2</sub> standard, ASTM methods D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA-approved custom fuel monitoring schedule or natural gas supplier data may be submitted or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be utilized. However, the applicant is responsible for ensuring that the procedures in 40 CFR60.335 or 40 CFR75 are used when determination of fuel sulfur content is made. Analysis may be performed

Auburndale Cogeneration Facility Page 36

**DRAFT Permit No.:** 1050221-009-AV

by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e) (1998 version). [PSD-FL-287/Air Construction Permit 1050334-001-AC]

**D.22.** Compliance with CO emission limit: An annual test for CO shall be conducted at 100% capacity with the duct burners off. The  $NO_X$  and CO test results shall be the average of three valid one-hour runs. Annual RATA testing for the CO and  $NO_X$  CEMS shall be required pursuant to 40 CFR 75.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

**D.23.** Compliance with the VOC emission limit: An initial test is required to demonstrate compliance with the VOC emission limit. Thereafter, the CO emission limit will be employed as a surrogate and no annual testing is required.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

**D.24.** Testing procedures: Unless otherwise specified, testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

- **D.25.** <u>Test Notification</u>: The DEP's Southwest District office shall be notified, in writing, at least 30 days prior to the initial performance tests and at least 15 days before annual compliance tests. [PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **D.26.** Special Compliance Tests: The DEP may request a special compliance test pursuant to Rule 62-297.310(7), F.A.C., when, after investigation (such as complaints, increased visible emissions, or questionable maintenance of control equipment), there is reason to believe that any applicable emission standard is being violated.

  [PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **D.27.** Test Results: Compliance test results shall be submitted to the DEP's Southwest District office no later than 45 days after completion of the last test run. [Rule 62-297.310(8), F.A.C., and PSD-FL-287/Air Construction Permit 1050334-001-AC].

#### **D.28.** Selective Catalytic Reduction System (SCR) Compliance Procedures:

- An annual stack emission test for nitrogen oxides and ammonia from the CT/HRSG pair shall be simultaneously conducted while operating in the power augmentation mode with the duct burner on as defined in Specific Condition D.5. The ammonia injection rate necessary to comply with the NO<sub>X</sub> standard shall be established and reported during the each performance test.
- The SCR shall operate at all times that the turbine is operating, except during turbine start-up and shutdown periods, as dictated by manufacturer's guidelines and in accordance with this permit.

• The permittee shall install and operate an ammonia flow meter to measure and record the ammonia injection rate to the SCR system of the CT/HRSG set. It shall be maintained and calibrated according to the manufacturer's specifications.

DRAFT Permit No.: 1050221-009-AV

- During the stack test, the permittee (at each tested load condition) shall determine and report the ammonia flow rate required to meet the emissions limitations. During NO<sub>X</sub> CEM downtimes or malfunctions, the permittee shall operate at the ammonia flow rate, which was established during the last stack test.
- Ammonia emissions shall be calculated continuously using inlet and outlet NO<sub>X</sub> concentrations from the SCR system and ammonia flow supplied to the SCR system.
   The calculation procedure shall be provided with the CEMS monitoring plan required by 40CFR Part 75. The following calculation represents one means by which the permittee may demonstrate compliance with this condition:

Ammonia slip @  $15\%O_2 = (A-(BxC/1,000,000)) \times (1,000,000/B) \times D$ , where: A= ammonia injection rate (lb/hr)/ 17 (lb/lb.mol)

B = dry gas exhaust flow rate (lb/hr) / 29 (lb/lb.mol)

C = change in measured NO<sub>X</sub> (ppmv@15%O<sub>2</sub>) across catalyst

D = correction factor, derived annually during compliance testing by comparing actual to tested ammonia slip

The calculation along with each newly determined correction factor shall be submitted with each annual compliance test. Calibration data ("as found" and "as left") shall be provided for each measurement device utilized to make the ammonia emission measurement and submitted with each annual compliance test.

- The permittee shall notify the Department within 2 business days if the calculated ammonia emissions exceed 9.0 ppmvd corrected to 15% O<sub>2</sub> over a 3-hour block average. The notification shall include a corrective action plan to reduce ammonia emissions below 9 ppmvd corrected to 15% O<sub>2</sub> over a 3-hour block average.
- Upon specific request by the Department, a special re-test shall occur as described in the
  previous conditions concerning annual test requirements, in order to demonstrate that all
  NO<sub>X</sub> and ammonia slip related permit limits can be complied with.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

#### Record Keeping and Reporting Requirements

**D.29.** Records: All measurements, records, and other data required to be maintained by Calpine shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to DEP representatives upon request.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

**D.30.** Compliance Test Reports: The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8), F.A.C. [PSD-FL-287/Air Construction Permit 1050334-001-AC]

#### Miscellaneous Requirements

**D.31.** Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner

Auburndale Cogeneration Facility Page 38

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or operator shall notify the DEP Southwest District office as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations.

**DRAFT Permit No.:** 1050221-009-AV

**D.32.** Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C., and PSD-FL-287/Air Construction Permit 1050334-001-AC]

[Rule 62-4.130, F.A.C., and PSD-FL-287/Air Construction Permit 1050334-001-AC]

**D.33.** <u>Circumvention</u>: The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C., and PSD-FL-287/Air Construction Permit 1050334-001-AC]

# Subsection E. This section addresses the following emissions unit(s).

E.U. ID No.	Brief Description
-009	Duct Burner with Supplementary HRSG
-010	Duct Burner with Supplementary HRSG

Two Heat Recovery Steam Generators with 250 MMBtu duct burners for supplemental firing and to achieve peak output. The Duct Burner can only fire pipeline natural gas. Low NO<sub>x</sub> burners (LNB) are used to control NO<sub>x</sub> emissions.

