Best Available Copy

Orlando Sentinel

Published Daily

State of Florida } S.S.
COUNTY OF ORANGE

Before the undersigned authority personally appeared Rachael Washington, who on oath says that he/she is the Legal Advertising Representative of Orlando Sentinel, a daily newspaper published at Orlando in Orange County, Florida; that the attached copy of advertisement, being a Advertisement for Bid in the matter of #0950137-015-AC, PSD-FL-395 In the Orange ____ Court, was published in said newspaper in the issue; of 12/22/07

Affiant further says that the said Orlando Sentinel is a newspaper published at Orlando, in said Orange County, Florida, and that the said newspaper has heretofore been continuously published in said Orange County, Florida, each Week Day and has been entered as second-class mail matter at the post office in Orlando in said Orange County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

The foregoing instrument was acknowledge before me this 25 day of January, 2007, by Rachael Washington , who is personally known to me and who did take an oath.

(SEAL)

Order# 585572

PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION DEP File No. 0950137-015-AC, PSD-FL-395

Orlando Utilities Commission (OUC)
Curtis H. Stanton Energy Center Units 1 and 2
Orange County

Applicant: The applicant for this project is the Orlando Utilities Commission (OUC). The applicant's mailing address is: OUC, Post Office Box 3193, Orlando, Florida 32802

Facility Location: The applicant operates the Stanton Energy Center located at 5100 Alafaya Trail, Orlando, Orange County.

Project: The permit authorizes installation or upgrade of low nitrogen oxides (NOX) burners (LNB) and overfire air (OFA) systems in the furnaces of Units 1 and 2. OUC Stanton Units 1 and 2 each consist of a coal fired boiler/steam generator and steam turbine with a 468 megawatts nominal capacity rating. Each unit is equipped with an electrostatic precipitator for control of particulate matter and a wet flue gas desulfurization scrubber for sulfur dioxide (SO2) control. Unit 2 is also equipped with LNBs, OFA and a selective catalytic reduction system. OUC proposes to install LNBs and an OFA system on Unit 1 and to upgrade the LNBs and OFA system on Unit 2. The purpose of the project is to decrease NOX emissions from Units 1 and 2. The project is part of a continuing program at OUC to reduce emissions of SO2 and NOX for the purpose of complying with the Clean Air Interstate Rule (CAIR). One effect of the project is that it will cause increases of CO emissions. The Department conducted a BACT determination and is proposing a limit of 0.18 pounds of CO per million British Thermal Units of heat input to the furnace (lb/mmBtu) of Unit 1 and a limit of 0.15 lb CO/mmBtu for Unit 2. The Department requires installation of continuous emission monitoring systems for determination of compliance with the BACT limits on a 30-day averaging basis. The Department reviewed an ambient air modeling analysis submitted by OUC and concluded that the increased CO emissions will not cause or contribute to any violation of the ambient air quality standards. A full description of the project and the Department's review are available at: www.dep.state.fl.us/Air/permitting/construction/ouc-stanton_LNBOFA.htm.

Notice of Intent to Issue A Permit: The Department Environmental Protection (Department) gives notice of its intent to issue a permit under the requirements for the Prevention of Significant Deterioration of Air Quality (PSD permit) to OUC. A best available control technology (BACT) determination was required for emissions of carbon monoxide (CO) pursuant to Rule 62-212.400(10)(c), Florida Administrative Code (F.A.C.). The Department will issue the final PSD Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

Comments: The Department will accept written comments concerning the proposed permit issuance action and requests for a public meeting for a period of 30 days from the date of publication of Public Notice of Intent to Issue PSD Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 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) of the Florida Statutes must be filed within 14 days of publication of the public notice or within 14 days of receipt of this no-

this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within 14 days of publication of the public notice or within 14 days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department 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 (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department'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 petitioner received notice of the agency decision; (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, 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, including an explanation of how the alleged facts relate to the specified rules or statutes; 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 Department'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. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Project File: A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0114
Fax: 850/921-9533

Department of Environmental Protection Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
Telephone: 407/894-7555
Fax: 407/897-5963

The complete project file includes the technical evaluation and the Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Program Administrator, South Permitting Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

COR585572-DEC.22

BLACK & VEATCH
building a world of difference™

ENERGY • WATER • INFORMATION • GOVERNMENT

Orlando Utilities Commission
Stanton Amendments

B&V Project 143799
February 2, 2007

Mr. Michael Halpin, P.E.
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road
Suite 649, MS-48
Tallahassee, FL 32399-2400

Subject: Amendment Requests
Stanton Energy Center

Dear Mr. Halpin:

Black & Veatch, on behalf of the Orlando Utilities Commission (OUC), requests per this application, the Department consider amending the Curtis H. Stanton Energy Center Site Certification (PA 81-14) to allow installation of a rail siding, railcar maintenance facility, fly ash blending operations, and use of pet coke/PRB in Units 1-2. These activities are described in further detail in the attached requests (Requests 8-11).

As the Department is aware, this is the fourth submittal for a number of projects that OUC is considering which are focused on improvements at or related to the Stanton facility. The first submittal (Requests 1-2) to the Bureau of Air Regulation on September 1, 2006, concerned the addition of a dibasic acid (DBA) additive system and a neural network-based combustion optimization system on Units 1 and 2. These requests were approved as modifications. The second submittal (Requests 3-4) on November 14, 2006, concerned reconductoring of the Curry Ford to Stanton transmission line and a culvert installation across the Stanton railroad corridor. These requests were approved as amendments. The third submittal (Requests 5-7) on December 14, 2006, concerned a scrubber upgrade, low NO_x burners, and forced oxidation on Units 1-2. These requests are in processing awaiting submittal of a supporting air permit application, which is included herein as Request 12.

OUC appreciates the opportunity to work with the Department in obtaining the required approvals for improved operations at the Stanton Energy Center. Should you have any questions or concerns regarding this submittal, please do not hesitate to contact me at (913) 458-7563 or Denise Stalls of OUC at (407) 737-4236.

Sincerely,

Mike Soltys
Site Certification Coordinator

Enclosures

cc: Fred Haddad, OUC
Denise Stalls, OUC
Buck Oven, FDEP
Myron Rollins

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
   Denise M Stalls, VP, Environmental Affairs

2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: Orlando Utilities Commission
   Street Address: P.O. Box 3193
   City: Orlando State: FL Zip Code: 32802

3. Owner/Authorized Representative Telephone Numbers...
   Telephone: (407)737-4236 ext. Fax: (407) 384-4062

4. Owner/Authorized Representative Email Address: dstalls@ouc.com

5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

Denise M Stalls — Signature

1/26/07 — Date

Professional Engineer Certification

1. Professional Engineer Name: Larry Todd Newland
   Registration Number: 64188
2. Professional Engineer Mailing Address...
   Organization/Firm: Black & Veatch
   Street Address: 11000 Regency Parkway, Suite 100
   City: Cary State: NC Zip Code: 27518
3. Professional Engineer Telephone Numbers...
   Telephone: (919) - 462-7415 ext. Fax: (919) - 468-9212
4. Professional Engineer Email Address: newlandlt@bv.com
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☑, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

01.26.2007
Date

(seal)

* Attach any exception to certification statement.

Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

November 21, 2007

Electronically Sent – Received Receipt Requested.

Ms. Denise Stalls DStalls@ouc.com
Vice President Environmental Affairs
Orlando Utilities Commission
500 South Orange Avenue
Post Office Box 3193
Orlando, Florida 32802

Re: DEP File No. 0950137-015-AC (PSD-FL-395)
Curtis H. Stanton Energy Center Units 1 and 2
Low NO_X Burners and Overfire Air Project

Dear Ms. Stalls:

Enclosed is one copy of the draft air construction permit pursuant to the rules for the Prevention of Significant Deterioration (PSD permit) authorizing the installation of Low NO_X burners and overfire air systems on Units 1 and 2 at the Curtis H. Stanton Energy Center in Orange County. The Department's Intent to Issue PSD Permit, the Technical Evaluation, and the "Public Notice of Intent to Issue Air Construction Permit" are also included.

The Public Notice must be published one time only as soon as possible in a newspaper of general circulation in the area affected, pursuant to the requirements of Chapter 50, Florida Statutes. Proof of publication, such as a newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in denial of the permit modification.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. A.A. Linero, Program Administrator, at the letterhead address. If you have any questions regarding this matter, please contact Mr. Linero at (850) 921-9523.

Sincerely,

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/aal

Enclosures

In the Matter of an
Application for Permit by:

Orlando Utilities Commission
Post Office Box 3193
Orlando, Florida 32802

Authorized Representative:
Ms. Denise Stalls, Vice President

DEP File No. 0950137-015-AC
Draft Permit PSD-FL-395
Stanton Energy Center Units 1 and 2
Low NO_X Burners and Overfire Air
Orange County, Florida

WRITTEN NOTICE OF INTENT TO ISSUE PSD PERMIT

Facility Location: The applicant, Orlando Utilities Commission, operates the Stanton Energy Center located at 5100 Alafaya Trail, Orlando, Orange County.

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit pursuant to the rules for the Prevention of Significant Deterioration of Air Quality (PSD permit), copy of Draft PSD permit attached, for the proposed project as detailed in the application specified above and the enclosed Technical Evaluation and Preliminary Determination for the reasons stated below.

Project: The applicant, Orlando Utilities Commission (OUC), initially applied on February 5, 2007 to the Department for a minor source permit to install or upgrade low nitrogen oxides (NO_X) burners and overfire air equipment in the furnaces of Units 1 and 2 at the existing Curtis H. Stanton Energy Center east of Orlando in Orange County. OUC Subsequently submitted a PSD permit application on August 4, 2007.

Permitting Authority: The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-212 and 62-213. This action is not exempt from permitting procedures. The Department determined that a PSD permit is required.

Notice of Intent to Issue Air Permit: The Department intends to issue this permit based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Public Notice: Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue PSD Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. 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 Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 921-9533). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

Memorandum

Florida Department of
Environmental Protection

TO: Trina Vielhauer

FROM: Al Linero

DATE: November 20, 2007

SUBJECT: Orlando Utilities Commission (OUC) – Stanton Energy Center
Low NO_X burners and Overfire Air Project
DEP File No. 0950137-015-AC

Attached is the Intent to Issue package for the installation of low NO_X burners and overfire air (OFA) equipment on OUC Stanton Units 1 and 2.

The burners shall be of a proven design which has been previously utilized to achieve similar emissions requirements when firing fuels similar to those fired at Unit 1 and Unit 2. The burners and OFA systems shall be designed specifically for low NO_x formation. Burner design shall provide accurate fuel-air ratio control and thorough mixing of fuel and air at all ratings. Burner design shall prevent flame impingement on steam generator tubes or burner tile at any time.

I recommend your approval of the attached Intent to Issue.

AAL

Attachments

The Department will issue the final PSD permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

Comments: The Department will accept written comments concerning the proposed permit issuance action for a period of 30 days from the date of publication of Public Notice. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the PSD permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 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) of the Florida Statutes must be filed within 14 days of publication of the public notice or within 14 days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department 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 (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department'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 petitioner received notice of the agency decision; (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, 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, including an explanation of how the alleged facts relate to the specified rules or statutes; 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 Department'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.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department 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 in this proceeding.

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue PSD Permit (including the Public Notice, Technical Evaluation, and the Draft PSD permit) and all copies were sent electronically (with Received Receipt) before the close of business on **November 21, 2007** to the persons listed:

Denise Stalls, OUC: dstalls@ouc.com
Jim Bradner, DEP CD: james.bradner@dep.state.fl.us
Lori Cunniff, Orange County EPD: lori.cunniff@ocfl.net
Jim Little, EPA Region 4: little.james@epamail.epa.gov
Katy Forney, EPA Region 4: forney.kathleen@epa.gov
Larry Todd Newland, P.E., Black & Veatch: newlandlt@bv.com
Mike Halpin, DEP Siting: mike.halpin@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 11/21/07 (Date)

PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0950137-015-AC, PSD-FL-395

Orlando Utilities Commission (OUC)
Curtis H. Stanton Energy Center Units 1 and 2
Orange County

Applicant: The applicant for this project is the Orlando Utilities Commission (OUC). The applicant's mailing address is: OUC, Post Office Box 3193, Orlando, Florida 32802

Facility Location: The applicant operates the Stanton Energy Center located at 5100 Alafaya Trail, Orlando, Orange County.

Project: The permit authorizes installation or upgrade of low nitrogen oxides (NO_X) burners (LNB) and overfire air (OFA) systems in the furnaces of Units 1 and 2. OUC Stanton Units 1 and 2 each consist of a coal fired boiler/steam generator and steam turbine with a 468 megawatts nominal capacity rating. Each unit is equipped with an electrostatic precipitator for control of particulate matter and a wet flue gas desulfurization scrubber for sulfur dioxide (SO_2) control. Unit 2 is also equipped with LNBs, OFA and a selective catalytic reduction system. OUC proposes to install LNBs and an OFA system on Unit 1 and to upgrade the LNBs and OFA system on Unit 2. The purpose of the project is to decrease NO_X emissions from Units 1 and 2. The project is part of a continuing program at OUC to reduce emissions of SO_2 and NO_X for the purpose of complying with the Clean Air Interstate Rule (CAIR). One effect of the project is that it will cause increases of CO emissions. The Department conducted a BACT determination and is proposing a limit of 0.18 pounds of CO per million British Thermal Units of heat input to the furnace (lb/mmBtu) of Unit 1 and a limit of 0.15 lb CO/mmBtu for Unit 2. The Department requires installation of continuous emission monitoring systems for determination of compliance with the BACT limits on a 30-day averaging basis. The Department reviewed an ambient air modeling analysis submitted by OUC and concluded that the increased CO emissions will not cause or contribute to any violation of the ambient air quality standards. A full description of the project and the Department's review are available at: www.dep.state.fl.us/Air/permitting/construction/ouc-stanton_LNBOFA.htm

Notice of Intent to Issue A Permit: The Department Environmental Protection (Department) gives notice of its intent to issue a permit under the requirements for the Prevention of Significant Deterioration of Air Quality (PSD permit) to OUC. A best available control technology (BACT) determination was required for emissions of carbon monoxide (CO) pursuant to Rule 62-212.400(10)(c), Florida Administrative Code (F.A.C.). The Department will issue the final PSD Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

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a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 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) of the Florida Statutes must be filed within 14 days of publication of the public notice or within 14 days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department 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 (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department'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 petitioner received notice of the agency decision; (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, 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, including an explanation of how the alleged facts relate to the specified rules or statutes; 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 Department'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. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Project File: A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0114
Fax: 850/921-9533

Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
Telephone: 407/894-7555
Fax: 407/897-5963

Notice for Publication in Newspaper

The complete project file includes the technical evaluation and the Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Program Administrator, South Permitting Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

Notice for Publication in Newspaper

PERMITTEE:

Orlando Utilities Commission (OUC)
500 South Orange Avenue
Orlando, Florida 32802

Authorized Representative:
Ms. Denise Stalls, Vice President
Environmental Affairs

DEP File No. 0950137-015-AC
Curtis H. Stanton Energy Center
Stanton Units 1 and 2
SIC No. 4911
Low NO_x burners and Overfire Air Project
Orange County, Florida

Permit Expires: Month day, year

PROJECT AND LOCATION

This permit authorizes the installation of low nitrogen oxides (NO_x) burners (LNB) and an overfire air (OFA) system on Units 1 and 2 at the OUC Curtis H. Stanton Energy Center. The facility is located at 5100 Alafaya Trail, Orlando, Orange County.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Parts 60 and 63 of the Code of Federal Regulations (CFR). The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Florida Department of Environmental Protection (the Department).

CONTENTS

Joseph Kahn, Director (Date)
Division of Air Resource Management

JK/tlv/aal

FACILITY AND PROJECT DESCRIPTION

The existing facility consists of two 468 megawatt (MW) fossil fuel fired steam electric generating units (Units 1 and 2), and one 640 MW combined cycle unit. There are storage and handling facilities for solid fuels, fly ash, limestone, gypsum, slag, and bottom ash. A recently permitted nominal 285 MW integrated gasification and combined cycle unit (Unit B) is under construction and will be operational by 2012.

As noted above, the project under this permit is for the installation of LNB and OFA equipment on Units 1 and 2. The burners shall be of a proven design which has been previously utilized to achieve similar emissions requirements when firing fuels similar to those fired at Unit 1 and Unit 2. The burners and OFA systems shall be designed specifically for low NO_x formation. Burner design shall provide accurate fuel-air ratio control and thorough mixing of fuel and air at all ratings. Burner design shall prevent flame impingement on steam generator tubes or burner tile at any time.

EU ID	Emissions Unit Description
001	Fossil Fuel Fired Steam Electric Generator No. 1
002	Fossil Fuel Fired Steam Electric Generator No. 2

REGULATORY CLASSIFICATION

The facility is a potential major source of hazardous air pollutants (HAP).

The facility operates existing units subject to the Acid Rain provisions of Title IV of the Clean Air Act (CAA).

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

The facility is a major Prevention of Significant Deterioration (PSD) stationary source in accordance with Rule 62-212.400, F.A.C.

The facility operates units subject to the Standards of Performance for New Stationary Sources pursuant to 40 CFR Part 60.

The facility does not operate electrical generating units subject to National Emissions Standards for Hazardous Air Pollutants pursuant to 40 Code of Federal Regulations (CFR) Part 63.

The facility is subject to the Federal Clean Air Interstate Rule (CAIR) in accordance with the Final Department Rules issued pursuant to CAIR as implemented by the Department in Rule 62-296.470, F.A.C.

The facility is subject to the Federal Clean Air Mercury Rule (CAMR) implemented by the Department in Rule 62-296.480, F.A.C.

The facility operates units that were certified under the Florida Power Plant Siting Act, 403.501-518, F.S.

RELEVANT DOCUMENTS

The following relevant documents are not a part of this permit, but helped form the basis for this permitting action: the permit application and additional information received to make it complete; and the Department's Technical Evaluation and Preliminary Determination.

1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Department. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Central District Office. The mailing address and phone number of the Central District Office are: Department of Environmental Protection, Central District Office, 3319 Maguire Boulevard, Suite 232, Orlando Florida 32803-3767. Telephone: (407)894-7555. Fax: (407)897-5963.
3. Appendices: The following Appendices are attached as part of this permit: Appendix GC (General Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Bureau of Air Regulation with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

This section of the permit addresses the following existing emissions units.