**DRAFT Permit No.:** 1050221-009-AV

{Permitting Note: These emissions units are regulated under 40 CFR 60, Subpart Da, Standards for Performance for Electric Utility Steam Generating Units for Units Constructed After September 18, 1978, adopted and incorporated by reference in Rule 62-204.800(7), and PSD-FL-287/Air Construction Permit 1050334-001-AC]

# The following conditions apply to the emissions unit(s) listed above:

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

- E.1. <u>Heat Recovery Steam Generator equipped with Duct Burner</u>. The maximum heat input rate of the natural gas fired duct burner shall not exceed 250 MMBtu/hour (LHV). [Applicant Request, Rule 62-210.200, F.A.C. (Definitions Potential Emissions)]
- **E.2.** <u>Maximum allowable hours</u> of operation for the 527 MW Combined Cycle Plant are 8760 hours per year while firing natural gas. Fuel oil firing of the combustion turbine is not permitted. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions Potential Emissions)]
- **E.3.** Simple Cycle Operation: The plant may not be operated without the use of the SCR system except during periods of startup and shutdown.

  [PSD-FL-287/Air Construction Permit 1050334-001-AC]

#### **Emission Limitations and Standards**

#### **E.4.1.** Nitrogen Oxides (NO<sub>X</sub>) Emissions:

- The concentration of NO<sub>X</sub> in the stack exhaust gas, with the combustion turbine operating, the duct burner on or off, shall not exceed 3.5 ppmvd @15% O<sub>2</sub> on a 24-hr block average. This limit shall apply whether or not each unit is operating with duct burner on and/or in power augmentation mode. Compliance shall be determined by the continuous emissions monitoring system (CEMS). [BACT Determination]
- The emissions of NO<sub>X</sub> shall not exceed 27.5 lb/hr (at 95°F ambient temperature) while operating in the power augmentation mode with the duct burner on, to be demonstrated by annual stack test. [BACT Determination]
- Emissions of NO<sub>X</sub> from the duct burner shall not exceed 0.1 lb/MMBtu, which is more stringent than the NSPS (see Specific Condition 29). [Applicant Request, Rule 62-4.070 and 62-204.800(7), F.A.C.]

- The concentration of ammonia in the exhaust gas from each CT/HRSG shall not exceed 9.0 ppmvd @15% O<sub>2</sub>. The compliance procedures are described in Specific Conditions E.17. and E.26. [BACT, Rules 62-212.400 and 62-4.070, F.A.C.]
- When NO<sub>X</sub> monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time. [PSD-FL-287/Air Construction Permit 1050334-001-AC]

#### E.4.2. NO<sub>X</sub> Emissions:

- Emissions of NO<sub>X</sub> from the duct burner shall not exceed 0.1 lb/MMBtu, which is more stringent than the NSPS (see Specific Condition D.17).
- When NO<sub>X</sub> monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time. [PSD-FL-287/Air Construction Permit 1050334-001-AC]
- E.5. Carbon Monoxide (CO) Emissions: Emissions of CO in the stack exhaust gas (at ISO conditions) with the combustion turbine operating on gas shall exceed neither 10 ppmvd @15% O<sub>2</sub> on a 24-hr block average to be demonstrated by CEMS for those days when no valid hour includes the use of duct burner firing, power augmentation or 60-70% operation (otherwise, the limit is 17 ppmvd @15% O<sub>2</sub> on a 24-hr block average to be demonstrated by CEMS); and neither 10 ppmvd @15% O<sub>2</sub> nor 45 lb/hr per unit at 100% output with the duct burner off and no power augmentation to be demonstrated by annual stack test using EPA Method 10 or through annual RATA testing.

[Rule 62-212.400, F.A.C., and PSD-FL-287/Air Construction Permit 1050334-001-AC]

- E.6. Volatile Organic Compounds (VOC) Emissions: Emissions of VOC in the stack exhaust gas (baseload at ISO conditions) with the combustion turbine operating on gas shall exceed neither 2.3 ppmvd @15% O<sub>2</sub> nor 5.8 lb/hr per unit with the duct burner off and neither 4.6 ppmvd @15% O<sub>2</sub> nor 12.4 lb/hr per unit with the duct burner on and operating in the power augmentation mode to be demonstrated by initial stack test using EPA Method 18, 25 or 25A.

  [PSD-FL-287/Air Construction Permit 1050334-001-AC, Rule 62-212.400, F.A.C.]
- E.7. <u>Sulfur Dioxide (SO<sub>2</sub>) emissions</u>: SO<sub>2</sub> emissions shall be limited by firing pipeline natural gas (sulfur content not greater than 2 grains per 100 standard cubic foot). Compliance with this requirement in conjunction with implementation of the Custom Fuel Monitoring Schedule in Specific Condition E.14. will demonstrate compliance with the applicable NSPS SO<sub>2</sub> emissions limitations from the duct burner or the combustion turbine. Note: This will effectively limit the combined SO<sub>2</sub> emissions for EU-001 and EU-002 at 95.4 tons per year. [PSD-FL-287/Air Construction Permit 1050334-001-AC, 40CFR60 Subpart GG and Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.]
- **E.8.** PM/PM<sub>10</sub> and Visible emissions (VE): VE emissions shall not exceed 10 percent opacity from the stack in use. PM/PM<sub>10</sub> emissions from each combustion turbine and HRSG train shall not exceed 24.1 lb/hr at 100% output with the duct burner on and operating in the power augmentation mode to be demonstrated by initial stack test using EPA Method 5. [PSD-FL-287/Air Construction Permit 1050334-001-AC, Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.]

# Excess Emissions

E.9. Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period except during both "cold start-up" to and shutdowns from combined cycle plant operation. During cold start-up to combined cycle operation, up to four hours of excess emissions are allowed. During shutdowns from combined cycle operation, up to three hours of excess emissions are allowed. Cold start-up is defined as a startup to combined cycle operation following a complete shutdown lasting at least 48 hours. Operation below 60% output per turbine shall otherwise be limited to 2 hours in any 24-hour period. [Rule 62-210.700, F.A.C.].

**DRAFT Permit No.:** 1050221-009-AV

- **E.10.** Excess emissions 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 pursuant to Rule 62-210.700, F.A.C. These emissions shall be included in the 24-hr average for NO<sub>X</sub> and the 24-hr average for CO.
- **E.11.** Excess Emissions Report: If excess emissions occur for more than two hours due to malfunction, the owner or operator shall notify DEP's Southwest District office within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, all excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. Following this format, 40 CFR 60.7, and using the monitoring methods listed in Specific Conditions E.13. through E.16. and E.26, periods of startup, shutdown, malfunction, shall be monitored, recorded, and reported as excess emissions when emission levels exceed the permitted standards listed in Specific Condition E.4. through E.8. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7 (1998 version)].

# Monitoring of Operations

- **E.12.** 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 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 Administrator 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)]
- E.13. Continuous Monitoring System: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides and carbon monoxide from these units. Periods when emissions (ppmvd @ 15% oxygen) are above the permitted limits, listed in Specific Conditions No. E.4. and E.5. shall be reported to the DEP Southwest District Office in accordance with the requirements of Specific Condition E.11.

[Rules 62-204.800, 62-210.700, 62-4.130, 62-4.160(8), F.A.C and 40 CFR 60.7 (1998 version), and PSD-FL-287/Air Construction Permit 1050334-001-AC].

**DRAFT Permit No.:** 1050221-009-AV

E.14. <u>Natural Gas Monitoring Schedule</u>: A custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2) provided the following requirements are met:

- The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.
- The permittee shall submit a monitoring plan, certified by signature of the Designated Representative, that commits to the sole use of pipeline supplied natural gas (sulfur content less than 20 gr/100 scf pursuant to 40 CFR 75.11(d)(2)) for the CT's.
- Each unit shall be monitored for SO<sub>2</sub> emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA.

#### **E.15.** Determination of Process Variables:

- The permittee shall operate and maintain equipment and/or instruments necessary to determine process variables, such as process weight input or heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards. No later than 90 days prior to operation, the permittee shall submit for the Department's approval a list of process variables that will be measured to comply with this permit condition.
- Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weigh hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value [Rule 62-297.310(5), F.A.C]
- **E.16.** Subpart Da Monitoring and Recordkeeping Requirements: The permittee shall comply with all applicable requirements of this Subpart [40CFR60, Subpart Da].

# **Test Methods and Procedures**

- **E.17.** Annual compliance tests shall be performed during every federal fiscal year (October 1 September 30) pursuant to Rule 62-297.310(7), F.A.C., on these units as indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing. Where initial tests only are indicated, these tests shall be repeated prior to renewal of each operation permit.
  - EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources".
  - EPA reference Method 5, "Determination of Particulate Emissions from Stationary Sources." Initial test only.
  - EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources".
  - EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines" (EPA reference Method 7E, "Determination of Nitrogen Oxides Emissions from Stationary Sources" or RATA test

data may be used to demonstrate compliance for annual test requirement). EPA Method 26A (modified) for ammonia sample collection.

• EPA Draft Method 206 for ion chromatographic analysis for ammonia. The applicant shall calculate and report the ppmvd ammonia slip (@ 15% O<sub>2</sub>) at the measured lb/hr NO<sub>X</sub> emission rate as a means of compliance with the BACT standard. The applicant shall also be capable of calculating ammonia slip at the Department's request, according to Specific Condition E.26.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

E.18. Continuous compliance with the CO and NO<sub>X</sub> emission limits: Continuous compliance with the CO and NO<sub>X</sub> emission limits shall be demonstrated by the CEMS system on the specified hour average basis. Based on CEMS data, a separate compliance determination is conducted at the end of each period and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous period. Valid hourly emission rates shall not include periods of start up or shutdown unless prohibited by 62-210.700 F.A.C. A valid hourly emission rate shall be calculated for each hour in which at least two measurements are obtained at least 15 minutes apart. Excess emissions periods shall be reported as required in Specific Condition E.11.

[Rules 62-4.070 F.A.C., 62-210.700, F.A.C., 40 CFR 75 and PSD-FL-287/Air Construction Permit 1050334-001-AC]

- E.19. Compliance with the SO<sub>2</sub> and PM/PM<sub>10</sub> emission limits: For the purposes of demonstrating compliance with the 40 CFR 60.333 SO<sub>2</sub> standard, ASTM methods D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA-approved custom fuel monitoring schedule or natural gas supplier data may be submitted or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be utilized. However, the applicant is responsible for ensuring that the procedures in 40 CFR60.335 or 40 CFR75 are used when determination of fuel sulfur content is made. Analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e) (1998 version). [PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **E.20.** Compliance with CO emission limit: An annual test for CO shall be conducted at 100% capacity with the duct burners off. The  $NO_X$  and CO test results shall be the average of three valid one-hour runs. Annual RATA testing for the CO and  $NO_X$  CEMS shall be required pursuant to 40 CFR 75.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

- E.21. Compliance with the VOC emission limit: An initial test is required to demonstrate compliance with the VOC emission limit. Thereafter, the CO emission limit will be employed as a surrogate and no annual testing is required.

  [PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **E.22.** Testing procedures: Unless otherwise specified, testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). Procedures for these tests shall meet all applicable requirements

(i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

- **E.23.** <u>Test Notification</u>: The DEP's Southwest District office shall be notified, in writing, at least 30 days prior to the initial performance tests and at least 15 days before annual compliance tests. [PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **E.24.** Special Compliance Tests: The DEP may request a special compliance test pursuant to Rule 62-297.310(7), F.A.C., when, after investigation (such as complaints, increased visible emissions, or questionable maintenance of control equipment), there is reason to believe that any applicable emission standard is being violated.