Emissions Units 001 and 002
Fossil Fuel Fired Steam Generators 1 and 2 are wall-fired, dry bottom boilers, firing pulverized coal as the primary fuel and No. 6 fuel oil for purposes of startup and flame stabilization. Each unit has a maximum heat input rate of 4,286 million British thermal units (mmBtu) per hour with a nominal generating capacity of 468 MW. Each unit is equipped with an electrostatic precipitator (ESP) for control of particulate matter (PM/PM_{10}), a wet flue gas desulfurization (WFGD) system for sulfur dioxide (SO_2) control, and low NO_X burners for nitrogen oxides (NO_X) control. Unit 2 is also equipped with a selective catalytic reduction (SCR) system for further control of NO_X emissions. The following parameters are continuously monitored on both units: NO_X, opacity, SO_2, carbon dioxide (CO_2), and stack gas flow rate.

APPLICABLE STANDARDS AND REGULATIONS

1. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]
2. The facility is subject to all of the requirements specified in Title V Air Operation Permit Renewal No. 0950137-006-AV.

GENERAL OPERATION REQUIREMENTS

3. Unconfined Particulate Emissions. During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4), F.A.C.]
4. 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 Department 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.]
5. 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.]
6. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.
   [Rule 62-210.650, F.A.C.]

EQUIPMENT AND CONTROL TECHNOLOGY

7. Low NO_x Burners and Overfire Air Equipment. The permittee is authorized to construct, operate and maintain low NO_x burners and overfire air equipment for Units 1 and 2 as described in the application. The burners and OFA systems shall be designed specifically for low NO_x formation. The existing burner configuration, control logic, and associated auxiliary combustion equipment shall be reused in its current configuration. Any replacement burners provided for Unit 2 and any new burners provided for Unit 1 shall be mounted within the existing wind box to the maximum extent possible. Any needed wind box modifications or internal supports shall be included in the configuration. Burner design shall provide accurate fuel-air ratio control and thorough mixing of fuel and air at all ratings. Burner design shall prevent

flame impingement on steam generator tubes or burner tile at any time. Adequate burner cooling air shall be provided when the burner is out of service during steam generator operation. In addition, the burner shall be fabricated of materials designed to eliminate the thermal effects resulting in distortion of the burner during its design lifetime. Provision shall be made for burner maintenance to be performed from outside of the furnace. Both an air and coal flow monitoring system shall be provided at each burner. [Applicant Request.]

REPORTING AND NOTIFICATION REQUIREMENTS

8. Notification. Within one week of beginning construction of the low NO_x burners and overfire air project, the permittee shall notify the Compliance Authority that the project has commenced and provide a general schedule of construction activities. Within one week following the end of construction, the permittee shall notify the Compliance Authority that the project was completed. [Rule 62-4.210, F.A.C.]

EMISSION STANDARDS

9. Carbon Monoxide (CO):

   Emissions of CO from Unit 1 shall not exceed 0.018 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required continuous emissions monitoring system (CO-CEMS). Emissions of CO from Unit 2 shall not exceed 0.015 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required CO-CEMS. Emissions of CO shall not exceed these respective limits on a 3-hr average during the initial compliance demonstration. See Specific Condition **10.**

   [62-210.200 (BACT), and 62-212.400(PSD), F.A.C.]

EMISSIONS COMPLIANCE DEMONSTRATION

10. Continuous Compliance with CO limits: The applicant shall install a carbon monoxide (CO) continuous emissions monitor (CO-CEMS) and conduct the appropriate performance specification by June 30, 2008, for Unit 1, and December 31, 2008, for Unit 2, respectively. Upon certification of the CO-CEMS, compliance with the 30 operating day rolling average shall be demonstrated using data collected from the required CO-CEMS. See Specific Conditions **12.** and **15.** [Rule 62-4.070(3), F.A.C.]

11. Additional Requirements – Appendix CEMS: Additional requirements applicable to the CO-CEMS are given in Section 4, Appendix CEMS.

12. Initial Compliance Demonstration: Within 60 days of commencing operation of each respective unit, following installation of the Low-NO_X burners and overfire air system, tests shall be conducted to determine emissions of CO and NO_X. Tests shall be conducted between 90% and 100% of permitted capacity while firing coal and fuel oil. Tests shall consist of three, 1-hour test runs. [Rule 62-297.310(7)(a)1, F.A.C.]

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

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions (Instrumental).
10	Determination of Carbon Monoxide Emissions

   The methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

14. Test Results. Compliance test results shall be submitted to the Department's Central District Office no later than 45 days after completion of the last test run. [Rule 62-297.310(8), F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

15. Performance Specifications and Quality Assurance: The acceptability of the CO-CEMS shall be evaluated by conducting the appropriate performance specification, as follows.

    The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A within 180 calendar days of commencing operation following installation of the low NO_X burners and overfire air system. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The required RATA tests shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards.

    [Rules 62-4.070(3), 62-210.200(BACT), F.A.C.]

16. CEMS Data Requirements for CO BACT Standard:

    a. *Data Collection*: The CO-CEMS shall monitor and record emissions during all operations and whenever emissions are being generated, including during episodes of startups, shutdowns, and malfunctions. All data shall be used, except for invalid measurements taken during monitor system breakdowns, repairs, calibration checks, zero adjustments, and span adjustments.

    b. *Operating Hours and Operating Days*: An hour is the 60-minute period beginning at the top of each hour. Any hour during which an emissions unit is in operation for more than 15 minutes is an operating hour for that emission unit. A day is the 24-hour period from midnight to midnight. Any day with at least one operating hour for an emissions unit is an operating day for that emission unit.

    c. *Valid Hourly Averages*: The CO-CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour.

        1) Hours that are not **operating** hours are not **valid** hours.

        2) For each operating hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, there is insufficient data, the 1-hour block average is not valid, and the hour is considered as "monitor unavailable."

    d. *Rolling 30-day average:* Compliance shall be determined after each operating day by calculating the arithmetic average of all the valid hourly averages from that operating day and the prior 29 operating days.

    e. *Monitor Availability*: The quarterly excess emissions report shall identify monitor availability for each quarter in which the unit operated. Monitor availability for the CO-CEMS shall be 95% or greater in any calendar quarter in which the unit operated for more than 760 hours. In the event the applicable availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving the required availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

[Rules 62-4.070(3) and 62-210.200(BACT), F.A.C.]

CEMS FOR ANNUAL EMISSIONS REPORTING

17. CO-CEMS Annual Emissions Requirement: The owner or operator shall use data from the CO-CEMS when calculating annual emissions for purposes of computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for purposes of computing emissions pursuant to the reporting requirements of Rule 62-210.370(3), F.A.C. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.
[Rules 62-210.200, and 62-210.370(3), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

18. Emissions Performance 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. and in Appendix GC of this permit.
[Rule 62-297.310(8), F.A.C.].

19. Excess Emissions Reporting:

    a. *Malfunction Notification:* If emissions in excess of a standard (subject to the specified averaging period) 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. The Department may request a written summary report of the incident.

    b. *SIP Quarterly Report:* Within 30 days following the end of each calendar-quarter, the permittee shall submit a report to the Compliance Authority summarizing periods of CO emissions in excess of the BACT permit standard following the NSPS format in 40 CFR 60.7(c), Subpart A. In addition, the report shall summarize the CO-CEMS system monitor availability for the previous quarter.

    c. *NSPS Reporting*: Within 30 days following the calendar quarter, the permittee shall submit the written reports required by 40 CFR 60 Subpart Da (Standards of Performance for Fossil-Fuel Fired Steam Generators) for the previous semi-annual period to the Compliance Authority.

{Note: If there are no periods of excess emissions as defined in 40 CFR, Part 60, Subpart Da, a statement to that effect may be submitted with the SIP Quarterly Report to suffice for the NSPS Semi-Annual Report.}

[Rules 62-4.130, 62-204.800, 62-210.700(6) and 62-212.400(BACT), F.A.C., and 40 CFR 60.7]

20. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating hours and emissions from this facility in accordance with 62-210.370. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

21. Monthly CO-CEMS Report: Upon certification of the CO-CEMS the permittee shall submit, on a monthly basis, a report in electronic file format which includes Unit 1 and Unit 2 CO, NO_X, and heat input data. The report shall be submitted by the 15th of each month by mailing a compact disc to the Department's Bureau of Air Regulation (BAR) Permitting South Section and shall include all hourly readings from the previous month. Alternatively, upon contacting the Bureau's project engineer, the file may be emailed to the appropriate BAR personnel.

APPENDIX BD

The Department establishes the following standards as the best available control technology (BACT) for the OUC Stanton Energy Center Units 1 and 2:

Emissions of CO from Unit 1 shall not exceed 0.018 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required continuous emissions monitoring system (CO-CEMS). Emissions of CO from Unit 2 shall not exceed 0.015 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required CO-CEMS. Emissions of CO shall not exceed these respective limits on a 3-hr average during the initial compliance demonstration.

UNITS 1 AND 2 CO EMISSION STANDARDS AND CO-CEMS

1. Emissions of CO from Unit 1 shall not exceed 0.018 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required continuous emissions monitoring system (CO-CEMS). Emissions of CO from Unit 2 shall not exceed 0.015 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required CO-CEMS. Emissions of CO shall not exceed these respective limits on a 3-hr average during the initial compliance demonstration. [62-210.200 (BACT) and 62-212.400(PSD), F.A.C.]

2. CEMS Required for Demonstrating Compliance: The owner or operator shall properly install, calibrate, maintain and operate a continuous emissions monitoring system (CEMS) to measure and record emissions of CO in the units of parts per million (ppm) and convert the reading to lb/mmBtu. The owner or operator shall comply with the conditions of Appendix CEMS for the CO-CEMS required to be installed by this permit as the compliance method for a SIP-based emission standard.

3. CEMS Required for Reporting Annual Emissions: The owner or operator shall use data from the CO-CEMS when calculating annual emissions for purposes of computing actual emissions, baseline actual emissions and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for purposes of computing emissions pursuant to the reporting requirements of Rules 62-210.370(3) and 62-212.300(1)(e), F.A.C. The owner or operator shall follow the procedures in Appendix CEMS for calculating annual emissions.

CEMS OPERATION PLAN

4. CEMS Operation Plan: The owner or operator shall create and implement a plan for the proper installation, calibration, maintenance and operation of the CO-CEMS required by this permit. The owner or operator shall submit the CEMS Operation Plan to the Bureau of Air Monitoring and Mobile Sources for approval at least 60 days prior to CEMS installation. The CEMS Operation Plan shall become effective 60 days after submittal or upon its approval. If the CEMS Operation Plan is not approved, the owner or operator shall submit a new or revised plan for approval.

   {Permitting Note: The Department maintains both guidelines for developing a CEMS Operation Plan and example language that can be used as the basis for the facility-wide plan required by this permit. Contact the Emissions Monitoring Section of the Bureau of Air Monitoring and Mobile Sources at (850)488-0114.}

INSTALLATION, PERFORMANCE SPECIFICATIONS AND QUALITY ASSURANCE

5. Timelines: The owner or operator shall install the CO-CEMS required by this permit and conduct the appropriate performance specification for the CO-CEMS no later than June 30, 2008, for Unit 1, and December 31, 2008, for Unit 2, respectively.

6. Installation: The CO-CEMS shall be installed such that representative measurements of emissions or process parameters from the facility are obtained. The owner or operator shall locate the CEMS by following the procedures contained in the applicable performance specification of 40 CFR Part 60, Appendix B.

7. Span Values and Dual Range Monitors: The owner or operator shall set appropriate span values for the CEMS. The owner or operator shall install dual range monitors if required by and in accordance with the CEMS Operation Plan.

8. Moisture Correction: If necessary, the owner or operator shall determine the moisture content of the exhaust gas and develop an algorithm to enable correction of the monitoring results to a dry basis (0% moisture).

{Permitting Note: The CEMS Operation Plan will contain additional CEMS-specific details and procedures for installation.}

9. Performance Specifications: The owner or operator shall evaluate the acceptability of the CO-CEMS by conducting the appropriate performance specification, as follows. CEMS determined to be unacceptable shall not be considered installed for purposes of meeting the timelines of this permit. For CO monitors, the owner or operator shall conduct Performance Specification 4 or 4A of 40 CFR part 60, Appendix B.

10. Quality Assurance: The owner or operator shall follow the quality assurance procedures of 40 CFR Part 60, Appendix F. The required relative accuracy test audit (RATA) tests for the CO-CEMS shall be performed using EPA Method 10 in Appendix A of 40 CFR part 60 and shall be based on a continuous sampling train.

11. Substituting RATA Tests for Compliance Tests: Data collected during CEMS quality assurance RATA tests can substitute for annual stack tests, and vice-versa, at the option of the owner or operator, provided the owner or operator indicates this intent in the submitted test protocol and follows the procedures outlined in the CEMS Operation Plan.

CALCULATION APPROACH

12. CEMS Used for Compliance: Once adherence to the applicable performance specification for each CEMS is demonstrated, the owner or operator shall use the CEMS to demonstrate compliance with the applicable emission standards as specified by this permit.

13. CEMS Data: Each CEMS shall monitor and record emissions during all periods of operation and whenever emissions are being generated, including during episodes of startups, shutdowns, and malfunctions. All data shall be used, except for invalid measurements taken during monitor system breakdowns, repairs, calibration checks, zero adjustments and span adjustments, and except for allowable data exclusions as per Condition 20 of this appendix.

14. Operating Hours and Operating Days: For purposes of this appendix, the following definitions shall apply. An hour is the 60-minute period beginning at the top of each hour. Any hour during which an emissions unit is in operation for more than 15 minutes is an operating hour for that emission unit. A day is the 24-hour period from midnight to midnight. Unless otherwise specified by this permit, any day with at least one operating hour for an emissions unit is an operating day for that emission unit.

15. Valid Hourly Averages: The CO-CEMS shall be designed and operated to sample, analyze and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour.

    a. Hours that are not operating hours are not valid hours.

    b. For each operating hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, there is insufficient data, the 1-hour block average is not valid, and the hour is considered as "monitor unavailable."

16. Calculation Approaches: The owner or operator shall implement the calculation approach specified by this permit for the CO-CEMS, as follows: For the 30-day rolling CO average, compliance shall be determined after each operating day by calculating the arithmetic average of all the valid hourly averages from that operating day and the prior 29 operating days.

MONITOR AVAILABILITY

17. Monitor Availability: The quarterly excess emissions report shall identify monitor availability for each quarter in which the unit operated. Monitor availability for the CO-CEMS shall be 95% or greater in any calendar quarter in which the unit operated for more than 760 hours. In the event the applicable availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving the required availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

EXCESS EMISSIONS

18. Definitions:

    a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.

    b. *Shutdown* means the cessation of the operation of an emissions unit for any purpose.

    c. *Malfunction* means any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

19. 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.

20. Data Exclusion Procedures for SIP Compliance: As per the procedures in this condition, limited amounts of CEMS emissions data may be excluded from the corresponding compliance demonstration, provided that best operational practices to minimize emissions are adhered to and the duration of data excluded is minimized. The data exclusion procedures of this condition apply only to SIP-based emission limits.

    a. *Excess Emissions.* Data in excess of the applicable emission standard may be excluded from compliance calculations if the data are collected during periods of permitted excess emissions (for example, during startup, shutdown or malfunction). The maximum duration of excluded data is 2 hours in any 24-hour period, unless some other duration is specified by this permit.

    b. *Limited Data Exclusion.* If the compliance calculation using all valid CEMS emission data, as defined in Condition 13 of this appendix, indicates that the emission unit is in compliance, then no CEMS data shall be excluded from the compliance demonstration.

    c. *Event Driven Exclusion.* The underlying event (for example, the startup, shutdown or malfunction event) must precede the data exclusion. If there is no underlying event, then no data may be excluded. Only data collected during the event may be excluded.

    d. *Reporting Excluded Data.* The data exclusion procedures of this condition are not necessarily the same procedures used for excess emissions as defined by federal rules. Quarterly or semi-annual reports required by this permit shall indicate not only the duration of data excluded from SIP compliance calculations but also the number of excess emissions as defined by federal rules.

21. Notification Requirements: The owner or operator shall notify the Compliance Authority within one working day of discovering any emissions that demonstrate noncompliance for a given averaging period. Within one working day of occurrence, the owner or operator shall notify the Compliance Authority of any malfunction resulting in the exclusion of CEMS data. For malfunctions, notification is sufficient for the owner or operator to exclude CEMS data.

ANNUAL EMISSIONS

22. CEMS Used for Calculating Annual Emissions: All valid data, as defined in Condition 13 of this appendix, shall be used when calculating annual emissions.
    a. Annual emissions shall include data collected during startup, shutdown and malfunction periods.
    b. Annual emissions shall include data collected during periods when the emission unit is not operating but emissions are being generated (for example, when firing fuel to warm up a process for some period of time prior to the emission unit's startup).
    c. Annual emissions shall not include data from periods of time where the monitor was functioning properly but was unable to collect data while conducting a mandated quality assurance/quality control activity such as calibration error tests, RATA, calibration gas audit or relative accuracy audit (RAA). These periods of time shall be considered missing data for purposes of calculating annual emissions.
    d. Annual emissions shall not include data from periods of time when emissions are in excess of the calibrated span of the CEMS. These periods of time shall be considered missing data for purposes of calculating annual emissions.
23. Accounting for Missing Data: All valid measurements collected during each hour shall be used to calculate a 1-hour block average. For each hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, the owner or operator shall account for emissions during that hour using site-specific data to generate a reasonable estimate of the 1-hour block average.
24. Emissions Calculation: Hourly emissions shall be calculated for each hour as the product of the 1-hour block average and the duration of pollutant emissions during that hour. Annual emissions shall be calculated as the sum of all hourly emissions occurring during the year.

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

   a. Have access to and copy and records that must be kept under the conditions of the permit;
   b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
   c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

   Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

   a. A description of and cause of non-compliance; and

b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (Not Applicable);
    b. Determination of Prevention of Significant Deterioration (Not Applicable);
    c. Compliance with National Emission Standards for Hazardous Air Pollutants (Not Applicable); and
    d. Compliance with New Source Performance Standards (Not Applicable).

14. The permittee shall comply with the following:

    a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

    b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

    c. Records of monitoring information shall include:

        1) The date, exact place, and time of sampling or measurements;
        2) The person responsible for performing the sampling or measurements;
        3) The dates analyses were performed;
        4) The person responsible for performing the analyses;
        5) The analytical techniques or methods used; and
        6) The results of such analyses.

When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

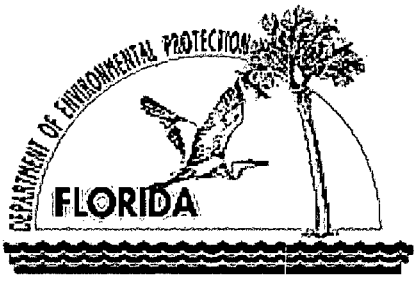
TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

Orlando Utilities Commission
Curtis H. Stanton Energy Center Units 1 & 2

Low Nitrogen Oxides Burners and Overfire Air Project

Orange County

DEP File No. 0950137-015-AC, PSD-FL-395



Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Permitting South

November 21, 2007

1. GENERAL FACILITY DESCRIPTION

Facility Description and Location

The OUC Curtis H. Stanton Energy Center is located in Orange County, Southeast of Orlando and North of Highway 528 at 5100 South Alafaya Trail. The site is located 144 km southeast from the Chassahowitzka National Wildlife Area; the nearest Federal Prevention of Significant Deterioration (PSD) Class I Area. The UTM coordinates for this site are 483.6 km East and 3151.1 North. The location of the OUC Stanton Energy Center is shown in Figure 1.

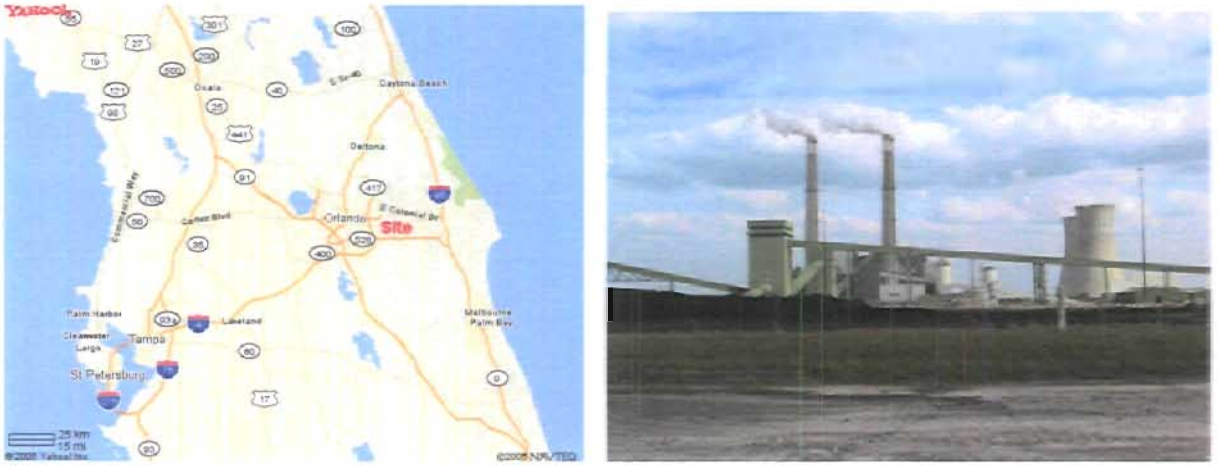


Figure 1. OUC Curtis H. Stanton Energy Center Location and Stanton Units 1 and 2.

The OUC Stanton Energy Center presently consists of two fossil fuel-fired steam electrical generating units and a combined cycle unit. Fossil fuel-fired steam electric generating Units 1 and 2 (468 megawatts-MW each) began operation in 1987 and 1996 while Combined Cycle Unit A (640 MW) began operation in 2003.

Table 1. OUC Curtis H. Stanton Energy Center SIC Codes

STANDARD INDUSTRIAL CLASSIFICATION CODES (SIC)		
Industry Group No.	49	Electric, Gas, and Sanitary Services
Industry No.	4911	Electric Services

Key Regulatory Categories

The key regulatory provisions applicable to Stanton Unit s 1 and 2 are:

Title I, Part C, Clean Air Act (CAA): The facility is located in an area that is designated as "attainment", "maintenance", or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. It is classified as a "fossil fuel-fired steam electric plant of more than 250 million BTU per hour of heat input", which is one of the 28 Prevention of Significant Deterioration (PSD) Major Facility Categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year, therefore the facility is classified as a "major stationary source" of air pollution with respect to Rule 62-212.400 F.A.C., Prevention of Significant Deterioration of Air Quality.

Title I, Section 111, CAA: Units 1 and 2 are subject to Subpart Da (Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978) of the New Source Performance Standards in 40 CFR 60.

Title I, Section 112, CAA: The facility is a "Major Source" of hazardous air pollutants (HAP).

Title IV, CAA: The facility operates units subject to the Acid Rain provisions of the Clean Air Act.

Title V, CAA: The facility is a Title V or "Major Source of Air Pollution" in accordance with Chapter 62-213, F.A.C. because the potential emissions of at least one regulated pollutant exceed 100 tons per year (TPY). Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

CAIR: The facility is subject to the Federal Clean Air Interstate Rule (CAIR) in accordance with the Final Department Rules issued pursuant to CAIR as implemented by FDEP in Rule 62-296.470, Florida Administrative Code (FAC).

CAMR: The facility is subject to the Federal Clean Air Mercury Rule (CAMR) implemented by the Department in Rule 62-296.480, F.A.C.

Siting: The facility was originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

Application Processing Schedule

02/05/07: Received application to construct, install or improve low NO_X burners (LNB), overfire air (OFA), forced oxidation, ash loadout system and scrubber on Units 1 and 2.

03/07/07: Application determined incomplete. Sent request for additional information (RAI).

08/09/07: Received partial responses to RAI.

09/04/07: Received additional responses to RAI including Best Available Control Technology (BACT) proposal for carbon monoxide (CO), revised application pages for PSD application, air dispersion modeling, etc.

09/06/07: Separated out requests into different projects including the present one for the LNB and OFA systems.

09/20/07: Received PSD permit fee of $7,500 to process the application for the LNB and OFA systems. Determined it is complete.

11/21/07: Distributed public notice package including the draft PSD permit for the LNB and OFA project.

Description of Units 1 and 2 and Original NO_X and CO Control Equipment

Unit No. 1 consists of a coal-fueled Babcock and Wilcox boiler/steam generator (Model RB 611) and steam turbine, which drives a generator with a nameplate rating of 468 Megawatts. Fuel oil No. 6 is used for startup and flame stabilization. Biogas from a nearby landfill is also combusted. Air pollution control equipment consists of an electrostatic precipitator (ESP) for PM/PM_{10} and a wet flue gas desulfurization (WFGD) system, i.e., a scrubber for SO_2.

The initial requirements for Unit 1 were from the BACT determination and permit PSD-FL-084 issued for Units 1 and 2 in May 1982. Unit 1 is also subject to the requirements of Subpart Da.

The specific controls for NO_X and CO were described in the technical evaluation as follows:

> *"The applicant has proposed to reduce NO_X emissions by combustion control, not combustion control. The boiler manufacturer will guarantee that the NO_X emissions from the proposed boilers will meet the NSPS" i.e. the Subpart Da limit of 0.6 pounds per million Btu heat input (lb/mmBtu) on a 30-day basis).*
>
> *"Good operation practice and excess air control will reduce CO emissions to minimum levels. There will be no post-combustion CO control for the proposed boiler" (also no limits were specified)."*

Unit No. 2 consists of a coal-fueled Babcock and Wilcox boiler/steam generator (Model RB 621) and steam turbine, which drives a generator with a nameplate rating of 468 Megawatts. Fuel oil No. 6 is used for startup and flame stabilization. Biogas from a nearby landfill is also combusted. Air pollution control equipment includes an ESP for PM/PM_{10} and a scrubber for SO_2. In addition, Unit 2 includes low NO_X burners (LNB), overfire air (OFA) and a selective catalytic reduction (SCR) system for NO_X control. The more stringent requirements for Unit 2 are from a modification of PSD-FL-084 dated December 1991.

The Unit 2 NO_X limitation is Unit 2 is 0.17 lb/mmBtu on a 30-day basis by SCR per the BACT determination accompanying the modification of PSD-FL-084. There is a CO limitation applicable to Unit 2 of 0.15 lb/mmBtu based on "the use of combustion controls to minimize incomplete combustion". In its analysis, EPA noted some lower CO determinations between 0.02 and 0.11 lb/mmBtu. However in view of the use of LNB, EPA concluded:

> *"In regards to changing boiler conditions, the major impact would be environmental, i.e., decreasing CO and VOC could cause a resultant increase in NO_X emissions. The emissions levels proposed by the applicant, 0.15 lb/mmBtu for CO and 0.015 lb/mmBtu for VOC is based upon the utilization of low NO_X burners."*

Each unit has five elevations, each containing six dual register burners for a total of 30 burners per unit. The following figure shows the key additional equipment (LNB, OFA, SCR) on Unit 2.

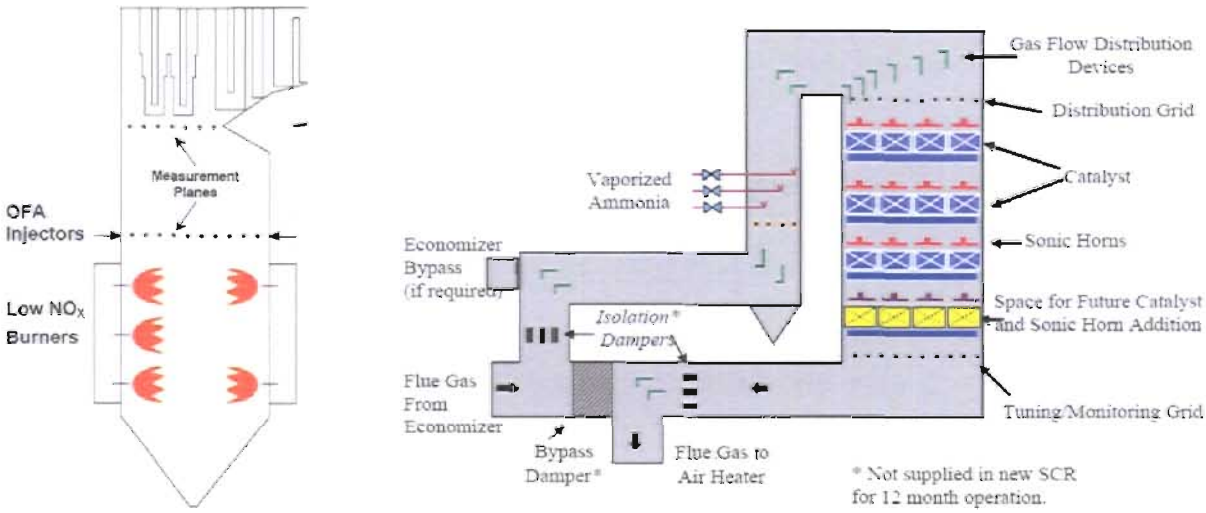


Figure 2. An opposed wall-fired furnace and an SCR system such as in OUC Unit 2

2. PRINCIPLES OF LOW NO_X BURNERS AND OVERFIRE AIR

The following discussion is largely based on information provided by the applicant's consultant, Black & Veatch (B&V) as well as a cooperative study by the Department of Energy (DOE) and Sunflower Electric Power Cooperative (SEPC) of Kansas and the Department's analysis.

LNB systems control the formation and emission of NO_X through a form of staged combustion. The basic NO_X reduction principles for LNB are to control and balance the fuel and airflow to each burner also to control the amount and position of secondary air in the burner zone so that fuel devolatization and high temperature zones are not oxygen rich. Mixing of the fuel and the air by the burner is controlled in such a way that ignition and initial combustion of the coal takes place under oxygen deficient conditions, while a portion of the combustion air is mixed in a delayed fashion along the length of the flame.

The objective of this process is to drive the fuel bound nitrogen (FBN) out of the coal as quickly as possible, under conditions where no oxygen is present, and where it will form molecular nitrogen (N_2), rather than oxidized to NO_X. Any N_2 escaping the initial fuel rich region has a greater opportunity to be converted to NO_X as the combustion process is completed.

The net result of staged combustion is usually longer and/or wider flames, due to this delayed mixing process. This is also one of the main reasons why low NO_X combustion is normally associated with the potential for *increased carbon in ash and higher CO emissions*, as the combustion process begins to encroach on cooled boiler surfaces. This is particularly true of wall fired boiler systems, where, compared to tangential firing, the combustion process must be confined to well defined flame zones, and is less able to make maximum use of the available burner zone volume.

Under conditions in which the target NO_X level is not achieved by LNB, it may be necessary to further stage the combustion. In this case, not all the air required for combustion is introduced through the LNB. The remaining air required for complete combustion is introduced at a higher elevation in the boiler where the temperature is lower, thus limiting the production of additional NO_X. This is the principle of OFA operation. The OFA is necessary to achieve the desired levels of carbon burnout and to limit CO emissions.

There are varying designs and degrees of aggressiveness with which LNB and percentage of OFA that can be practiced. It is even possible to add additional burners at higher elevation in the furnace to effect the process of *reburn* to further reduce NO_X and then to follow up with additional OFA.

3. PROPOSED LOW NO_X BURNER AND OVERFIRE AIR PROJECTS

To provide full flexibility in implementing the federal cap and trade program for NO_X under the Clean Air Interstate Rule (CAIR), the applicant proposes to install a LNB and OFA on Unit 1 and to perform modifications and improvements on the existing LNB and OFA systems in Unit 2. The work on Unit 1 will be conducted during an early 2008 outage while the work on Unit 2 will occur during an outage in late 2008.

The exact scope of work was not specified and the selected vendor, Siemens, has some latitude in achieving the technical specifications. The key vendor guarantee for each LNB/OFA is 0.28 lb NO_x/mmBtu for each unit after the LNB/OFA project at full load and exclusive of an SCR system.

In recent years, NO_X emissions from Unit 1 have been approximately 0.41 lb/mmBtu. The expectation is that the LNB/OFA project will substantially decrease NO_X emissions. Recent emissions of NO_X from Unit 2 have been approximately 0.16 lb/mmBtu with the existing LNB/OFA/SCR control strategy. The LNB/OFA improvements for Unit 2 will make it easier to achieve the emission limit of 0.17 lb/mmBtu and allow achievement of even lower emissions.

The project will also facilitate achievement of lower emissions based on OUC's CAIR strategy and to comply with a separate NO_X cap on Units 1 and 2 required by the permit PSD-FL-373 by the startup of Stanton Unit B. The specific condition requires that:

> *"The combined NO_X emissions from existing coal fired boiler steam electric generating Stanton Unit 1 and Stanton Unit 2 shall not exceed 8,300 tons per year on a 12-month rolling total beginning the first month of first fire of Unit B and thereafter. Total NO_X emissions shall be based on data collected from the Unit 1 and Unit 2 NO_X CEMS and the rolling 12-month total from each unit shall be computed in accordance with Condition 46 of this subsection."*

4. EFFECTS OF THE LNB AND OFA PROJECT ON CO EMISSIONS

Operating the burners with lesser amounts of air in the lower furnace will tend to increase the formation of carbon monoxide (CO). The presence of CO is one of the key drivers in reducing NO_X formation in conventional power plants. The OFA compensates for the lesser air during initial combustion. However the total time of turbulent contact and the temperature will be reduced and less carbon burnout will be achieved compared with the present arrangement.

The following table provides the manufacturer guarantees for the project.

Table 1. Performance after the LNB and OFA Project excluding Unit 2 SCR system

Parameter	Guaranteed Emissions (lb/mmBtu)			
	Unit 1		Unit 2	
	40% Load	100% Load	40% Load	100% Load
NO_X	0.25	0.28	0.25	0.28
CO*	~0.09	~0.17	0.15	0.15
	100 ppm	200 ppm	175 ppm	175 ppm

* CO is guaranteed in lb/mmBtu and parts per million at 3.5 percent oxygen (ppm)

The LNB and OFA systems to reduce NO_X place constraints on CO guarantees if not on CO emissions. This was recognized by EPA when issuing the CO BACT determination for Unit 2 in 1991. While there are few data demonstrating the relation between NO_X and CO at units in Florida, the Department reviewed the previously-mentioned SEPC/DOE showing a relation for an opposed wall-fired unit equipped with LNB (but not OFA) and burning Powder River Basin

(PRB) coal. The relation shown in the following figure would not apply for OUC's bituminous coal-fueled units, but the trends would likely be similar.

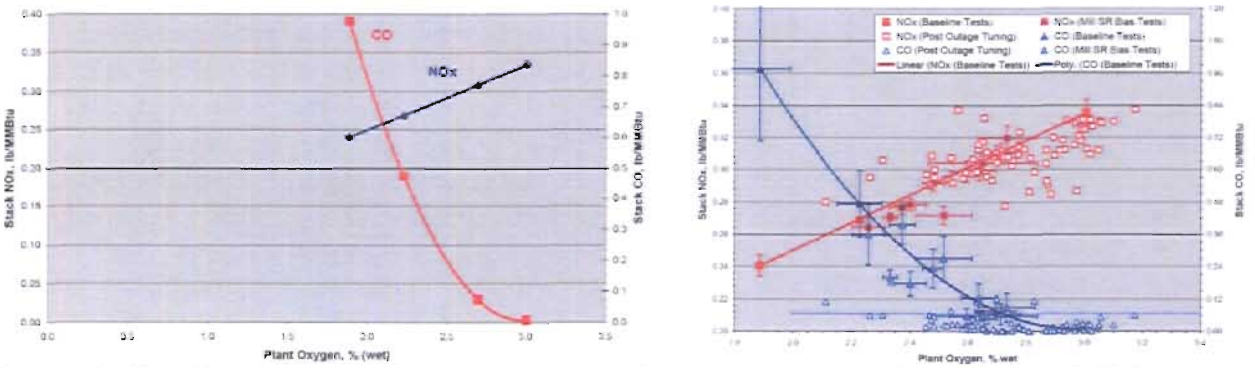


Figure 3. Baseline testing and optimization of first generation LNB system at SEPC

SEPC was subject to a CO emissions limit of 0.15 lb/mmBtu. Baseline tests using the early LNB system are summarized ion the left hand side of the figure. These showed that CO emissions rise rapidly for relatively small decreases in NO_X. An optimization program to improve the NO_X reduction characteristics of the LNB within the CO constraint was conducted. The results are shown on the right and it was possible to suppress CO emissions at excess O2 values less than approximately 2.5%.

The vendor guarantee for the OUC LNB/OFA project includes a specification for unburned carbon (UBC) in the fly ash. UBC in the Unit 1 fly ash is guaranteed to increase no more than 20% above the baseline prior to the LNB/OFA project, while UBC is guaranteed to be less than or equal to the baseline value for Unit 2.

The following table is the applicant's estimate of *baseline actual emissions* for CO and NO_X during a 2 year period (2004-2005) within the most recent five years of operation (2001-2006). CO emissions were calculated based on a low emissions factor from EPA's publication AP-42 wherein an emission factor in the range of 0.02 to 0.03 lb/mmBtu is given. Such emission factors were likely developed before the widespread implementation of LNB and OFA.