  [PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **E.25.** <u>Test Results</u>: Compliance test results shall be submitted to the DEP's Southwest District office no later than 45 days after completion of the last test run. [Rule 62-297.310(8), F.A.C., and PSD-FL-287/Air Construction Permit 1050334-001-AC].

#### **E.26.** Selective Catalytic Reduction System (SCR) Compliance Procedures:

- An annual stack emission test for nitrogen oxides and ammonia from the CT/HRSG pair shall be simultaneously conducted while operating in the power augmentation mode with the duct burner on as defined in Specific Condition E.4. The ammonia injection rate necessary to comply with the NO<sub>X</sub> standard shall be established and reported during the each performance test.
- The SCR shall operate at all times that the turbine is operating, except during turbine start-up and shutdown periods, as dictated by manufacturer's guidelines and in accordance with this permit.
- The permittee shall install and operate an ammonia flow meter to measure and record the ammonia injection rate to the SCR system of the CT/HRSG set. It shall be maintained and calibrated according to the manufacturer's specifications.
- During the stack test, the permittee (at each tested load condition) shall determine and report the ammonia flow rate required to meet the emissions limitations. During NO<sub>X</sub> CEM downtimes or malfunctions, the permittee shall operate at the ammonia flow rate, which was established during the last stack test.
- Ammonia emissions shall be calculated continuously using inlet and outlet NO<sub>X</sub> concentrations from the SCR system and ammonia flow supplied to the SCR system.
   The calculation procedure shall be provided with the CEM monitoring plan required by 40CFR Part 75. The following calculation represents one means by which the permittee may demonstrate compliance with this condition:

Ammonia slip @  $15\%O_2 = (A-(BxC/1,000,000)) \times (1,000,000/B) \times D$ , where: A= ammonia injection rate (lb/hr)/ 17 (lb/lb.mol)

B = dry gas exhaust flow rate (lb/hr) / 29 (lb/lb.mol)

C = change in measured NO<sub>X</sub> (ppmv@15%O<sub>2</sub>) across catalyst

D = correction factor, derived annually during compliance testing by comparing actual to tested ammonia slip

The calculation along with each newly determined correction factor shall be submitted with each annual compliance test. Calibration data ("as found" and "as left") shall be provided for each measurement device utilized to make the ammonia emission measurement and submitted with each annual compliance test.

• The permittee shall notify the Department within 2 business days if the calculated ammonia emissions exceed 9.0 ppmvd corrected to 15% O<sub>2</sub> over a 3-hour block average. The notification shall include a corrective action plan to reduce ammonia emissions below 9 ppmvd corrected to 15% O<sub>2</sub> over a 3-hour block average.

**DRAFT Permit No.:** 1050221-009-AV

Upon specific request by the Department, a special re-test shall occur as described in the
previous conditions concerning annual test requirements, in order to demonstrate that all
NO<sub>X</sub> and ammonia slip related permit limits can be complied with.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

#### **Record Keeping and Reporting Requirements**

E.27. Records: All measurements, records, and other data required to be maintained by Calpine shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to DEP representatives upon request.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

E.28. Compliance Test Reports: The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8), F.A.C. [PSD-FL-287/Air Construction Permit 1050334-001-AC]

#### Miscellaneous Requirements

- E.29. Plant Operation Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the DEP Southwest District office as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations.

  [Rule 62-4.130, F.A.C., and PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **E.30.** Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C., and PSD-FL-287/Air Construction Permit 1050334-001-AC]
- **E.31.** <u>Circumvention</u>: The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C., and PSD-FL-287/Air Construction Permit 1050334-001-AC]

### Subsection F. This section addresses the emissions unit(s).

E.U.

ID No. Brief Description

-011 Cooling Tower

The Cooling tower consists of 8 cells with individual exhaust fans.

{Permitting note: This emissions unit is an 'unregulated emissions units.'}

### The following conditions apply to the emissions unit(s) listed above:

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

**F.1.** Hours of Operation. These emissions units are allowed to operate continuously, i.e., 8,760 hours/year.

[Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C., Definitions - (PTE)]

#### **Emission Limitations and Standards**

F.2. <u>Drift Eliminators for PM/PM<sub>10</sub> Emissions</u>: This emissions unit shall meet a 0.002 gallons/100 gallons recirculation water flowrate.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

**F.3.** <u>Visible Emissions:</u> VE emissions shall not exceed 20 percent opacity from the cooling tower.

[Rule 62-296.320(4)(b)(1), F.A.C.]

#### **Test Methods and Procedures**

- **F.4.** Annual compliance tests shall be performed during every federal fiscal year (October 1 September 30) pursuant to Rule 62-297.310(7), F.A.C., on these units as indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing. Where initial tests only are indicated, these tests shall be repeated prior to renewal of each operation permit.
  - EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources"

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

#### **Record Keeping and Reporting Requirements**

**F.5.** Records: All measurements, records, and other data required to be maintained by Calpine shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to DEP representatives upon request.

[PSD-FL-287/Air Construction Permit 1050334-001-AC]

Auburndale Cogeneration Facility Page 47

DRAFT Permit No.: 1050221-009-AV

F.6. <u>Compliance Test Reports</u>: The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8), F.A.C. [PSD-FL-287/Air Construction Permit 1050334-001-AC]

#### Section IV. This section is the Acid Rain Part.

Operated by: Auburndale Cogeneration Facility

**ORIS code:** 54658

The emissions unit(s) listed below is regulated under Acid Rain Part, Phase II.

#### E.U. ID

<u>No.</u>	Brief Description
-001	Combined Cycle Combustion Turbine
-006	Simple Cycle Combustion Turbine
-007	Combined Cycle Combustion Turbine
-008	Combined Cycle Combustion Turbine

A.1. The Phase II Acid Rain Part application submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of this Phase II acid rain unit must comply with the standard requirements and special provisions set forth in the application listed below:

a. DEP Form No. 62-210.900(1)(a), effective 04/16/01, received August 15, 2002 and August 29, 2001.

[Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

A.2. Sulfur dioxide (SO2) allowance allocations for each Acid Rain unit is as follows:

E.U. ID		_		,			
No.	EPA ID	Year	2003	2004	2005	2006	2007
-001	1	SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*	0*	0*
-006	6	SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*	0*	0*
-007		SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*	0*	0*
-008		SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*	0*	0*

<sup>\*</sup>The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the USEPA under Table 2 or 3 of 40 CFR 73.

applicable requirement of the Act.

A.3. Emission Allowances. 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

**DRAFT Permit No.:** 1050221-009-AV

- 1. 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.
- 2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.
- 3. Allowances shall be accounted for under the Federal Acid Rain Program. [Rule 62-213.440(1)(c), F.A.C.]
- **A.4.** <u>Fast-Track Revisions of Acid Rain Parts.</u> 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, Fast-Track

Revisions of Acid Rain Parts.

[Rules 62-213.413 and 62-214.370(4), F.A.C.]

A.5. Comments, notes, and justifications:

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The designated representative was changed by letter dated March 28, 2002, with a revised Certificate of Authorization.

# Appendix H-1, Permit History/ID Number Changes

Auburndale Peaker Energy Center, LLC Auburndale Power Partners, L.P. Auburndale Energy Center **DRAFT Permit No.**: 1050221-009-AV

Facility ID No.: 1050221

	History (for tracking purpose	es):				1
E.U. ID No <u>.</u>	Description	Permit No.	Issue Date	Expiration Date	Extended Date <sup>1, 2</sup>	Revised Date(s)
-001	Combined Cycle Combustion Turbine	AC53-208321/ PSD-FL-185 1050221-004-AC	12/14/92	10/30/95	11/1/96	6/20/94, 3/18/96, 5/22/97 2/26/02, xx/xx/xx
-002	Fuel oil storage tanks (2)					
-003	Emergency generators					
-004	Heating units and engines			•		
-005	Surface coating operations					
-006	Simple Cycle Combustion Turbine	1050221-004-AC		4/1/03		4/29/02
-007	Combustion Turbine	1050334-001-AC				
-008	Combustion Turbine	1050334-001-AC				
-009	Duct Burner	1050334-001-AC				
-010	Duct Burner	1050334-001-AC				
-011	Cooling Tower	1050334-001-AC				
All	Initial Title V	1050221-002-AV				
All	Title V Renewal	1050221-007-AV		12/31/07		
All	Title V Revision	1050221-009-AV		12/31/07		

# ID Number Changes (for tracking purposes):

NOTE: Calpine Construction Finance Company, L.P., Osprey Energy Center (Facility ID No.: 1050334) will need to be merged in the future with this Facility ID No.: 1050221. Units 007 through 011 were incorporated from Facility ID No. 1050334 into 1050221 in permit revision 1050221-009-AV.

#### Notes:

- 1 AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.
- 2 AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.

{Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits}

# Appendix I-1, List of Insignificant Emissions Units and/or Activities.

Auburndale Peaker Energy Center, LLC Auburndale Power Partners, L.P. Calpine Construction Finance Company, LP

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule 62-210.300(3)(a), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule 62.210.300(3)(a), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to

**DRAFT Permit No.:** 1050221-009-AV

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

#### Emissions Units and/or Activities Description

- 1. Comfort heating with a gross maximum heat input of less than one million Btu per hour.
- 2. Vacuum pumps in laboratory operations.
- 3. Belt or Drum Sanders having a total sanding surface of five square feet or less and other equipment used exclusively on woods or plastics or their products having a density of 20 pounds per cubic foot or more.
- 4. Equipment used exclusively for space heating, other than boilers.

emit any pollutant in such amount as to make the facility a Title V source.

- 5. Laboratory equipment used exclusively for chemical or physical analyses (including fume hoods and vents)
- 6. Surface coating operations utilizing only coatings containing 5.0 percent or less VOCs, by volume.
- 7. Degreasing units using heavier-than-air vapors exclusively, except any unit using or emitting any substance classified as a hazardous air pollutant.
- 8. No. 2 Fuel Oil Truck Unloading Equipment.
- 9. Oil/Water Separators.
- 10. Freshwater cooling towers. The cooling towers do not use chromium-based water treatment chemicals.
- 11. Refrigeration Units.
- 12. Lube Oil Vents Associated with Rotating Equipment.
- 13. Lube Oil Tank Vents.
- 14. Internal combustion engines used for transportation of passengers and freight.
- 15. Steam cleaning equipment.
- 16. Fire and safety equipment.
- 17. Brazing, soldering, or welding equipment.
- 18. Petroleum Lube Systems
- 19. Application of fungicide, herbicide, or pesticide
- 20. Non-halogenated solvent storage and cleaning operation, provided the solvents contain none of the hazardous air pollutants listed in Rule 62-210.200, F.A.C.
- 21. Vehicle refueling operations and associated fuel storage
- 22. Storage tanks less than 250 gallons

#### Emissions Units and/or Activities Description Continued

- 23. General Plant maintenance activities including, but no limited to, welding, grinding, and general vehicle repair (excluding air-conditioning systems.
- 24. Water and wastewater treatment equipment
- 25. Turbine Vapor Extractor
- 26. Wet surface air coolers
- 27. Sand Blasting and abrasive grit blasting where temporary total enclosures are used to contain particulate matter emissions.
- 28. Vehicular Traffic on plant roadways and grounds
- 29. Architectural (equipment) maintenance painting
- 30. One (1) 1,250 KW emergency generator diesel engine
- 31. One (1) 265 HP fire water pump diesel engine
- 32. Any emission unit or activity that would:
  - a. Not be subject to any unit-specific applicable requirement
  - b. Neither emit nor have the potential to emit:
    - (i) 500 pounds per year or more of lead and lead compounds expressed as lead
    - (ii) 1,000 pounds per year or more of any hazardous air pollutant
    - (iii) 2,500 pounds a year or more of total hazardous air pollutants
    - (iv) 5.0 tons per year or more of any regulated pollutant

# Appendix U-1, List of Unregulated Emissions Units and/or Activities.

Auburndale Peaker Energy Center, LLC
Auburndale Power Partners, L.P.
Calpine Construction Finance Company, LP

<u>Unregulated Emissions Units and/or Activities</u>. An emissions unit which emits no "emissions-limited pollutant" and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither 'regulated emissions units' nor 'insignificant emissions units'.