Table 2. Baseline actual emissions and projected actual emissions after LNB/OFA project

Pollutant	Baseline Emissions	Projected Emissions	Increase (decrease)
NO_X (TPY)	9,325	<8,300	(>1,024)
CO (TPY)	753	5,975	5,222

The NO_X values are the actual measurements from the continuous emissions monitoring systems (CEMS) on Units 1 and 2. The future projected actual emissions were calculated by the applicant on the basis of meeting the NO_X emission cap as required by the PSD permit for Stanton Unit B and the *requested* CO limits of 0.18 and 0.15 lb/mmBtu for Units 1 and 2 respectively.

5. REGULATIONS THAT APPLY TO THE PROJECT

State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the F.S. The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the F.A.C. This project is subject to the applicable rules and regulations defined in the following Chapters of the Florida Administrative Code. These include: 62-4 (Permitting Requirements); 62-204 (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference); 62-210 (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms); 62-212 (Preconstruction Review, PSD Review and BACT); 62-213 (Title V Air Operation Permits for Major Sources of Air Pollution); 62-296 (Emission Limiting Standards); and 62-297 (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures).

General PSD Applicability

The Department regulates major air pollution sources in accordance with Florida's Prevention of Significant Deterioration (PSD) program set forth in Rule 62-212.400, F.A.C. A PSD review is required in areas currently in attainment with the state and federal Ambient Air Quality Standards (AAQS) or areas designated as "unclassifiable" for a given pollutant. A new facility is considered "major" with respect to PSD if it emits or has the potential to emit: 250 tons per year or more of any regulated air pollutant; or 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the 28 PSD Major Facility Categories defined in Rule 62-210.200, F.A.C.; or 5 tons per year of lead.

For new projects at existing PSD-major sources, each regulated pollutant is reviewed for PSD applicability based on emissions thresholds known as the "Significant Emission Rates" defined in Rule 62-210.200, F.A.C. Pollutant emissions from the project exceeding these rates are considered "significant" and applicants must employ the Best Available Control Technology (BACT) to minimize emissions of each such pollutant, and evaluate the air quality impacts.

Although a facility may be "major" with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several regulated pollutants that exceed the Significant Emission Rates.

PSD Applicability for the Project

The OUC Stanton Plant is a major facility under Department Rules. The applicant estimated annual emissions increases of 5,222 TPY of CO. The CO emissions increase will be greater than 100 TPY and a review pursuant to the PSD rules and a BACT determination for CO are required for this project.

It is noted that since 1992 and until 2005 there was an exemption from PSD Review for increases in emissions of pollutants caused by installation of "Pollution Control Projects" (PCP). The purpose of the exemption as applied to power plants was primarily to exempt from the PSD rules increases caused by projects intended to reduce emissions of SO_2 and NO_X such as required for compliance with the Acid Rain regulations.

It was generally agreed that as long as PCP were on balance "environmentally beneficial" and no national ambient air quality standards were exceeded and substantial decreases in acid rain pollutants were realized, then significant emissions of collateral emissions such as CO were allowable. Therefore, during that period of time quite a number of PCP were conducted that caused significant collateral increases of CO and (in the case of some SCR projects) sulfuric acid mist that were not subjected to PSD or a BACT determination.

6. BACT DETERMINATION FOR CO

BACT Methodology.

A determination of the "Best Available Control Technology (BACT)" is required for each of these pollutants, which is defined in Rule 62-212.200, F.A.C. as:

> *An emission limitation, including a visible emissions standard, based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account:*
>
> *1. Energy, environmental and economic impacts, and other costs;*
>
> *2. All scientific, engineering, and technical material and other information available to the Department; and*
>
> *3. The emission limiting standards or BACT determinations of Florida and any other state; determines is achievable through application of production processes and available methods, systems and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of each such pollutant.*
>
> *If the Department determines that technological or economic limitations on the application of measurement methodology to a particular part of an emissions unit or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice or operation.*
>
> *Each BACT determination shall include applicable test methods or shall provide for determining compliance with the standard(s) by means which achieve equivalent results.*
>
> *In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60, 61, and 63.*

CO BACT Evaluation Provided by the Applicant

OUC provided information on recent BACT determinations for coal-fueled units throughout the country for numerous new projects. The CO BACT determinations ranged from 0.1 to 0.25 lb CO/mmBtu and typically about 0.15 lb/mmBtu. Such new projects also provide for the inclusion of NO_X control methods such as LNB and OFA.

OUC also reviewed and rejected the possibility of installing thermal or catalytic oxidation systems on the basis of technical infeasibility, impacts on other pollutants (e.g. conversion of SO_2 to SO_3) and the claim that such equipment has not been installed elsewhere. OUC proposes combustion controls as the method to achieve their BACT proposals of 0.18 and 0.15 lb/mmBtu for Unit 1 and 2 respectively.

Department Evaluation

The Department does not necessarily agree with the evaluation of the applicant. Some of the same arguments regarding oxidation catalyst erosion and conversion of SO_2 to SO_3 are typically made for SCR systems. The Department does not necessarily agree with those arguments and solutions are often found to mitigate the claimed effects. However, the Department agrees that oxidation catalyst is not appropriate for this project.

Thermal oxidation systems have been installed at other facilities although the Department did not find examples for coal-fueled power plants. For example TXI installed a regenerative thermal oxidation (RTO) system at a coal-fueled cement plant in Midlothian, Texas. However, a reheat system is required and the system was very expensive (~$15,000,000) for a much smaller gas stream than Units 1 and 2. Also, the CO emissions from that facility are inherently very high due to carbonaceous matter in the raw materials that evolves CO prior to pyroprocessing.

Structural changes can also be made to increase the residence time following the OFA system and before some of the convective passes. Those changes are not indicated for this project. The Department does not rule out consideration of greater burn out residence times or oxidation catalyst on modifications in general or on new units.

In recent years, a number of BACT determinations have been made for new units by other state agencies. However they often, although not always, are based on supplier statements and there is usually little or no supporting data. There has not been consistency in the associated averaging time. Some of those proposals or determinations are summarized in the Table 3.

Operating the furnace with very high CO emissions can cause the fly ash to contain excessive carbon as indicated by greater "loss on ignition" (LOI) properties. This can have ramifications on the salability of the fly ash and the fate of any additional mercury (Hg) collected on the higher LOI fly ash.

The Department will set BACT limits of 0.18 and 0.15 lb CO/mmBtu for Units 1 and 2 on a 30-day basis. These values can be achieved by good combustion practices within the constraints of the multi-pollutant controls on the unit. The value for Unit 1 will be a little greater than the value for Unit 2. This will provide more flexibility to reduce NO_X emissions from Unit 1 which does not have an SCR system. The BACT limit for Unit 2 is the same as originally set by EPA in the 1991 PSD permit modification.

The Department will require installation of a continuous emission monitoring system (CEMS). CEMS have been used throughout the industry as a cost-effective means for documenting compliance with BACT limits. There will be a requirement for the CEMS to be installed and certified by June 30, 2008, for Unit 1, and December 31, 2008, for Unit 2, respectively.

Table 3. Recent BACT Emission Limits for Carbon Monoxide. Averaging periods vary.

Facility	Capacity MW	Unit Type	Permit or Application	Date	State	Primary Fuel	Limit lb/mmBtu
Montana-Dakota Utilities	175	CFB	Permit	Jun-05	ND	Lignite	0.15
Omaha Public Power District	660	PC	Permit	Mar-05	NE	PRB	0.15
Xcel Energy – Comanche	750	PC	Permit	Mar-05	CO	Subbit	0.13
Longleaf Energy Associates, LLC	1200	PC	Application	Jan-05	GA	PRB or Bitum.	0.15
NEVCO Energy (Sevier Power)	270	CFB	Permit	Oct-04	UT	Subbit	0.12
City Pub Serv. of San Antonio	750	PC	Permit	Oct-04	TX	PRB	0.15
Intermountain Power	950	PC	Permit	Oct-04	UT	Subbit	0.15
Intermountain Power	950	PC	Permit	Oct-04	UT	Bitum.	0.15
WPSC Weston Unit 4	500	PC	Permit	Jul-04	WI	Subbit	0.15
Sandy Creek (LS Power)	800	PC	Permit	Jun-04	TX	PRB	0.15
Longview Power, LLC	600	PC	Permit	Mar-04	WV	Bitum 2.5% S	0.11
Hastings Utilities	220	PC	Permit	Mar-04	NE	PRB	0.15
Steag Desert Energy	1500	SCPC	Application	Feb-04	NM	Subbit	0.10
Elm Road Gen. Station	615	SCPC	Permit	Jan-04	WI	Pitt.#8	0.12

PC = pulverized coal SC = supercritical CFB = circulating fluidized bed PRB – Powder River Basin coal
Bitum = bituminous coal Subbit = sub bituminous coal Pitt = Pittsburgh coal

AIR QUALITY IMPACT ANALYSIS

Introduction

The proposed project will increase emissions of carbon monoxide (CO) at levels in excess of PSD significant amounts. CO is a criteria pollutant and has Ambient Air Quality Standards (AAQS), significant impact levels and de minimis monitoring levels defined for it.

Major Stationary Sources in Orange County

The current largest stationary sources of CO in Orange County are listed below. The information is from annual operating reports submitted to the Department.

Table 4. Largest Sources of CO in Orange County (2006)

Owner	Site Name	Tons per year
Orlando Utilities Commission	***Stanton (Unit 4 Proposed Project)***	***5,128***
Orlando Utilities Commission	Stanton Energy Center (Existing)	716
FL Gas Transmission Co.	FGTC Station 18, Orange Co.	71
Kinder Morgan Energy Partners	Central Florida Pipeline	49
Middlesex Asphalt	Orange Co. Plant #1	29
Walt Disney World	Walt Disney World Complex	26

Air Quality and Monitoring in Orange County

Orange County currently operates twelve monitors at five sites measuring PM_{10}, $PM_{2.5}$, ozone, CO, lead, SO_2 and NO_2. The 2006 monitoring network is shown in the figure below. There are two PM fine monitors at the Winter Park site.

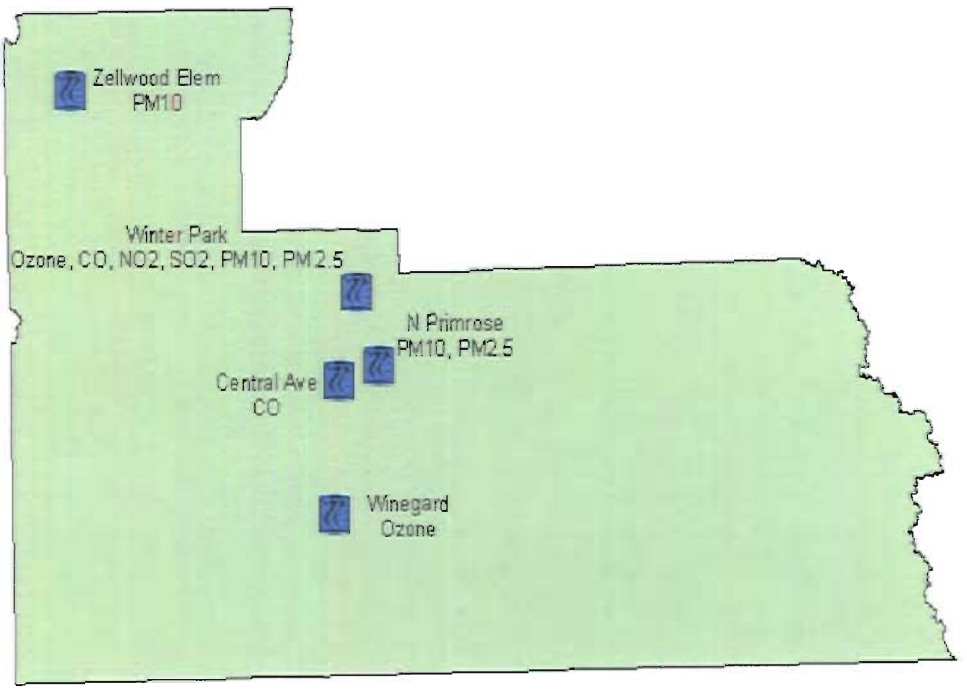


Figure 4. Orange County Ambient Air Monitoring Network

Measured ambient air quality information is summarized in the following table.

Table 5. Ambient Air Quality Concentrations Nearest to Project Site (2006)

Pollutant	Location	Averaging Period	Ambient Concentration				
			High	2nd High	Mean	Standard	Units
PM_{10}	Orlando	24-hour	42	38		150[c]	ug/m^3
		Annual			20	50[f]	ug/m^3
$PM_{2.5}$	Orlando	24-hour	34	25		35[d]	ug/m^3
		Annual			11*	15[e]	ug/m^3
SO_2	Winter Park	3-hour	10	9		500 [a]	ppb
		24-hour	3	3		100[a]	ppb
		Annual			1	20 [b]	ppb
NO_2	WinterPark	Annual			8	53 [b]	ppb
CO	Orlando	1-hour	3	2		35 [a]	ppm
		8-hour	2	2		9 [a]	ppm
Ozone	Orlando	1-hour	.102	.089		0.12[a]	ppm
		8-hour	.083	.082		0.08[g]	ppm

*Annual data from Winter Park monitor. Orlando annual data did not satisfy summary criteria.
a - Not to be exceeded more than once per year
b - Arithmetic mean
c - Not to be exceeded more than an once per year on average over three years
d- Three year average of the 98th percentile of 24-hour concentrations
e- Three year average of the weighted annual mean
f- EPA has revoked Annual Standard
g- Three year average of the fourth-highest daily maximum of 8-hour concentrations

The highest measured values of all pollutants are all less than the respective National Ambient Air Quality Standards (NAAQS), including ozone. Although the 8-hour ozone concentrations in the table above suggest a violation of the standard, the three year average of the fourth-highest daily maximum of 8-hour concentrations for 2006 was 0.079 ppm, which is in compliance with the standard.

Air Quality Impact Analysis

Significant Impact Analysis

Significant Impact Levels (SILs) are defined for CO. A significant impact analysis is performed on CO to determine if the proposed project can cause an increase in ground level concentrations greater than the SILs.

In order to conduct a significant impact analysis, the applicant uses the proposed project's emissions at worst load conditions as inputs to the models. The models used in this analysis and any required subsequent modeling analyses are described below. The highest predicted short-

term concentrations predicted by this modeling are compared to the appropriate SILs for the PSD Class II Areas (vicinity of the proposed project).

For the Class II analysis, receptors extending out to 15 kilometers (km) from the center of the facility were chosen for predicting maximum concentrations in the vicinity of the project. Receptors along the property boundary were spaced 50 meters (m) apart. Receptors extending out to 3 km had 100m spacing. Receptors from 3 to 6 km had 250m spacing and beyond 6km, a spacing of 500m was used for this analysis.

If this modeling at worst-load conditions shows ground-level increases less than the SILs, the applicant is exempted from conducting any further modeling. If the modeled concentrations from the project exceed the SILs, then additional modeling including emissions from all major facilities or projects in the region (multi-source modeling) is required to determine the proposed project's impacts compared to the AAQS or PSD increments.

The applicant's initial CO air quality impact analyses for this project indicated that maximum predicted impacts from all pollutants are less than the applicable SILs for the Class II area. These values are tabulated in the table below and are compared with existing ambient air quality measurements from the local ambient monitoring network.

Table 6. Maximum Projected Air Quality Impacts from the OUC Stanton modification for Comparison to the PSD Class II Significant Impact Levels

Pollutant	Averaging Time	Max Predicted Impact (ug/m^3)	Significant Impact Level (ug/m^3)	Baseline Concentrations (ug/m^3)	Ambient Air Standards (ug/m^3)	Significant Impact?
CO	8-Hour	33	500	3,450	10,000	NO
	1-Hour	68	2000	2,300	40,000	NO

Maximum predicted impacts from the project for CO are much less than the respective AAQS and the baseline concentrations in the area. CO concentrations are also less than the respective significant impact levels that would otherwise require more detailed modeling efforts.

Preconstruction Ambient Monitoring Requirements

A preconstruction monitoring analysis is done for those pollutants with listed de minimis impact levels. These are levels, which, if exceeded, would require pre-construction ambient monitoring. For this analysis, as was done for the significant impact analysis, the applicant uses the proposed project's emissions at worst load conditions as inputs to the models. As shown in the following table, the maximum predicted impacts for CO with a listed de minimis impact level was less than this level. Therefore, no pre-construction monitoring is required for CO.

Table 7. Maximum Air Quality Impacts for Comparison to the De Minimis Ambient Impact Levels.

Pollutant	Averaging Time	Max Predicted Impact (ug/m^3)	De Minimis Level (ug/m^3)	Baseline Concentrations (ug/m^3)	Impact Greater Than De Minimis?
CO	8-hour	33	575	3,450	NO

Based on the preceding discussions, the only additional detailed air quality analyses required by the PSD regulations for this project is the following:

- An analysis of impacts on soils, vegetation, visibility, and of growth-related air quality modeling impacts.

Models and Meteorological Data Used in the Air Quality Analysis

PSD Class II Area: The AERMOD modeling system was used to evaluate the pollutant emissions from the proposed project in the surrounding Class II Area. The AERMOD modeling system incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including the treatment of both surface and elevated sources, and both simple and complex terrain. AERMOD contains two input data processors, AERMET and AERMAP. AERMAP is the terrain processor and AERMET is the meteorological data processor.

A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options. Direction-specific downwash parameters were used for all sources for which downwash was considered. The stacks associated with this project all satisfied the good engineering practice (GEP) stack height criteria.

AERMET meteorological data prepared by the Department used in the AERMOD model consisted of a concurrent 5-year period of hourly surface weather observations from the Orlando International Airport and twice-daily upper air soundings from the National Weather Service at Ruskin (Tampa). The 5-year period of meteorological data was from 1999 through 2003. These stations were selected for use in the study because they are the closest primary weather stations to the study area and are most representative of the project site. The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling.

In reviewing this permit application, the Department has determined that the application complies with the applicable provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification should EPA revise the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators.

Additional Impacts Analysis

Impact on Soils, Vegetation, and Wildlife:

The proposed project is in response to the addition of control technologies on Units 1 and 2. These controls will provide emissions reductions for NO_X, which will improve the current impact on soils, vegetation and wildlife from the Stanton facility. These reductions of NO_X will also reduce a source of ozone formation in the vicinity of the project. With regards to the increase in CO emissions, the maximum ground-level concentrations predicted to occur for CO as a result of the proposed project will be considerably less than the Significant Impact Levels and the respective AAQS. The Significant Impact Levels are more stringent that the AAQS, which are health-based standards that are also in place to protect sensitive populations.

Growth-Related Impacts Due to the Proposed Project:

The size of the project is relatively small. There will relatively no increase in the labor force due to the proposed project.

Growth-Related Air Quality Impacts since 1977:

According to the applicant, the U.S. Census Bureau reported a population of approximately 1 million for Orange County. The population has grown by approximately 50% between 1980 and 2000. Despite the population and obvious mobile source growth, the County is in attainment with all ambient air quality standards.

Specifically for CO, there has not been an exceedance of the standards since 1988 for the entire State of Florida. Since 1993, the highest reported 1-hour concentration for CO in Orlando was 26,450 compared to a 40,000 AAQS and the highest reported 8-hour concentration was 8,050 compared to a 10,000 AAQS. These highest concentrations of CO occurred in 1996.

7. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit.

Harvey, Mary

From: Harvey, Mary
Sent: Wednesday, November 21, 2007 2:20 PM
To: 'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc: Linero, Alvaro; Adams, Patty; Gibson, Victoria
Subject: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)
Attachments: COVER015.pdf; INTENT015.pdf; NOTICE015.pdf; TECHNICAL015.pdf; DPERMIT015.pdf

Tracking:

Recipient	Delivery	Read
'dstalls@ouc.com'		
Bradner, James		Read: 11/21/2007 2:20 PM
'lori.cunniff@ocfl.net'		
'little.james@epamail.epa.gov'		
'forney.kathleen@epa.gov'		
'newlandlt@bv.com'		
Halpin, Mike	Delivered: 11/21/2007 2:20 PM	Read: 11/21/2007 2:28 PM
Linero, Alvaro		Read: 11/21/2007 2:22 PM
Adams, Patty		Read: 11/21/2007 4:00 PM
Gibson, Victoria		

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Harvey, Mary

From: Newland, Larry T. (Todd) [NewlandLT@bv.com]
To: undisclosed-recipients
Sent: Wednesday, November 21, 2007 2:24 PM
Subject: Read: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

Your message

To: NewlandLT@bv.com
Subject:

was read on 11/21/2007 2:24 PM.

Harvey, Mary

From: Newland, Larry T. (Todd) [NewlandLT@bv.com]
Sent: Wednesday, November 21, 2007 2:25 PM
To: Harvey, Mary
Subject: RE: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

Confirmed.

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Wednesday, November 21, 2007 2:20 PM
To: dstalls@ouc.com; Bradner, James; lori.cunniff@ocfl.net; little.james@epamail.epa.gov; forney.kathleen@epa.gov; Newland, Larry T. (Todd); Halpin, Mike
Cc: Linero, Alvaro; Adams, Patty; Gibson, Victoria
Subject: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

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Harvey, Mary

From: Halpin, Mike
To: Harvey, Mary
Sent: Wednesday, November 21, 2007 2:28 PM
Subject: Read: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

Your message

To:	'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc:	Linero, Alvaro; Adams, Patty; Gibson, Victoria
Subject:	Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)
Sent:	11/21/2007 2:20 PM

was read on 11/21/2007 2:28 PM.

Harvey, Mary

From: Stalls, Denise M. [DStalls@ouc.com]
To: Harvey, Mary
Sent: Wednesday, November 21, 2007 2:51 PM
Subject: Read: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

Your message

To: DStalls@ouc.com
Subject:

was read on 11/21/2007 2:51 PM.

Harvey, Mary

From: Adams, Patty
To: Harvey, Mary
Sent: Wednesday, November 21, 2007 4:00 PM
Subject: Read: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

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To:	'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc:	Linero, Alvaro; Adams, Patty; Gibson, Victoria
Subject:	Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)
Sent:	11/21/2007 2:20 PM

was read on 11/21/2007 4:00 PM.

Harvey, Mary

From: Bradner, James
Sent: Monday, November 26, 2007 7:43 AM
To: Harvey, Mary
Subject: RE: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

Thanks!

From: Harvey, Mary
Sent: Wednesday, November 21, 2007 2:20 PM
To: 'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc: Linero, Alvaro; Adams, Patty; Gibson, Victoria
Subject: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

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From: Lori.Cunniff@ocfl.net
To: Harvey, Mary
Sent: Monday, November 26, 2007 8:52 AM
Subject: Read: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

Your message

To: Lori.Cunniff@ocfl.net
Subject:

was read on 11/26/2007 8:52 AM.

Harvey, Mary

From: Forney.Kathleen@epamail.epa.gov
Sent: Wednesday, November 21, 2007 2:25 PM
To: Harvey, Mary
Cc: Little.James@epamail.epa.gov
Subject: Re: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

Thanks

Katy R. Forney
Air Permits Section
EPA - Region 4
61 Forsyth St., SW
Atlanta, GA 30024

Phone: 404-562-9130
Fax: 404-562-9019

"Harvey, Mary" <Mary.Harvey@dep.state.fl.us>
11/21/2007 02:20 PM

To: <dstalls@ouc.com>, "Bradner, James" <James.Bradner@dep.state.fl.us>, <lori.cunniff@ocfl.net>, James Little/R4/USEPA/US@EPA, Kathleen Forney/R4/USEPA/US@EPA, <newlandlt@bv.com>, "Halpin, Mike" <Mike.Halpin@dep.state.fl.us>

cc: "Linero, Alvaro" <Alvaro.Linero@dep.state.fl.us>, "Adams, Patty" <Patty.Adams@dep.state.fl.us>, "Gibson, Victoria" <Victoria.Gibson@dep.state.fl.us>

Subject: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

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Harvey, Mary

From: Bradner, James
To: Harvey, Mary
Sent: Wednesday, November 21, 2007 2:21 PM
Subject: Read: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

Your message

To:	'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc:	Linero, Alvaro; Adams, Patty; Gibson, Victoria
Subject:	Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)
Sent:	11/21/2007 2:20 PM

was read on 11/21/2007 2:20 PM.

Harvey, Mary

From: Bradner, James
Sent: Wednesday, November 21, 2007 2:21 PM
To: Harvey, Mary
Subject: RE: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

Received. Have a safe and happy Thanksgiving!

From: Harvey, Mary
Sent: Wednesday, November 21, 2007 2:20 PM
To: 'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc: Linero, Alvaro; Adams, Patty; Gibson, Victoria
Subject: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

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Harvey, Mary

From: Linero, Alvaro
To: Harvey, Mary
Sent: Wednesday, November 21, 2007 2:22 PM
Subject: Read: Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)

Your message

To:	'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
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Subject:	Orlando Utilities Commission - DEP File #0950137-015-AC (PSD-FL-395)
Sent:	11/21/2007 2:20 PM

was read on 11/21/2007 2:22 PM.

Orlando Utilities Commission
500 South Orange Avenue
P.O. Box 3193
Orlando, Florida 32802
Phone: 407.423.9100
Administrative Fax: 407.236.9616
Purchasing Fax: 407.384.4141
Website: www.ouc.com

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September 19, 2007

Mr. Al Linero, P. E., Administrator
Resource Review Section
Division of Air Resources Management
Florida Department of
Environmental Protection
MS#5505
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Stanton Energy Center – Units 1 and 2
Forced Oxidation Project – Orange County
Modification Fee

Dear Mr. Linero:

Enclosed please find our check in the amount $7,500 to cover the modification fee on the forced oxidation amendment to the SEC Air Permit PSD Conditions of Certification..

Should you require further information, please contact me at 407/737-4236.

Sincerely,

Denise M. Stalls

Denise M. Stalls
Vice President
Environmental Affairs

DMS:rc
Enclosures

I:/letters/DMS-Units1and2ModificationFeeAirPermit

Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE:

Orlando Utilities Commission (OUC)
500 South Orange Avenue
Orlando, Florida 32802

Authorized Representative:
Ms. Denise Stalls, Vice President
Environmental Affairs

DEP File No. 0950137-015-AC
Curtis H. Stanton Energy Center
Stanton Units 1 and 2
SIC No. 4911
Low NO_X Burners and Overfire Air Project
Orange County, Florida

Permit Expires: April 1, 2009

PROJECT AND LOCATION

This permit authorizes the installation of low nitrogen oxides (NO_x) burners (LNB) and an overfire air (OFA) system on Units 1 and 2 at the OUC Curtis H. Stanton Energy Center. The facility is located at 5100 Alafaya Trail, Orlando, Orange County.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Parts 60 and 63 of the Code of Federal Regulations (CFR). The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Florida Department of Environmental Protection (the Department).

CONTENTS

Joseph Kahn, Director
Division of Air Resource Management

2/6/08
(Date)

JK/tlv/aal/tbc

FACILITY AND PROJECT DESCRIPTION

The existing facility consists of two 468 megawatt (MW) fossil fuel fired steam electric generating units (Units 1 and 2), and one 640 MW combined cycle unit. There are storage and handling facilities for solid fuels, fly ash, limestone, gypsum, slag, and bottom ash. A recently permitted nominal 285 MW integrated gasification and combined cycle unit (Unit B) is under construction and will be operational by 2012.

As noted above, the project under this permit is for the installation of LNB and OFA equipment on Units 1 and 2. The burners shall be of a proven design which has been previously utilized to achieve similar emissions requirements when firing fuels similar to those fired at Unit 1 and Unit 2. The burners and OFA systems shall be designed specifically for low NO_x formation. Burner design shall provide accurate fuel-air ratio control and thorough mixing of fuel and air at all ratings. Burner design shall prevent flame impingement on steam generator tubes or burner tile at any time.

EU ID	Emissions Unit Description
001	Fossil Fuel Fired Steam Electric Generator No. 1
002	Fossil Fuel Fired Steam Electric Generator No. 2

REGULATORY CLASSIFICATION

The facility is a potential major source of hazardous air pollutants (HAP).

The facility operates existing units subject to the Acid Rain provisions of Title IV of the Clean Air Act (CAA).

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

The facility is a major Prevention of Significant Deterioration (PSD) stationary source in accordance with Rule 62-212.400, F.A.C.

The facility operates units subject to the Standards of Performance for New Stationary Sources pursuant to 40 CFR Part 60.

The facility does not operate electrical generating units subject to National Emissions Standards for Hazardous Air Pollutants pursuant to 40 Code of Federal Regulations (CFR) Part 63.

The facility is subject to the Federal Clean Air Interstate Rule (CAIR) in accordance with the Final Department Rules issued pursuant to CAIR as implemented by the Department in Rule 62-296.470, F.A.C.

The facility is subject to the Federal Clean Air Mercury Rule (CAMR) implemented by the Department in Rule 62-296.480, F.A.C.

The facility operates units that were certified under the Florida Power Plant Siting Act, 403.501-518, F.S.

RELEVANT DOCUMENTS

The following relevant documents are not a part of this permit, but helped form the basis for this permitting action: the permit application and additional information received to make it complete; the draft air construction permit; and the Department's Technical Evaluation and Preliminary Determination.

1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Department. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Central District Office. The mailing address and phone number of the Central District Office are: Department of Environmental Protection, Central District Office, 3319 Maguire Boulevard, Suite 232, Orlando Florida 32803-3767. Telephone: (407)894-7555. Fax: (407)897-5963.

3. Appendices: The following Appendices are attached as part of this permit: Appendix BD, Appendix CEMS, and Appendix GC (General Conditions).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Bureau of Air Regulation with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

This section of the permit addresses the following existing emissions units.

Emissions Units 001 and 002
Fossil Fuel Fired Steam Generators 1 and 2 are wall-fired, dry bottom boilers, firing pulverized coal as the primary fuel and No. 6 fuel oil for purposes of startup and flame stabilization. Each unit has a maximum heat input rate of 4,286 million British thermal units (mmBtu) per hour with a nominal generating capacity of 468 MW. Each unit is equipped with an electrostatic precipitator (ESP) for control of particulate matter (PM/PM_{10}), a wet flue gas desulfurization (WFGD) system for sulfur dioxide (SO_2) control, and low NO_X burners for nitrogen oxides (NO_X) control. Unit 2 is also equipped with a selective catalytic reduction (SCR) system for further control of NO_X emissions. The following parameters are continuously monitored on both units: NO_X, opacity, SO_2, carbon dioxide (CO_2), and stack gas flow rate.

APPLICABLE STANDARDS AND REGULATIONS

1. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]
2. The facility is subject to all of the requirements specified in Title V Air Operation Permit Renewal No. 0950137-006-AV.

GENERAL OPERATION REQUIREMENTS

3. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4), F.A.C.]
4. 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 Department 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.]
5. 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.]
6. Circumvention: No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.
[Rule 62-210.650, F.A.C.]

EQUIPMENT AND CONTROL TECHNOLOGY

7. Low NO_x Burners and Overfire Air Equipment: The permittee is authorized to construct, operate and maintain low NO_x burners and overfire air equipment for Units 1 and 2 as described in the application. The burners and OFA systems shall be designed specifically for low NO_x formation. The existing burner configuration, control logic, and associated auxiliary combustion equipment shall be reused in its current configuration. Any replacement burners provided for Unit 2 and any new burners provided for Unit 1 shall be mounted within the existing wind box to the maximum extent possible. Any needed wind box modifications or internal supports shall be included in the configuration. Burner design shall provide accurate fuel-air ratio control and thorough mixing of fuel and air at all ratings. Burner design shall prevent

flame impingement on steam generator tubes or burner tile at any time. Adequate burner cooling air shall be provided when the burner is out of service during steam generator operation. In addition, the burner shall be fabricated of materials designed to eliminate the thermal effects resulting in distortion of the burner during its design lifetime. Provision shall be made for burner maintenance to be performed from outside of the furnace. Both an air and coal flow monitoring system shall be provided at each burner. [Applicant Request.]

REPORTING AND NOTIFICATION REQUIREMENTS

8. Notification: Within one week of beginning construction of the low NO_x burners and overfire air project, the permittee shall notify the Compliance Authority that the project has commenced and provide a general schedule of construction activities. Within one week following the end of construction, the permittee shall notify the Compliance Authority that the project was completed. [Rule 62-4.210, F.A.C.]

EMISSION STANDARDS

9. Carbon Monoxide (CO):

   Emissions of CO from Unit 1 shall not exceed 0.18 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required continuous emissions monitoring system (CO-CEMS). Emissions of CO from Unit 2 shall not exceed 0.15 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required CO-CEMS. Emissions of CO shall not exceed these respective limits on a 3-hr average during the initial compliance demonstration. See Specific Condition **10.**

   [62-210.200 (BACT), and 62-212.400(PSD), F.A.C.]

EMISSIONS COMPLIANCE DEMONSTRATION

10. Continuous Compliance with CO limits: The applicant shall install a carbon monoxide (CO) continuous emissions monitor (CO-CEMS) and conduct the appropriate performance specification by June 30, 2008, for Unit 2, and December 31, 2008, for Unit 1, respectively. Upon certification of the CO-CEMS, compliance with the 30-operating day rolling average shall be demonstrated using data collected from the required CO-CEMS. See Specific Conditions **12.** and **15.** [Rule 62-4.070(3), F.A.C.]

11. Additional Requirements – Appendix CEMS: Additional requirements applicable to the CO-CEMS are given in Section 4, Appendix CEMS.

12. Initial Compliance Demonstration: Within 60 days of commencing operation of each respective unit, following installation of the Low-NO_X burners and overfire air system, tests shall be conducted to determine emissions of CO and NO_X. Tests shall be conducted between 90% and 100% of permitted capacity while firing coal and fuel oil. Tests shall consist of three, 1-hour test runs. [Rule 62-297.310(7)(a)1, F.A.C.]

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

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions (Instrumental).
10	Determination of Carbon Monoxide Emissions

   The methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

14. Test Results: Compliance test results shall be submitted to the Department's Central District Office no later than 45 days after completion of the last test run. [Rule 62-297.310(8), F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

15. Performance Specifications and Quality Assurance: The acceptability of the CO-CEMS shall be evaluated by conducting the appropriate performance specification, as follows.

    The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A within 180 calendar days of commencing operation following installation of the low NO_X burners and overfire air system. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The required RATA tests shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards.

    [Rules 62-4.070(3), 62-210.200(BACT), F.A.C.]

16. CEMS Data Requirements for CO BACT Standard:

    a. *Data Collection*: The CO-CEMS shall monitor and record emissions during all operations and whenever emissions are being generated, including during episodes of startups, shutdowns, and malfunctions. All data shall be used, except for invalid measurements taken during monitor system breakdowns, repairs, calibration checks, zero adjustments, and span adjustments.

    b. *Operating Hours and Operating Days*: An hour is the 60-minute period beginning at the top of each hour. Any hour during which an emissions unit is in operation for more than 15 minutes is an operating hour for that emission unit. A day is the 24-hour period from midnight to midnight. Any day with at least one operating hour for an emissions unit is an operating day for that emission unit.

    c. *Valid Hourly Averages*: The CO-CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour.

        1) Hours that are not **operating** hours are not **valid** hours.

        2) For each operating hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, there is insufficient data, the 1-hour block average is not valid, and the hour is considered as "monitor unavailable."

    d. *Rolling 30-day average:* Compliance shall be determined after each operating day by calculating the arithmetic average of all the valid hourly averages from that operating day and the prior 29 operating days.

    e. *Monitor Availability*: The quarterly excess emissions report shall identify monitor availability for each quarter in which the unit operated. Monitor availability for the CO-CEMS shall be 95% or greater in any calendar quarter in which the unit operated for more than 760 hours. In the event the applicable availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving the required availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

[Rules 62-4.070(3) and 62-210.200(BACT), F.A.C.]

SECTION 3. EMISSIONS UNITS SPECIFIC CONDITIONS

CEMS FOR ANNUAL EMISSIONS REPORTING

17. CO-CEMS Annual Emissions Requirement: The owner or operator shall use data from the CO-CEMS when calculating annual emissions for purposes of computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for purposes of computing emissions pursuant to the reporting requirements of Rule 62-210.370(3), F.A.C. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.
[Rules 62-210.200, and 62-210.370(3), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

18. Emissions Performance 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. and in Appendix GC of this permit.
[Rule 62-297.310(8), F.A.C.]

19. Excess Emissions Reporting:

    a. *Malfunction Notification:* If emissions in excess of a standard (subject to the specified averaging period) 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. The Department may request a written summary report of the incident.

    b. *SIP Quarterly Report*: Within 30 days following the end of each calendar-quarter, the permittee shall submit a report to the Compliance Authority summarizing periods of CO emissions in excess of the BACT permit standard following the NSPS format in 40 CFR 60.7(c), Subpart A. In addition, the report shall summarize the CO-CEMS system monitor availability for the previous quarter.

    c. *NSPS Reporting*: Within 30 days following the calendar quarter, the permittee shall submit the written reports required by 40 CFR 60 Subpart Da (Standards of Performance for Fossil-Fuel Fired Steam Generators) for the previous semi-annual period to the Compliance Authority.