<u>E.U.</u>	
ID No.	Brief Description of Emissions Units and/or Activity
-003	One or more emergency generators which are not subject to the Acid Rain Program and have total fuel consumption, in the aggregate, of 32,000 gallons per year or less of diesel fuel, 4,000 gallons per year or less of gasoline, and 4.4 million cubic feet per year or less of natural gas or propane, or an equivalent prorated amount if multiple fuels are used.
004	
-004	One or more heating units and general purpose internal combustion engines which are not subject to the Acid Rain Program and have total fuel consumption, in the aggregate, of 32,000 gallons per year or less of diesel fuel, 4,000 gallons per year or less of gasoline, and 4.4 million cubic feet per year or less of natural gas or propane, or an equivalent prorated amount if multiple fuels are used.
-005	Surface coating operations utilizing 6.0 gallons per day or less, averaged monthly, of coatings containing greater than 5.0 percent VOCs, by volume.
-011	Cooling Tower

Table 1-1, S	umma	ry of Air	Pollutant Standards and Terms									
Auburndale Pe	aker En	eray Cente	er IIC	DRAFT Permi	it No : 1050	221-009-AV						+
Auburndale Po				Facility ID No			_					
Auburndale En				Tacinty ID NO	1000221							+
AddaMdaic En						-						1
This table summa	arizes info	ormation for	Convenience purposes only. This table does not supersection	de any of the terms or	conditions of t	his permit.				1		
E.U. ID No.	Brief D	  escription	1		·							
-001			Combustion Turbine				-			_		$\top$
			Allowable Emissions									
Pollutant Name	Fuel(s)	Hours/Year	Standard(s)	gulatory Citation	lbs./hou	Regulatory Citation(s)	TPY	Regulatory Citation(s)	lbs:/hour		See permit condition(s	s)
VE	Gas/Oil		<10% opacity at full load	see note #3					亞納納	的極地	III.A.4.	]
			≤20% opacity otherwise	see note #2					工义主意		III.A.5.	
PM10	Oil	400	0.0472 lb/mmBtu	see note #2	36.8	see note #1	7.4	see note #2			III.A.6.	
PM10	Gas	8760	0.0134 lb/mmBtu	see note #2	10.5	see note #1	46.0	see note #2			III.A.6.	
SO2	Oil	400	0.05 % sulfur content by weight	see note #1	70.0	see note #1	14.0	see note #2	在		III.A.7.	
SO2	Gas	8760			40.0	see note #1	175.2	see note #2		医肾盂	III.A.7.	
NOx	Oil	400	42 ppmvd @15% O2, 24 hour block average	see note #1	230.0	see note #2	46.0	see note #2			III.A.8.	
NOx	Gas	8760	15 ppmvd @15% O2, 24 hour block average	see note #1	78.6	see note #2	177.0	see note #2, 4, and 5			III.A.8.	
NOx	Gas	8760	9 ppmvd @15% O2, 12 month rolling average					see note #2, 4, and 5				_
voc	Oil	400			10.0	see note #1	2.0	see note #2			III.A.9.	
voc	Gas	8760			6.0	see note #1	26.3	see note #2	4	30.00	III.A.9.	
CO	Oil		25 ppmvd	see note #2	73.0	see note #1	14.6	see note #2			III.A.10.	
CO	Gas	8760	21 ppmvd (min. load)	see note #2	43.5	see note #1	190.5	see note #2 and 5	<b>一种性的</b>		III.A.10.	
co	Gas	8760	15 ppmvd (base load)	see note #2	43.5	see note #1	190.5	see note #2 and 5			III.A.10.	-
Notes:	<u> </u>				_		•		11.00 C-0.00	NAME OF THE PARTY	-	╡
* The "Equivalent	t Emissio	ns" listed are	for informational purposes only.		·							
#1 - from BACT		nation					-					
#2 - from PSD-F												
#3 - from Rule 6		0(4)(b), F.A.	С.									
#4 - 1050221-004	4-AC											
#5 - duel fuel tota	al .						_					