{Note: If there are no periods of excess emissions as defined in 40 CFR, Part 60, Subpart Da, a statement to that effect may be submitted with the SIP Quarterly Report to suffice for the NSPS Semi-Annual Report.}

[Rules 62-4.130, 62-204.800, 62-210.700(6) and 62-212.400(BACT), F.A.C., and 40 CFR 60.7]

20. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating hours and emissions from this facility in accordance with 62-210.370. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

21. Monthly CO-CEMS Report: Upon certification of the CO-CEMS the permittee shall submit, on a monthly basis, a report in electronic file format which includes Unit 1 and Unit 2 CO, NO_X, and heat input data. The report shall be submitted by the 15th of each month by mailing a compact disc to the Department's Bureau of Air Regulation Permitting South Section and shall include all hourly readings from the previous month. Alternatively, upon contacting the Bureau's project engineer, the file may be emailed to the appropriate Bureau personnel.

APPENDIX BD

The Department establishes the following standards as the best available control technology (BACT) for the OUC Stanton Energy Center Units 1 and 2:

Emissions of CO from Unit 1 shall not exceed 0.18 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required continuous emissions monitoring system (CO-CEMS). Emissions of CO from Unit 2 shall not exceed 0.15 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required CO-CEMS. Emissions of CO shall not exceed these respective limits on a 3-hr average during the initial compliance demonstration.

UNITS 1 AND 2 CO EMISSION STANDARDS AND CO-CEMS

1. Emissions of CO from Unit 1 shall not exceed 0.18 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required continuous emissions monitoring system (CO-CEMS). Emissions of CO from Unit 2 shall not exceed 0.15 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required CO-CEMS. Emissions of CO shall not exceed these respective limits on a 3-hr average during the initial compliance demonstration. [62-210.200 (BACT) and 62-212.400(PSD), F.A.C.]

2. CEMS Required for Demonstrating Compliance: The owner or operator shall properly install, calibrate, maintain and operate a continuous emissions monitoring system (CEMS) to measure and record emissions of CO in the units of parts per million (ppm) and convert the reading to lb/mmBtu. The owner or operator shall comply with the conditions of Appendix CEMS for the CO-CEMS required to be installed by this permit as the compliance method for a SIP-based emission standard.

3. CEMS Required for Reporting Annual Emissions: The owner or operator shall use data from the CO-CEMS when calculating annual emissions for purposes of computing actual emissions, baseline actual emissions and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for purposes of computing emissions pursuant to the reporting requirements of Rules 62-210.370(3) and 62-212.300(1)(e), F.A.C. The owner or operator shall follow the procedures in Appendix CEMS for calculating annual emissions.

CEMS OPERATION PLAN

4. CEMS Operation Plan: The owner or operator shall create and implement a plan for the proper installation, calibration, maintenance and operation of the CO-CEMS required by this permit. The owner or operator shall submit the CEMS Operation Plan to the Bureau of Air Monitoring and Mobile Sources for approval at least 60 days prior to CEMS installation. The CEMS Operation Plan shall become effective 60 days after submittal or upon its approval. If the CEMS Operation Plan is not approved, the owner or operator shall submit a new or revised plan for approval.

   {Permitting Note: The Department maintains both guidelines for developing a CEMS Operation Plan and example language that can be used as the basis for the facility-wide plan required by this permit. Contact the Emissions Monitoring Section of the Bureau of Air Monitoring and Mobile Sources at (850)488-0114.}

INSTALLATION, PERFORMANCE SPECIFICATIONS AND QUALITY ASSURANCE

5. Timelines: The owner or operator shall install the CO-CEMS required by this permit and conduct the appropriate performance specification for the CO-CEMS no later than June 30, 2008, for Unit 2, and December 31, 2008, for Unit 1, respectively.

6. Installation: The CO-CEMS shall be installed such that representative measurements of emissions or process parameters from the facility are obtained. The owner or operator shall locate the CEMS by following the procedures contained in the applicable performance specification of 40 CFR Part 60, Appendix B.

7. Span Values and Dual Range Monitors: The owner or operator shall set appropriate span values for the CEMS. The owner or operator shall install dual range monitors if required by and in accordance with the CEMS Operation Plan.

8. Moisture Correction: If necessary, the owner or operator shall determine the moisture content of the exhaust gas and develop an algorithm to enable correction of the monitoring results to a dry basis (0% moisture).

   {Permitting Note: The CEMS Operation Plan will contain additional CEMS-specific details and procedures for installation.}

9. Performance Specifications: The owner or operator shall evaluate the acceptability of the CO-CEMS by conducting the appropriate performance specification, as follows. CEMS determined to be unacceptable shall not be considered installed for purposes of meeting the timelines of this permit. For CO monitors, the owner or operator shall conduct Performance Specification 4 or 4A of 40 CFR part 60, Appendix B.

10. Quality Assurance: The owner or operator shall follow the quality assurance procedures of 40 CFR Part 60, Appendix F. The required relative accuracy test audit (RATA) tests for the CO-CEMS shall be performed using EPA Method 10 in Appendix A of 40 CFR part 60 and shall be based on a continuous sampling train.

11. Substituting RATA Tests for Compliance Tests: Data collected during CEMS quality assurance RATA tests can substitute for annual stack tests, and vice versa, at the option of the owner or operator, provided the owner or operator indicates this intent in the submitted test protocol and follows the procedures outlined in the CEMS Operation Plan.

CALCULATION APPROACH

12. CEMS Used for Compliance: Once adherence to the applicable performance specification for each CEMS is demonstrated, the owner or operator shall use the CEMS to demonstrate compliance with the applicable emission standards as specified by this permit.

13. CEMS Data: Each CEMS shall monitor and record emissions during all periods of operation and whenever emissions are being generated, including during episodes of startups, shutdowns, and malfunctions. All data shall be used, except for invalid measurements taken during monitor system breakdowns, repairs, calibration checks, zero adjustments and span adjustments, and except for allowable data exclusions as per Condition 20 of this appendix.

14. Operating Hours and Operating Days: For purposes of this appendix, the following definitions shall apply. An hour is the 60-minute period beginning at the top of each hour. Any hour during which an emissions unit is in operation for more than 15 minutes is an operating hour for that emission unit. A day is the 24-hour period from midnight to midnight. Unless otherwise specified by this permit, any day with at least one operating hour for an emissions unit is an operating day for that emission unit.

15. Valid Hourly Averages: The CO-CEMS shall be designed and operated to sample, analyze and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour.

    a. Hours that are not operating hours are not valid hours.

    b. For each operating hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, there is insufficient data, the 1-hour block average is not valid, and the hour is considered as "monitor unavailable."

16. Calculation Approaches: The owner or operator shall implement the calculation approach specified by this permit for the CO-CEMS, as follows: For the 30-day rolling CO average, compliance shall be determined after each operating day by calculating the arithmetic average of all the valid hourly averages from that operating day and the prior 29 operating days.

MONITOR AVAILABILITY

17. Monitor Availability: The quarterly excess emissions report shall identify monitor availability for each quarter in which the unit operated. Monitor availability for the CO-CEMS shall be 95% or greater in any calendar quarter in which the unit operated for more than 760 hours. In the event the applicable availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving the required availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

EXCESS EMISSIONS

18. Definitions:

    a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.

    b. *Shutdown* means the cessation of the operation of an emissions unit for any purpose.

    c. *Malfunction* means any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

19. 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.

20. Data Exclusion Procedures for SIP Compliance: As per the procedures in this condition, limited amounts of CEMS emissions data may be excluded from the corresponding compliance demonstration, provided that best operational practices to minimize emissions are adhered to and the duration of data excluded is minimized. The data exclusion procedures of this condition apply only to SIP-based emission limits.

    a. *Excess Emissions.* Data in excess of the applicable emission standard may be excluded from compliance calculations if the data are collected during periods of permitted excess emissions (for example, during startup, shutdown or malfunction). The maximum duration of excluded data is 2 hours in any 24-hour period, unless some other duration is specified by this permit.

    b. *Limited Data Exclusion.* If the compliance calculation using all valid CEMS emission data, as defined in Condition 13 of this appendix, indicates that the emission unit is in compliance, then no CEMS data shall be excluded from the compliance demonstration.

    c. *Event Driven Exclusion.* The underlying event (for example, the startup, shutdown or malfunction event) must precede the data exclusion. If there is no underlying event, then no data may be excluded. Only data collected during the event may be excluded.

    d. *Reporting Excluded Data.* The data exclusion procedures of this condition are not necessarily the same procedures used for excess emissions as defined by federal rules. Quarterly or semi-

annual reports required by this permit shall indicate not only the duration of data excluded from SIP compliance calculations but also the number of excess emissions as defined by federal rules.

21. Notification Requirements: The owner or operator shall notify the Compliance Authority within one working day of discovering any emissions that demonstrate noncompliance for a given averaging period. Within one working day of occurrence, the owner or operator shall notify the Compliance Authority of any malfunction resulting in the exclusion of CEMS data. For malfunctions, notification is sufficient for the owner or operator to exclude CEMS data.

ANNUAL EMISSIONS

22. CEMS Used for Calculating Annual Emissions: All valid data, as defined in Condition 13 of this appendix, shall be used when calculating annual emissions.
    a. Annual emissions shall include data collected during startup, shutdown and malfunction periods.
    b. Annual emissions shall include data collected during periods when the emission unit is not operating but emissions are being generated (for example, when firing fuel to warm up a process for some period of time prior to the emission unit's startup).
    c. Annual emissions shall not include data from periods of time where the monitor was functioning properly but was unable to collect data while conducting a mandated quality assurance/quality control activity such as calibration error tests, RATA, calibration gas audit or relative accuracy audit (RAA). These periods of time shall be considered missing data for purposes of calculating annual emissions.
    d. Annual emissions shall not include data from periods of time when emissions are in excess of the calibrated span of the CEMS. These periods of time shall be considered missing data for purposes of calculating annual emissions.
23. Accounting for Missing Data: All valid measurements collected during each hour shall be used to calculate a 1-hour block average. For each hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, the owner or operator shall account for emissions during that hour using site-specific data to generate a reasonable estimate of the 1-hour block average.
24. Emissions Calculation: Hourly emissions shall be calculated for each hour as the product of the 1-hour block average and the duration of pollutant emissions during that hour. Annual emissions shall be calculated as the sum of all hourly emissions occurring during the year.

SECTION 4. APPENDIX GC – GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

   a. Have access to and copy and records that must be kept under the conditions of the permit;
   b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
   c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

   Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

   a. A description of and cause of non-compliance; and

b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (Not Applicable);
    b. Determination of Prevention of Significant Deterioration (Not Applicable);
    c. Compliance with National Emission Standards for Hazardous Air Pollutants (Not Applicable); and
    d. Compliance with New Source Performance Standards (Not Applicable).

14. The permittee shall comply with the following:

    a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

    b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

    c. Records of monitoring information shall include:

        1) The date, exact place, and time of sampling or measurements;
        2) The person responsible for performing the sampling or measurements;
        3) The dates analyses were performed;
        4) The person responsible for performing the analyses;
        5) The analytical techniques or methods used; and
        6) The results of such analyses.

When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Air Permit by:

Ms. Denise Stalls, Vice President –
Environmental Affairs
Orlando Utilities Commission (OUC)
500 South Orange Ave
Orlando, Florida 32802

DEP File No. 0950137-015-AC
Curtis H. Stanton Energy Center
Low NO_X Burners and Overfire Air Project
Orange County

_____/

Enclosed is the Final Permit Number 0950137-015-AC authorizing the applicant OUC to install low nitrogen oxides (NO_x) burners (LNB) and overfire air (OFA) equipment on Units 1 and 2 at the existing OUC Curtis H. Stanton Energy Center, Southeast of Orlando in Orange County. The burners shall be of a proven design which has been previously utilized to achieve similar emissions requirements when firing fuels similar to those fired at Unit 1 and Unit 2. The burners and OFA systems shall be designed specifically for low NO_x formation. Burner design shall provide accurate fuel-air ratio control and thorough mixing of fuel and air at all ratings. Burner design shall prevent flame impingement on steam generator tubes or burner tile at any time.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

Trina L. Vielhauer

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Permit) and all copies were sent electronically (with Received Receipt Requested) before the close of business on 2/7/08 to the person(s) listed:

Denise Stalls, OUC: dstalls@ouc.com
Jim Bradner, DEP CD: james.bradner@dep.state.fl.us
Lori Cunniff, Orange County EPD: lori.cunniff@ocfl.net
Jim Little, EPA Region 4: little.james@epamail.epa.gov
Katy Forney, EPA Region 4: forney.kathleen@epa.gov
Larry Todd Newland, P.E., Black & Veatch: newlandlt@bv.com
Mike Halpin, DEP Siting: mike.halpin@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Mary F. Harvey 2/7/08
(Clerk) (Date)

FINAL DETERMINATION

PERMITTEE

Orlando Utilities Commission (OUC)
500 South Orange Ave
Orlando, Florida 32802

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
2600 Blair Stone Road, MS# 5505
Tallahassee, Florida 32399-2400

PROJECT

Air Construction Permit No. 0950137-015-AC

Curtis H. Stanton Energy Center
Low NO_X Burners and Overfire Air Project

The project authorized by this permit is for the installation of low nitrogen oxides (NO_x) burners (LNB) and overfire air (OFA) equipment on Units 1 and 2 at the existing OUC Curtis H. Stanton Energy Center, located Southeast of Orlando in Orange County. The burners shall be of a proven design which has been previously utilized to achieve similar emissions requirements when firing fuels similar to those fired at Unit 1 and Unit 2. The burners and OFA systems shall be designed specifically for low NO_x formation. Burner design shall provide accurate fuel-air ratio control and thorough mixing of fuel and air at all ratings. Burner design shall prevent flame impingement on steam generator tubes or burner tile at any time.

NOTICE AND PUBLICATION

The Department distributed an "Intent to Issue Permit" package on November 21, 2007. The applicant published the "Public Notice of Intent to Issue" in the Orlando Sentinel on December 22, 2007, with proof of publication received by the Department on January 11, 2008. No petitions for administrative hearings or extensions of time to petition for an administrative hearing were filed. Minor comments and corrections were received from the applicant concerning the Intent to Issue the Air Construction Permit package, and the final permit was adjusted accordingly. No comments were received from EPA Region 4 or the public at large.

CONCLUSION

The final action of the Department is to issue the air construction permit with changes indicated above.

Memorandum

Florida Department of Environmental Protection

TO: Joseph Kahn, Director, Division of Air Resource Management

THROUGH: Trina Vielhauer, Chief, Bureau of Air Regulation

THROUGH: Al Linero

FROM: Tom Cascio

DATE: February 4, 2008

SUBJECT: Final Air Construction Permit No. 0950137-015-AC
Orlando Utilities Commission (OUC)
Curtis H. Stanton Energy Center
Low NO_X Burners and Overfire Air Project

Attached for your review are the following items:

- Final Notice;
- Final Determination; and
- Final Permit.

The Final Determination explains the purpose of the project. We recommend your approval of the attached final permit for this project.

Attachments

Tracking Page

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Air Permit by:

Ms. Denise Stalls, Vice President –
Environmental Affairs
Orlando Utilities Commission (OUC)
500 South Orange Ave
Orlando, Florida 32802

DEP File No. 0950137-015-AC
Curtis H. Stanton Energy Center
Low NO_X Burners and Overfire Air Project
Orange County

Enclosed is the Final Permit Number 0950137-015-AC authorizing the applicant OUC to install low nitrogen oxides (NO_x) burners (LNB) and overfire air (OFA) equipment on Units 1 and 2 at the existing OUC Curtis H. Stanton Energy Center, Southeast of Orlando in Orange County. The burners shall be of a proven design which has been previously utilized to achieve similar emissions requirements when firing fuels similar to those fired at Unit 1 and Unit 2. The burners and OFA systems shall be designed specifically for low NO_x formation. Burner design shall provide accurate fuel-air ratio control and thorough mixing of fuel and air at all ratings. Burner design shall prevent flame impingement on steam generator tubes or burner tile at any time.

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Executed in Tallahassee, Florida.

Trina L. Vielhauer

Trina L. Vielhauer, Chief
Bureau of Air Regulation

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Jim Bradner, DEP CD: james.bradner@dep.state.fl.us
Lori Cunniff, Orange County EPD: lori.cunniff@ocfl.net
Jim Little, EPA Region 4: little.james@epamail.epa.gov
Katy Forney, EPA Region 4: forney.kathleen@epa.gov
Larry Todd Newland, P.E., Black & Veatch: newlandlt@bv.com
Mike Halpin, DEP Siting: mike.halpin@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Mary L. Story 2/7/08
(Clerk) (Date)

Harvey, Mary

From: Newland, Larry T. (Todd) [NewlandLT@bv.com]
Sent: Thursday, February 07, 2008 12:37 PM
To: Harvey, Mary
Subject: RE: Orlando Utilities Commission (OUC) - DEP File No. 0950137-015-AC-FINAL

Confirmed.

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Thursday, February 07, 2008 12:29 PM
To: Denise Stalls, OUC:; Bradner, James; Lori Cunniff, Orange County EPD:; Jim Little, EPA Region 4:; Katy Forney, EPA Region 4:; Newland, Larry T. (Todd); Halpin, Mike
Cc: Cascio, Tom; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Orlando Utilities Commission (OUC) - DEP File No. 0950137-015-AC-FINAL

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site:
http://www.adobe.com/products/acrobat/readstep.html.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey. Thank you in advance for completing the survey.

Harvey, Mary

From: Bradner, James
Sent: Thursday, February 07, 2008 1:00 PM
To: Harvey, Mary
Subject: RE: Orlando Utilities Commission (OUC) - DEP File No. 0950137-015-AC-FINAL

Received—thank you.

From: Harvey, Mary
Sent: Thursday, February 07, 2008 12:29 PM
To: 'Denise Stalls, OUC:'; Bradner, James; 'Lori Cunniff, Orange County EPD:'; 'Jim Little, EPA Region 4:'; 'Katy Forney, EPA Region 4:'; 'Larry Todd Newland, P.E., Black & Veatch:'; Halpin, Mike
Cc: Cascio, Tom; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Orlando Utilities Commission (OUC) - DEP File No. 0950137-015-AC-FINAL

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Thank you,

DEP, Bureau of Air Regulation

Harvey, Mary

From: Forney.Kathleen@epamail.epa.gov
Sent: Thursday, February 07, 2008 1:32 PM
To: Harvey, Mary
Subject: Re: FW: Orlando Utilities Commission (OUC) - DEP File No. 0950137-015-AC-FINAL

Thanks.

Katy R. Forney
Air Permits Section
EPA - Region 4
61 Forsyth St., SW
Atlanta, GA 30303

Phone: 404-562-9130
Fax: 404-562-9019

"Harvey, Mary" <Mary.Harvey@dep.state.fl.us> 02/07/2008 01:30 PM

To: Kathleen Forney/R4/USEPA/US@EPA
cc:
Subject: FW: Orlando Utilities Commission (OUC) - DEP File No. 0950137-015-AC-FINAL

Thanks,
Mary

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey. Thank you in advance for completing the survey.

From: Harvey, Mary
Sent: Thursday, February 07, 2008 12:29 PM
To: 'Denise Stalls, OUC:'; Bradner, James; 'Lori Cunniff, Orange County EPD:'; 'Jim Little, EPA Region 4:'; 'Katy Forney, EPA Region 4:'; 'Larry Todd Newland, P.E., Black & Veatch:'; Halpin, Mike
Cc: Cascio, Tom; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Orlando Utilities Commission (OUC) - DEP File No. 0950137-015-AC-FINAL

Harvey, Mary

From: Lori.Cunniff@ocfl.net
Sent: Monday, February 11, 2008 7:51 PM
To: Harvey, Mary
Subject: RE: Orlando Utilities Commission (OUC) - DEP File No. 0950137-015-AC-FINAL

Received

Lori Cunniff, Manager
Orange County Environmental Protection Division
800 Mercy Drive
Orlando, FL 32808
407-836-1405
Please consider the environment before printing this e-mail.

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Thursday, February 07, 2008 12:29 PM
To: Denise Stalls, OUC:; Bradner, James; Cunniff, Lori; Jim Little, EPA Region 4:; Katy Forney, EPA Region 4:; Larry Todd Newland, P.E., Black & Veatch:; Halpin, Mike
Cc: Cascio, Tom; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Orlando Utilities Commission (OUC) - DEP File No. 0950137-015-AC-FINAL

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Harvey, Mary

From: Stalls, Denise M. [DStalls@ouc.com]
Sent: Wednesday, February 13, 2008 2:12 PM
To: Harvey, Mary
Subject: RE: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Hi Mary

I am just back in the office from vacation time off. Thank you for continued support of OUC's projects.

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Wednesday, February 13, 2008 10:31 AM
To: Stalls, Denise M.; Halpin, Mike
Subject: FW: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Good Morning!!

Please email me your read receipt if you have received this permit. I need the read receipt to complete the file.

Thanks,
Mary

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey. Thank you in advance for completing the survey.
From: Harvey, Mary
Sent: Thursday, February 07, 2008 3:47 PM
To: 'Denise Stalls, OUC:'; Bradner, James; 'Lori Cunniff, Orange County EPD:'; 'Jim Little, EPA Region 4:'; 'Katy Forney, EPA Region 4:'; 'Larry Todd Newland, P.E., Black & Veatch:'; Halpin, Mike
Cc: Read, David; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Dear Sir/Madam:

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The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be

Harvey, Mary

From: Halpin, Mike
To: Harvey, Mary
Sent: Wednesday, February 13, 2008 10:36 AM
Subject: Read: FW: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Your message

To: 'dstalls@ouc.com'; Halpin, Mike
Subject: FW: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)
Sent: 2/13/2008 10:31 AM

was read on 2/13/2008 10:36 AM.

BLACK & VEATCH
building a world of difference™

ENERGY • WATER • INFORMATION • GOVERNMENT

RECEIVED
FEB 05 2007
BUREAU OF AIR REGULATION

Orlando Utilities Commission
Stanton Amendments

B&V Project 143799
February 2, 2007

Mr. Michael Halpin, P.E.
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road
Suite 649, MS-48
Tallahassee, FL 32399-2400

Subject: Amendment Requests
Stanton Energy Center

Dear Mr. Halpin:

Black & Veatch, on behalf of the Orlando Utilities Commission (OUC), requests per this application, the Department consider amending the Curtis H. Stanton Energy Center Site Certification (PA 81-14) to allow installation of a rail siding, railcar maintenance facility, fly ash blending operations, and use of pet coke/PRB in Units 1-2. These activities are described in further detail in the attached requests (Requests 8-11).

As the Department is aware, this is the fourth submittal for a number of projects that OUC is considering which are focused on improvements at or related to the Stanton facility. The first submittal (Requests 1-2) to the Bureau of Air Regulation on September 1, 2006, concerned the addition of a dibasic acid (DBA) additive system and a neural network-based combustion optimization system on Units 1 and 2. These requests were approved as modifications. The second submittal (Requests 3-4) on November 14, 2006, concerned reconductoring of the Curry Ford to Stanton transmission line and a culvert installation across the Stanton railroad corridor. These requests were approved as amendments. The third submittal (Requests 5-7) on December 14, 2006, concerned a scrubber upgrade, low NO_x burners, and forced oxidation on Units 1-2. These requests are in processing awaiting submittal of a supporting air permit application, which is included herein as Request 12.

OUC appreciates the opportunity to work with the Department in obtaining the required approvals for improved operations at the Stanton Energy Center. Should you have any questions or concerns regarding this submittal, please do not hesitate to contact me at (913) 458-7563 or Denise Stalls of OUC at (407) 737-4236.

Sincerely,

Mike Soltys
Site Certification Coordinator

Enclosures

cc: Fred Haddad, OUC
Denise Stalls, OUC
Buck Oven, FDEP
Myron Rollins

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
   Denise M Stalls, VP, Environmental Affairs

2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: Orlando Utilities Commission
   Street Address: P.O. Box 3193
   City: Orlando State: FL Zip Code: 32802

3. Owner/Authorized Representative Telephone Numbers...
   Telephone: (407)737-4236 ext. Fax: (407) 384-4062

4. Owner/Authorized Representative Email Address: dstalls@ouc.com

5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

   Denise M Stalls — Signature

   1/26/07 — Date

Professional Engineer Certification

1. Professional Engineer Name: Larry Todd Newland
   Registration Number: 64188

2. Professional Engineer Mailing Address...
   Organization/Firm: Black & Veatch
   Street Address: 11000 Regency Parkway, Suite 100
   City: Cary State: NC Zip Code: 27518

3. Professional Engineer Telephone Numbers...
   Telephone: (919) - 462-7415 ext. Fax: (919) - 468-9212

4. Professional Engineer Email Address: newlandlt@bv.com

5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☑, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature 01-26-2007
Date

(seal)

* Attach any exception to certification statement.

Sheplak, Scott

From: Linero, Alvaro
Sent: Friday, June 08, 2007 6:31 PM
To: Sheplak, Scott; Adams, Patty
Subject: FW: Request for Extension, Project Number 0950137-012-AC

-----Original Message-----
From: Falcone, Salvatore J. (Sal) [mailto:FalconeSJ@bv.com]
Sent: Fri 6/8/2007 5:55 PM
To: Linero, Alvaro
Cc: Halpin, Mike; Denise Stalls @ OUC; Louis Brown @ OUC; Soltys, J. Michael (Mike); Rollins, Myron R.; Hillman, Timothy M.; O'Neal, Brian D.
Subject: Request for Extension, Project Number 0950137-012-AC

Mr. Linero,

On behalf of Orlando Utilities Commission (OUC), this is a request for extension of time for providing a response to the FDEP Request for Additional Information (RAI) dated March 7, 2007. The subject of FDEP's RAI was an air construction permit application for emissions reductions and facility operations improvement projects at OUC's Curtis H. Stanton Energy Center, near Orlando. We had completed responses to all of the FDEP questions, but some recent decisions regarding future fuel use affected several of those responses, including all of emissions tables, and required additional analysis of future emissions. In fact, there will be the need to perform dispersion modeling and submit a revision to the air construction permit.

Because of these factors, we respectfully seek an extension of time totaling ninety (90) days to September 3, 2007. This will allow us ample time to complete all of the technical analyses, revise the permit application, and provide clear and concise responses to the RAI. Should you have any questions, please call Mike Soltys of Black & Veatch at 913-458-7563.

Salvatore Falcone
Black & Veatch Corporation
Phone & Fax = 913-458-3380
Email = falconesj@bv.com

6. Flyash/Blending Facility -- amendment request #10, originally submitted 2/2/07, received RAI 3/7/07. These improvements are proposed to allow the blending of Units 1 & 2 ashes with imported ashes to produce larger quantities of high quality, marketable, pozzolan grade fly ash (a non-cementitious additive to concrete that partially replaces cement and improves concrete durability and workability), and reduce quantities of fly ash going to the onsite landfill.

7. Petcoke & PRB Coal/Coal Handling/Blending -- amendment request #11, not currently pursued by OUC.

8. Fuel Tank Relocation -- amendment request #14, not yet submitted, may have small air emissions impact due to gasoline working and breathing losses.

Salvatore Falcone
Black & Veatch Corporation
Phone & Fax = 913-458-3380
Email = falconesj@bv.com

From: Soltys, J. Michael (Mike)
Sent: Wednesday, August 29, 2007 1:02 PM
To: O'Neal, Brian D.; Hillman, Timothy M.
Cc: Falcone, Salvatore J. (Sal); Rollins, Myron R.
Subject: FW: OUC-Stanton

fyi
Sal/Brian - Can you guys prepare the requested list?

From: Linero, Alvaro [mailto:Alvaro.Linero@dep.state.fl.us]
Sent: Wednesday, August 29, 2007 12:58 PM
To: Soltys, J. Michael (Mike)
Cc: Denise Stalls @ OUC; Lorraine Guise @OUC; Sheplak, Scott
Subject: RE: OUC-Stanton

Hello Mike:

I am passing this along to Scott Sheplak.

It may be time to make an **updated list** and discuss the changes we (Air) are reviewing.

Hope we aren't seeing holdups due to misunderstandings of what needs an air permit.

Hope the hold-up isn't trying to answer all question for all media simultaneously.

I recall when we had to act fast (like on the superheater bank replacement project) it was done in record time because of streamlined communication.

If we focus on the air permit changes then the job that the Siting Office has to do pursuant to those air permits becomes more routine.

We know that there are some changes that involve other media and do not involve air permitting.

Feel free to call.

You too Lorraine or Denise.

To: Falcone, Salvatore J. (Sal)
Cc: Denise Stalls @ OUC; Rollins, Myron R.; Soltys, J. Michael (Mike); O'Neal, Brian D.; Louis Brown @ OUC; LGuise@ouc.com; Sheplak, Scott
Subject: RE: OUC-Stanton Air Permitting Changes

Thanks Sal.

We'll look this over and work on a schedule to get this done.

Sounds like forced oxidation is tops on your list followed by LNB/OFA.

I'm thinking the forced oxidation approval will look much like the DiBasic Acid and the LNB/OFA will need a BACT determination for CO.

Just let us know when you want to talk and we'll be ready. At worts, we might have to juggle a few things around but otherwise not especially loaded calendar.

Thanks.

Al Linero.

-----Original Message-----
From: Falcone, Salvatore J. (Sal) [mailto:FalconeSJ@bv.com]
Sent: Fri 8/31/2007 5:36 PM
To: Linero, Alvaro
Cc: Denise Stalls @ OUC; Rollins, Myron R.; Soltys, J. Michael (Mike); O'Neal, Brian D.; Louis Brown @ OUC; LGuise@ouc.com
Subject: OUC-Stanton Air Permitting Changes

Mr. Linero,
In response to your email to Mike Soltys (below), we have updated the list of air permitting issues, both resolved and pending. We feel it would be a good idea to call you to discuss these. If you can give me some available times next week (Sept 4-7), I will set up a conference call with you, OUC, and Black & Veatch. Please let me know what days and times look good.

Air Permitting-Related Projects in Site Certification Amendment Requests:

1. Neural Network -- The permit to install issued 1/10/07.

2. Dibasic Acid -- The permit to install issued 1/10/07.

3. Unit 1 Scrubber Upgrade, Phase 2 -- This was Amendment Request #5, originally submitted to DEP 12/14/06. Desired construction start date is March 2008. Phase 2 of the Scrubber Upgrade Project involves installation of a new distribution tray in conjunction with spray header modifications on the Unit 1 absorber modules. This modification is expected to reduce the operating costs of the Unit 1 flue gas desulfurization (FGD) system and improve its reliability. In addition, the modifications will provide flexibility to meet possible future sulfur dioxide reduction (SO_2) requirements and will increase flexibility in coal selection.
4. LowNOx Burners and Overfire Air -- amendment request #6, originally submitted to DEP 12/14/06. Desired construction start date is March 2008 for Unit 2 and October 2008 for Unit 1. The purpose of installing the Low NO_x Burners and Overfire Air System is to lower the level of NO_x emissions from Stanton Energy Center Units 1 and 2 while avoiding adverse effects to the boilers and the unit's performance/reliability.

5. Forced Oxidation -- amendment request #7, originally submitted 12/14/07 and ready for construction to begin in September. The function of the Forced Oxidation Air System is to provide the additional air needed to increase oxidation of the sulfite ions to sulfate within the scrubber slurry. The advantages of adding a forced oxidation system include the reduced FGD system maintenance through reduced scaling and plugging in the modules and improved byproduct solids handling properties due to higher quality.

Friday, Barbara

From: Harvey, Mary

Sent: Thursday, June 14, 2007 2:13 PM

To: 'dstalls@ouc.com'; 'newlandlt@bv.com'; 'soltysjm@bv.com'; Halpin, Mike; Bradner, James; 'lori.cunniff@ocfl.net'

Cc: Sheplak, Scott; Adams, Patty; Gibson, Victoria

Subject: Orlando Utilities Commission - DEP #0950137-012-AC

Attachments: Ltr. Denise Stalls - Orlando Utilities Commission - Project #0950137-012-AC.pdf

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: http://www.adobe.com/products/acrobat/readstep.html.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

Friday, Barbara

From: Harvey, Mary
Sent: Friday, June 15, 2007 12:45 PM
To: Adams, Patty
Subject: FW: Orlando Utilities Commission - DEP #0950137-012-AC

From: Stalls, Denise M. [mailto:DStalls@ouc.com]
Sent: Friday, June 15, 2007 12:07 PM
To: Harvey, Mary
Subject: RE: Orlando Utilities Commission - DEP #0950137-012-AC

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Thursday, June 14, 2007 2:13 PM
To: Stalls, Denise M.; newlandlt@bv.com; soltysjm@bv.com; Halpin, Mike; Bradner, James; lori.cunniff@ocfl.net
Cc: Sheplak, Scott; Adams, Patty; Gibson, Victoria
Subject: Orlando Utilities Commission - DEP #0950137-012-AC

Dear Sir/Madam:

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http://www.adobe.com/products/acrobat/readstep.html.

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Thank you,

DEP, Bureau of Air Regulation

Friday, Barbara

From: Harvey, Mary
Sent: Thursday, June 14, 2007 2:15 PM
To: Sheplak, Scott; Adams, Patty
Subject: FW: Out of Office AutoReply: Orlando Utilities Commission - DEP #0950137-012-AC

From: Lori.Cunniff@ocfl.net [mailto:Lori.Cunniff@ocfl.net]
Sent: Thursday, June 14, 2007 2:14 PM
To: Harvey, Mary
Subject: Out of Office AutoReply: Orlando Utilities Commission - DEP #0950137-012-AC

Thank you for the email. I will be out of the office until June 20, 2007 Please contact the Assistant Manager, Dennis Weatherford, at 407-836-1404 for further assistance, or my assistant, Michelle Narvaez at 407-836-1405.
Lori

Friday, Barbara

From: Harvey, Mary
Sent: Tuesday, June 19, 2007 10:58 AM
To: Adams, Patty
Subject: FW: Orlando Utilities Commission - DEP #0950137-012-AC

From: Lori.Cunniff@ocfl.net [mailto:Lori.Cunniff@ocfl.net]
Sent: Tuesday, June 19, 2007 12:38 AM
To: Harvey, Mary
Subject: Read: Orlando Utilities Commission - DEP #0950137-012-AC

Your message

To: Lori.Cunniff@ocfl.net
Subject:

was read on 6/19/2007 12:38 AM.

Friday, Barbara

From: Harvey, Mary
Sent: Friday, June 15, 2007 9:05 AM
To: Adams, Patty; Sheplak, Scott
Subject: FW: Orlando Utilities Commission - DEP #0950137-012-AC

From: Soltys, J. Michael (Mike) [mailto:soltysjm@bv.com]
Sent: Thursday, June 14, 2007 2:17 PM
To: Harvey, Mary
Cc: Denise Stalls @ OUC; Halpin, Mike; Seiler, Ann
Subject: RE: Orlando Utilities Commission - DEP #0950137-012-AC

Message received and acknowledged.

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Thursday, June 14, 2007 1:13 PM
To: dstalls@ouc.com; Newland, Larry T. (Todd); Soltys, J. Michael (Mike); Halpin, Mike; Bradner, James; lori.cunniff@ocfl.net
Cc: Sheplak, Scott; Adams, Patty; Gibson, Victoria
Subject: Orlando Utilities Commission - DEP #0950137-012-AC

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The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: http://www.adobe.com/products/acrobat/readstep.html.

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Thank you,

DEP, Bureau of Air Regulation

Friday, Barbara

From: Harvey, Mary
Sent: Friday, June 15, 2007 9:05 AM
To: Adams, Patty
Subject: FW: Orlando Utilities Commission - DEP #0950137-012-AC

From: Newland, Larry T. (Todd) [mailto:NewlandLT@bv.com]
Sent: Thursday, June 14, 2007 2:17 PM
To: undisclosed-recipients
Subject: Read: Orlando Utilities Commission - DEP #0950137-012-AC

Your message

To: NewlandLT@bv.com
Subject:

was read on 6/14/2007 2:17 PM.

Florida Department of
Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

June 14, 2007

SENT BY ELECTRONIC MAIL - RECEIVED RECEIPT REQUESTED

dstalls@ouc.com

Ms. Denise Stalls
Vice President Environmental Affairs
Orlando Utilities Commission
P.O. Box 3193
Orlando, FL 32802

Re: Project Number 0950137-012-AC
Stanton Energy Center
Emission Reductions and Facility Operations Improvement Projects

Dear Ms. Stalls:

On February 6, 2007, the Department received the air construction (AC) permit application for the proposed projects at the Stanton Energy Center. The application was deemed incomplete and the Department requested additional information on March 7, 2007. You are reminded that the permit processing time clock has stopped for this project.

We received the request for additional time in which to respond to the additional information items on June 8, 2007 (copy enclosed). In this request, you indicated recent decisions on future fuel use affect the responses and air dispersion modeling is also now required. Your request for an additional ninety (90) days in which to respond to **September 3, 2007**, is granted.