<b>Table 1-1, S</b>	umma	ry of Air	Pollutant Standards and Terms									
					_					_		
Auburndale Pe				DRAFT Perm	it No.: 10502	21-009-AV						
Auburndale Po	wer Par	tners, L.P.		Facility ID No	o.: 1050221							
Auburndale En	ergy Ce	nter										
This table summa	arizes info	ormation for	convenience purposes only. This table does not supersede a	ny of the terms or	conditions of th	nis permit.						
E.U. ID No.	Brief D	escription	1									
-006	Simple	Cycle Cor	mbustion Turbine									
			Allowable Emissions 以上,这种是一种特别的一种,但是一种的一种,但是一种的一种的一种,但是一种的一种的一种,但是一种的一种的一种,但是一种的一种的一种,但是一种的一种的一种,但是一种的一种的一种的一种的一种的一种的一种的一种的一种的一种的一种的一种的一种的一	(4)对"	气制的、抽	はまれた。東京を連続	<b>亚洲洲</b>	验证所在控制	Equivalen	t Emissions.		
Pollutant Name	Fuel(s)	Hours/Year		gulatory Citation		Regulatory Citation(s)	TPY	Regulatory Citation(s)	"the /hour	CONTRACTOR	See permit condition(s	i)
VE	Gas/Oil	see note A	<20% opacity	see note B					是無電鐵	<b>建筑</b>	III.C.4.	1
PM10	Oil	400			58.5	see note D			<b>然不为</b>		III.C.6.	
PM10	Gas	see note A			2.9	see note D					III.C.6.	
SO2	Oil	400	0.05 % sulfur content by weight	see note C	74.9	see note C			ROLL.		III.C.7.	
SO2	Gas		2 grains of sulfur per 100 dsf of gas	see note C							III.C.7.	
NOx	Oil	400	42 ppmvd @15% O2, 24 hour block average	see note D			115.0	see note D and E			III.C.8.	
NOx	Gas		25 ppmvd @15% O2, 24 hour block average	see note D			115.0	see note D and E	建型型		III.C.8.	.
	Oil		5 ppmvd	see note C					持於時		III.C.9.	.
VOC	Gas	see note A		see note C							III.C.9.	ļ
co	Gas/Oil	see note A	10 ppmvd (base load)	see note D			99.0	see note D	1		III.C.10.	.
·		<u> </u>							14. 地域型			<b></b> -
Notes:					<u> </u>				_			ļ
* The "Equivalent	t Emissio	ns" listed are	e for informational purposes only.									.
A - Natural Gae li	imited to	2 227 400 M	MBtu per consecutive 12-month period									<del> </del>
B - from Rule 62-		· · ·	· · · · · · · · · · · · · · · · · · ·					_				1-
C - from Rule 62-			,. 					<del>                                     </del>				
D - from Rule 62-	. , ,		Avoidance)								•	_
E - duel fuel total											-	
												1

This table summarizes in E.U. ID No. Brief		Ce purposes only. Thi	Facility ID	No.: 1050221		
Calpine Construction This table summarizes in E.U. ID No. Brief -001 Com	n Finance Company, L nformation for convenience f Description	ce purposes only. Thi			of the terms	s or conditions of this per
E.U. ID No. Brief	nformation for convenience	ce purposes only. Thi	is table does	not supersede any	of the terms	s or conditions of this per
E.U. ID No. Brief	f Description	-36	is table does	not supersede any	of the terms	s or conditions of this per
E.U. ID No. Brief	f Description	-36	is table does	not supersede any	of the terms	s or conditions of this per
-001 Com		rbine				
-001 Com		rbine				
	bined Combustion Tu	rbine				
Pollutant Name						,
Pollutant Name						
Pollutant Name		Testing	Frequency	Min. Compliance		
	Compliance	Time	Base	Test		
or parameter Fuel	(s) Method	Frequency	Date *	Duration	CMS **	See permit condition(s)
VE Ga	s EPA Method 9	annual	June 4	l hour		III.A.18., 33.
SO2 Oi	(see note 2)	upon receipt of		1		
		each oil shipment		1		
SO2 Ga	s (see note 3)	bi-mionthly				III.A.22., 23.
502 Ga	s (see note 3)	permit renewal (5				III.A.22., 23.
NOx Ga	s EPA Method 20	year)	June 4	3 hour	Yes	III.A.22., 33.
VOC Ga			Julie 4	3 11041	103	111.74.22., 33.
		year)	June 4	3 hour		III.A.25., 33.
		permit renewal (5				
CO Ga	s EPA Method 10	year)	June 4	3 hour		III.A.26., 33.
		permit renewal (5				
O2 Oil/Ga	s EPA Method 3A	year)	June 4	3 hour	Yes	III.A.22., 33.
Notes:						
	established for planning purp	poses only; see Rule 62-2	97.310, F.A.C.			
**CMS [=] continuous mon	itoring system					

Auburndale Pe	aker Ene	ergy Center, LLC		DRAFT P	ermit No.: 10502	21-009-A	V
Auburndale Po	wer Part	ners, L.P.		Facility ID	No.: 1050221		
Calpine Constr	uction Fi	nance Company, LP					
This table summa	arizes infor	mation for convenience pu	rposes only. Th	is table does	not supersede any	of the terms	or conditions of this pe
E.U. ID No.		escription					1
006	Simple	Cycle Combustion Tur	bine				
			Testing	Frequency	Min. Compliance		
Pollutant Name	_	Compliance	Time	Base	Test		
or parameter	Fuel(s)	Method	Frequency	Date *	Duration	CMS **	See permit condition(s)
VE	Gas/Oil	EPA Method 9	annual	June 4	1 hour		III.A.18., 33.
SO2	Oil	see note (2)	upon receipt of				
			each oil shipment				111 4 22 22
SO2	Gas	see note (3)	bi-monthly				III.A.22., 23.
302	Gus	See note (5)	or monany				
		EPA Method 20 or Annual					
NOx	- Gas/Oil	RATA at 100% output	annual	June 4	3 hour	Yes	III.A.22., 33.
VOC	Gas/Oil	EPA Method 25A	permit renewal (5				
			year)	June 4	3 hour		III.A.25., 33.
		EPA Method 20 or Annual					
CO	Gas/Oil	RATA at 100% output	annual	June 4	3 hour		III.A.26., 33.
Notes:	Guston	TOTTI de 10070 output	umaar	Julie 4	3 11041		11.11.20., 33.
	e date is esta	ablished for planning purposes	only: see Rule 62-2	297.310. F.A.C			
*CMS [=] continue		,					
		<i>y</i> -,					
		<u> </u>					
2) Sulfur dioxide is	indirectly d	etermined by fuel sulfur analys	sis by ASTM D129	-91; D1552-90	; D2280-71; D2880-96	; D2622-92; I	04292; D4294-90; or the
		ed or any other method approv					
				*			
•	-	etermined by fuel sulfur analys	•	ods D4084-82,	D3246-81, or any other	method appr	oved in writing by the
_		-297.620, F.A.C. or 40 CFR 75					

Auburndale Pe	aker Ene	ergy Center, LLC		DRAFT P	ermit No.: 10502	21-009-A	v —
Auburndale Po					No.: 1050221		
		nance Company, LP					
· ·		T - ' '					
his table summa	arizes infor	mation for convenience pu	rposes only. Th	is table does	not supersede any	of the terms	s or conditions of this pe
E.U. ID No.		escription	, -				
007 & -008	Combin	ed Combustion Turbin	е				,
	and Duc	ct Burners					
_			Testing	Frequency	Min. Compliance		
Pollutant Name		Compliance	Time	Base	Test		
or parameter	Fuel(s)	Method	Frequency	Date *	Duration	CMS **	See permit condition(s)
VE	Gas	EPA Method 9	annual		1 hour		III.D
SO2	Gas	(see note 1)	bi-monthly		-		III.D
NOx	Gas	EPA Method 20	annual		1 hour	Yes	III.D
СО	Gas	EPA Method 10	annual		1 hour	Yes	III.D
PM		EPA Method 5	annual		I hour		III.D
VOC	Gas/Oil	EPA Method 18, 25 or 25A	permit renewal (5 year)				III.A.25., 33.
			J /				
Notes:							
The frequency bas	se date is esta	ablished for planning purposes	only; see Rule 62-2	97.310, F.A.C			
*CMS [=] continu							
<u> </u>			_		-		

# Phase II Acid Rain Part Application

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

This submission is: New Revised

Compliance

Plan

STEP 1 Identify the source by plant name, State, and ORIS code from NADB

Plant Name Auburndale Cogeneration Facility State FL ORIS Code 54658
Auburndale Peaker Energy Center

STEP 2 Enter the unit ID# for each affected unit and indicate whether a unit is being repowered and the repowering plan being renewed by entering "yes" or "no" at column c. For new units, enter the requested information in columns d and e.

a	b	c	d	e
Unit ID#	Unit will hold allowances	Repowering Plan	New Units	New Units
	in accordance with 40 CFR 72.9©(1)		Commence Operation Date	Monitor Certification Deadline
1	Yes			January 1, 1996
6	Yes			July 29, 2002
	Yes			

STEP 3
Check the box if the response in column c of Step 2 is "Yes" for any unit

For each unit that is being repowered, the Repowering Extension Plan form is included.

DEP Form No. 62-210.900(1)(a) - Form

Effective: 4-16-01

STEP 4
Read the standard requirements and certification, enter the name of the designated repre-

sentative, and sign

and date

Plant Name (from Step 1) Auburndale Cogeneration Facility/Auburndale Peaker Energy Center

#### 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

- v' -

- (ii) Submit in a timely manner any supplemental information that the Department 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 Department; 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.

#### 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)) 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
- (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)(i) 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, 72.8, or 72.14 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 Department:
  - (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.

#### Plant Name (from Step 1) Auburndale Cogeneration Facility/Auburndale Peaker Energy Center

#### 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, 72.8 or 72.14, 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 (NOx 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, 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 72.7, 72.8, or 72.14 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,
- Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

#### Certification

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 Mr. Benjamin M. H. Borsch, Environmental Manager (Alternate Designated Representative)		
Signature Bojai Lull. Forsh	Date &	14/02
:	:::	

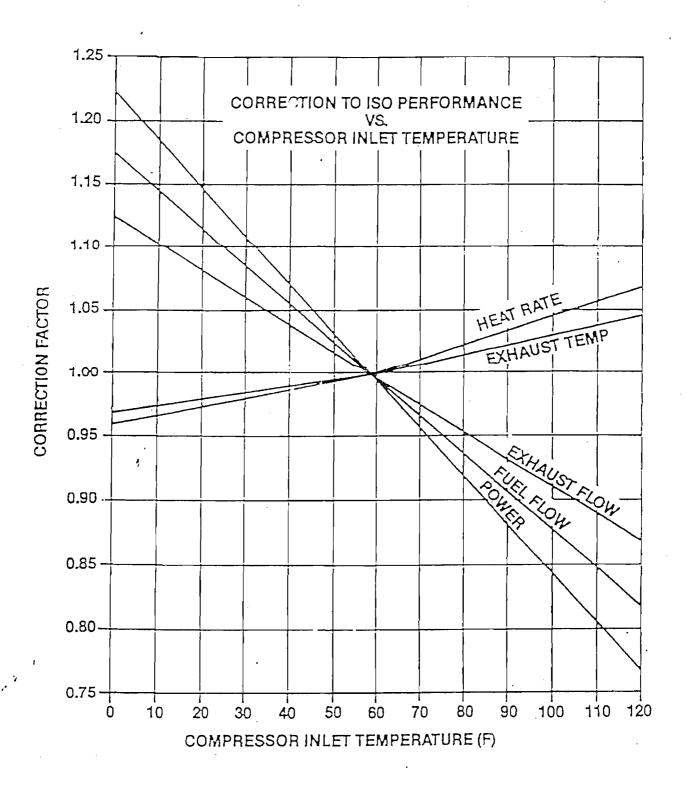
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AUG 15 2002

BUREAU OF AIR REGULATION

DEP Form No. 62-210.900(1)(a) - Form Effective: 4-16-01

# W501D5 ECONOPAC SYSTEM PERFORMANCE



# Friday, Barbara

To:

Waters, Jason; hwhidden@calpine.com; 'tdavis@ectinc.com'

Cc:

Bull, Robert

Subject: DRAFT Title V Permit Revision No. 1050221-009-AV - Calpine Construction Finance,

L.P./Aurburndale Power Partners, L.P.

Attached for your records is a zip file which contains the DRAFT Title V Permit Revision and associated documents.

If I may be of further assistance, please feel free to contact me.

Barbara J. Friday Planner II Bureau of Air Regulation (850)921-9524 Barbara.Friday@dep.state.fl.us