As a reminder, Rule 62-4.055(1), F.A.C. states the following:

"*The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to ninety days. Additional extensions shall be granted for good cause shown by the applicant. A showing that the applicant is making a diligent effort to obtain the requested additional information shall constitute good cause. Failure of an applicant*

to provide the timely requested information by the applicable deadline shall result in denial of the application."

If you should have any questions, please contact me at 850/921-9532 and Ms. Deborah Nelson regarding modeling items at 850/921-9537. We would be glad to meet with you and your staff to discuss this project.

Sincerely,

Scott M. Sheplak, P.E.
Air Permitting South Section
Bureau of Air Regulation
Mail Station #5505
2600 Blair Stone Road
Tallahassee, FL 32399
Scott.Sheplak@dep.state.fl.us

/sms

Enclosure

copy to: Larry Todd Newland, P.E., Black & Veatch Corp., newlandlt@bv.com
Mike Soltys, Black & Veatch Corp., soltysjm@bv.com
Mike Halpin, P.E., DEP-Siting Office, Mike.Halpin@dep.state.fl.us
Jim Bradner, P.E., DEP-CD Office: James.Bradner@dep.state.fl.us
Lori Cunniff, Orange County EPD: lori.cunniff@ocfl.net

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Orlando Utilities Commission
Stanton Amendments

B&V Project 143799
August 31, 2007

RECEIVED
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BUREAU OF AIR REGULATION

Mr. Scott M. Sheplak, P.E.
Bureau of Air Regulation
Florida Department of Environmental Protection
Mail Station #5505
2600 Blair Stone Road
Tallahassee, FL 32399

Subject: OUC Curtis Stanton Energy Center PA81-14
Project Number 0950137-012-AC
Emissions Reductions and Facility Operations Improvement Projects

Dear Mr. Sheplak:

Black & Veatch, on behalf of the Orlando Utilities Commission (OUC), is providing information in response to your Request for Additional Information (RAI) dated March 7, 2007. The request addressed the air construction permit application received by your Department on February 6, 2007. On June 8, 2007, Black & Veatch, on behalf of OUC, requested by electronic mail to Mr. Al Linero a ninety (90) day extension of time to respond to the RAI. In your letter to Ms. Denise Stalls of OUC dated June 14, 2007, the extension of time to September 3, 2007 was granted.

Your RAI letter of March 7 contained twelve (12) questions, most of which were answered in a subsequent correspondence sent to you on August 9, 2007. The enclosed submittal completes the response to Questions 1, 2, 4, and 7. All of the aforementioned correspondence is attached for your reference and convenience.

This submittal includes:

- Updated response to Questions 4 and 7 in the RAI dated March 7, 2007.
- Results of a Best Available Control Technology analysis.
- Results of an Air Quality Impact Analysis and Additional Impact Analysis.
- Revised pages 6, 11, 22, and 23 from the air construction permit application submitted on February 6, 2007.
- Certification page signed and sealed by a professional engineer (Question 1).
- Electronic files of the entire submittal, including dispersion modeling files, on a compact disk (Question 2).

The compact disk (CD) contains all of the files included this submittal plus pertinent files from the February submittal. Two of the files contained in that early submittal are not relevant to this one. One, the railroad siding amendment request, does not have any air quality implications. The other, the railcar maintenance facility amendment request, has been formally withdrawn from consideration.

Here is a list of the files and file names contained on the enclosed CD:

- (File) 070831 Response to 070307 RAI.pdf
- (File) 070809 Response to 070307 RAI.pdf
- (File) 070614 Grant of Extension from Sheplak.pdf
- (File) 070307 RAI from Sheplak.pdf
- (Folder with 2 files) Request 10 – Headwaters-Flyash Blending (2-5-07)
- (Folder with 6 files) Request 12 – Air Permit Application (2-5-07)

We believe this submittal represents an adequate response to the four questions cited above. However, should you or others at the agency require additional information, please don't hesitate to contact us by calling me at (913) 458-7563 or Denise Stalls of OUC at (407) 737-4236.

Thank you for continuing to work with us in resolving these technical and permitting issues.

Sincerely,

Mike Soltys
Site Certification Coordinator

Enclosures

cc: Al Linero, FDEP
Mike Halpin, FDEP
Ann Seiler, FDEP
Denise Stalls, OUC
Lorraine Guise, OUC
Louis Brown, OUC
Myron Rollins, Black & Veatch
Brian O'Neal, Black & Veatch
John Davisson, Black & Veatch
Salvatore Falcone, Black & Veatch

Question 4: Table 3-1 on page 3-2 lists the significant emission rates (SERs) and Section 3.3 discusses emission changes however, an actual estimate of emission changes was not provided. Provide an estimate of emissions after the Project to compare the estimated emissions to the SERs in order to show that PSD will not be triggered. Prepare a table showing the estimated emissions compared to the SERs.

Response: On December 31, 2002, the United States Environmental Projection Agency (USEPA) substantially reformed the Prevention of Significant Deterioration (PSD) program, including the manner in which a project's emissions increase is determined. Florida amended its rules, effective February 2006, to address the USEPA PSD reforms.

In terms of PSD applicability, a project at an existing major source will not be subject to PSD review if it does not result in a significant emissions increase. In general, a project's emissions increase is determined as the difference between its baseline actual emissions (BAE) and its future projected actual emissions (PAE). One is also allowed to consider excludable emissions (EE) when making this comparison.

The starting point for this type of analysis at the Stanton Energy Center is the determination of the baseline actual emissions (BAE) for Units 1 and 2 combined. For this analysis, the BAE emissions were determined using historical emissions data and the methodology set forth in the current PSD regulations. The historical emissions data used were the continuous emissions monitoring system (CEMS) data for SO_2 and NO_x emissions found on the USEPA Clean Air Markets web site and in the annual operating report (AOR) for all other pollutants. The BAE period is chosen on a pollutant by pollutant basis as the 24-month period within the five year look-back period that has the highest emissions of that pollutant based on historical emissions data. The BAE period can be different for each pollutant but must be the same for both units for each individual pollutant. The period calendar years 2004 and 2005 were used as the BAE period for this discussion. In general, this period saw a relatively high level of operation for both Unit 1 and Unit 2. Table 1 shows the BAE period, Unit 1 BAE emissions, Unit 2 BAE emissions, and the combined BAE emissions for each pollutant.

Table 1
BAE Emissions

Pollutant	BAE Period	Unit 1 BAE Heat Input (mmBtu/yr)	Unit 1 BAE Emission Level (tpy)	Unit 1 BAE Emission Level (lb/mmBtu)	Unit 2 BAE Heat Input (mmBtu/yr)	Unit 2 BAE Emission Level (tpy)	Unit 2 BAE Emission Level (lb/mmBtu)	Combined BAE Emission Levels (tpy)
NO_x	Jan 2004 – Dec 2005	32,489,743	6,696.4	0.412	31,989,507	2,629.0	0.164	9325.4
VOC	Jan 2004 – Dec 2005	32,489,743	46.60	0.0029	31,989,507	44.2	0.0028	90.8
PM_{10}	Jan 2004 – Dec 2005	32,489,743	51.9	0.0032	31,989,507	94.4	0.0059	146.3
PM	Jan 2004 – Dec 2005	32,489,743	53.1	0.0033	31,989,507	95.4	0.0060	148.5
SO_2	Jan 2004 – Dec 2005	32,489,743	5,166.2	0.318	31,989,507	2,639.8	0.165	7,806.0
CO	Jan 2004 – Dec 2005	32,489,743	361.0	0.022	31,989,507	392.1	0.025	753.1

Once the BAE is established, the next step is to determine the EE based on the projected operation of each unit without the project. Essentially, the rules allow one to exclude from the emissions increase calculation those emission increases that would have occurred without the project. As will be discussed shortly, the EE can be considered an adjusted BAE and is subtracted from the projected actual emissions (PAE) to determine the project emission increases. As a basis for determining the EE it is assumed that without the project, the maximum operation of either unit would at least be as great as the maximum 12-month period during the look-back period. Therefore, for each unit the CEMS data was used to determine the maximum expected annual heat input to each unit. The maximum projected annual heat input rates are 37,316,142 mmBtu and 34,881,583 mmBtu for Unit 1 and Unit 2, respectively. These heat input rates, along with the respective BAE lb/mmBtu emissions level for each pollutant were used to determine the EE levels, as shown in Table 2.

Table 2 EE			
Pollutant	Unit 1 EE Emission Level (tpy)	Unit 2 EE Emission Level (tpy)	Combined EE Emission Levels (tpy)
NO_x	7,687.1	2,860.3	8,300*
VOC	54.1	48.8	102.9
PM_{10}	59.7	102.9	162.6
PM	61.6	104.6	166.2
SO_2	5,933.3	2,877.7	8,811.0
CO	410.5	436.0	846.5
Notes: * The NOx EE is set equal to the permit limit taken as part of the netting analysis for Stanton B.			

Once the BAE and EE are established, the next step is to determine the PAE values. In determining the PAE for each unit, one needs to differentiate between the projected increases due to natural demand growth versus the increases due to the project. But because the project is not expected to increase demand growth, the operation of the units either with or without the project is expected to be the same. Therefore, the projected unit operation is the same as that used in the EE determination, 37,316,142 mmBtu and 34,881,583 mmBtu for Unit 1 and Unit 2, respectively. Also, since there is no short-term hourly or lb/mmBtu type of emissions increase for NO_x, VOC, PM/PM_{10}, or SO_2 associated with the project, the unit's calculated PAE levels shown in Table 3 are identical to the EE levels. The exception here is CO.

As discussed in the February 2007 application, historical emissions of CO from Units 1 and 2 have been based on the appropriate AP-42 emission factor. This emission factor is on a lb/ton basis and its use results in a relatively low estimated CO emissions rate. While it is dependent on the coal heating value, using the AP-42 emission factor of 0.5 lb/ton with a 12,500 Btu/lb coal results in an estimated CO emission rate of 0.02 lb/mmBtu. This is similar to the lb/mmBtu values for CO presented in Table 1. Because emissions of CO data from conventional power plants are much less reliable than other pollutants such as NO_x and SO_2, in going forward with the projection of emissions OUC is using the vendor guarantee emission rates for CO after installation of the Low NO_x Burner/Overfire Air (LNB/OFA) systems. Specifically, the guarantees are Unit 1 at 0.18 lb/mmBtu and Unit 2 at 0.15 lb/mmBtu on a 30-day rolling average basis.

Table 3 PAE			
Pollutant	Unit 1 PAE Emission Level (tpy)	Unit 2 PAE Emission Level (tpy)	Combined PAE Emission Levels (tpy)
NO_x	7,687.1	2,860.2	8,300*
VOC	54.1	48.8	102.9
PM_{10}	59.7	102.9	162.6
PM	61.6	104.6	166.2
SO_2	5,933.3	2,877.7	8,811.0
CO**	3,358.5	2,616.1	5,974.6
Notes: * The NOx PAE is set equal to the permit limit taken as part of the netting analysis for Stanton B. ** CO PAE is based on vendor guarantee of CO emissions post installation of the LNB/OFA systems on Units 1 and 2. Specifically, Unit 1 at 0.18 lb/mmBtu and Unit 2 at 0.15 lb/mmBtu.			

Once the BAE, EE, and PAE values are determined, the next step is to run the calculations to determine the emissions increase to compare with the PSD SER levels.

Table 4 PAE to EE Comparison						
Pollutant	Combined BAE Emission Levels (tpy)	Combined PAE Emission Levels (tpy)	Combined EE Levels (tpy)	Project Emissions Increase (tpy)	PSD SER (tpy)	PSD Major Modification (Yes/No)
NO_x	9325.4	8,300*	8,300*	-1025.4	40	No
VOC	90.8	102.9	102.9	0	40	No
PM_{10}	146.3	162.6	162.6	0	15	No
PM	148.5	166.2	166.2	0	25	No
SO_2	7,806.0	8,811.0	8,811.0	0	40	No
CO	753.1	5,974.6	846.5	5,128.1	100	Yes
Notes: * The NOx PAE and EE are set equal to the permit limit taken as part of the netting analysis for Stanton B.						

Note that a primary focus of the modifications requested with this application (including the February 2007 submittal) are to reduce NO_x and SO_2 emissions and that is reflected somewhat in the decrease in NO_x emissions shown in Table 4. However, because the purpose of this analysis is simply to demonstrate that emission increases for NO_x, VOC, PM/PM_{10}, and SO_2 will be below the SERs and thus not be considered a major modification for PSD, the full effect of NO_x and SO_2 reductions are not built into this analysis. The expected project benefits to

future NO_x and SO_2 emissions are covered in more detail in responses to items 5, 7, and 8 of the request for additional information submitted to the Department on August 9, 2007.

As discussed previously, because of the historically low CO emissions reporting that went into creating the BAE and the EE and the use of vendor guarantees for CO emissions after installation of the LNB/OFA systems in determining the PAE, the resulting emissions increase for CO illustrated in Table 4 is greater than 100 tpy (the PSD SER for CO). As such, CO is subject to the PSD permitting process for the modification. OUC is submitting via this response a request for a PSD permit modification for CO. The necessary components of the PSD application for CO, including the BACT analysis, air dispersion modeling analysis, additional impacts analysis, and updated FDEP forms (from the February 2007 application) are contained in Attachments 1, 2, and 3.

These additional pieces of information, along with this response, the responses submitted to the Department on August 9, 2007, and the original application submitted in February comprise a complete application submittal for your review and approval.

Attachment 1

BACT Analysis

1.0 Best Available Control Technology (BACT) Analysis

1.1 Introduction and Methodology

As required under the NSR/PSD regulations, the BACT analysis presented herein employed a top-down, five-step analysis to determine the appropriate emission control technologies and emissions limitations for the Project. The BACT analysis was conducted for Units 1 and 2 and limited to the pollutant CO as that is the subject of this PSD application. The BACT analysis was conducted in accordance with the United States Environmental Protection Agency's (USEPA's) recommended methodology:

- Step 1--Identify All Control Technologies.
- Step 2--Eliminate Technically Infeasible Options.
- Step 3--Rank Remaining Control Technologies by Control Effectiveness.
- Step 4--Evaluate Most Effective Controls.
- Step 5--Select BACT.

Step 1--Identify All Control Technologies

The first step in a "top-down" analysis is to identify all available control options for the emission unit in question. The available control options consist of those air pollution control technologies or techniques with a practical potential for application to the emission unit and the regulated pollutant under evaluation. The available control technologies and techniques include lower emitting processes, practices, and post-combustion controls. Lower emitting practices can include fuel cleaning, treatment, or innovative fuel combustion techniques that are classified as pre-combustion controls. Post-combustion controls are add-on controls for the pollutant being controlled.

Step 2--Eliminate Technically Infeasible Options

The second step of the "top-down" analysis is to identify the technical feasibility of the control options identified in Step 1, which are evaluated with respect to source-specific factors. A control option that is determined to be technically infeasible is eliminated. "Technically infeasible" is defined by a clearly documented case of a control option that has technical difficulties which would preclude its successful use because of physical, chemical, and engineering principles. After completion of this step, technically infeasible options are then eliminated from the BACT review process.

A "technically feasible" control option is defined as a control technology that has been installed and operated successfully at a similar type of source of comparable size under review (demonstrated). If the control option cannot be demonstrated, the analysis gets more involved. When determining if a control option has been demonstrated, two

key concepts need to be analyzed. The first concept, availability, is defined as technology that can be obtained through commercial channels or is otherwise available within the common sense meaning of the term. A technology that is being offered commercially by vendors or is in licensing and commercial demonstration is deemed an available technology. Technologies that are in development (concept stage/research and patenting) and testing stages (bench scale/laboratory testing/pilot scale testing) are classified as not available. The second concept, applicability, is defined as an available control option that can reasonably be installed and operated on the source type under consideration. In summary, a commercially available technology is applicable if it has been previously installed and operated at a similar type of source of comparable size, or one with similar gas stream characteristics.

Step 3--Rank Remaining Control Technologies by Control Effectiveness

The third step of the "top-down" analysis is to rank all the remaining control alternatives not eliminated in Step 2, based on control effectiveness for the pollutant under review. The list to determine the rankings of the control technologies should include the following: control effectiveness (percent of pollutant removed), expected emission rate (tons per year), expected emission reduction (tons per year), energy impacts (Btu, kWh), environmental impacts (other media and the emissions of toxic and hazardous air emissions), and economic impacts (total cost-effectiveness and incremental cost-effectiveness). However, if the BACT analysis proposes the top control alternative, from an emission reduction standpoint, there would be no need to provide cost and other detailed information in regard to other control options that would provide less control.

Step 4--Evaluate Most Effective Controls

Once the control effectiveness is established in Step 3 for all the feasible control technologies identified in Step 2, additional evaluations of each technology are performed to make a BACT determination in Step 4. The impacts of the technology implementation on the viability of the control technology at the source are evaluated. The evaluation process of these impacts is also known as "Impact Analysis." The following impact analyses are performed:

- Energy evaluation of alternatives.
- Environmental evaluation of alternatives.
- Economic evaluation of alternatives.

The first impact analysis addresses the energy evaluation of alternatives. The energy impact of each evaluated control technology is the energy penalty or benefit resulting from the operation of the control technology at the source. Direct energy impacts include such items as the auxiliary power consumption of the control technology

and the additional draft system power consumption to overcome the additional system resistance of the control technology in the flue gas flow path. The costs of these energy impacts are defined either in additional fuel costs or the cost of lost generation, which impacts the cost-effectiveness of the control technology.

The second impact analysis addresses the environmental evaluation of alternatives. Non-air quality environmental impacts are evaluated to determine the cost to mitigate the environmental impacts caused by the operation of a control technology. Examples of non-air quality environmental impacts include polluted water discharge and solids or waste generation. The procedure for conducting this analysis should be based on a consideration of site-specific circumstances.

The third and final impact analysis addresses the economic evaluation of alternatives. This analysis is performed to indicate the cost to purchase and operate the control technology. The capital and operating/annual cost is estimated based on the established design parameters. Information for the design parameters should be obtained from established sources that can be referenced. However, documented assumptions can be made in the absence of references for the design parameters. The estimated cost of control is represented as an annualized cost ($/year) and, with the estimated quantity of pollutant removed (tons/year), the cost-effectiveness ($/tons) of the control technology is determined. The cost-effectiveness describes the potential to achieve the required emissions reduction in the most economical way. The cost-effectiveness compares the potential technologies on an economical basis.

Two types of cost-effectiveness are considered in a BACT analysis: average and incremental. Average cost-effectiveness is defined as the total annualized cost of control divided by the annual quantity of pollutant removed for each control technology. The incremental cost-effectiveness is a comparison of the cost and performance level of a control technology to the next most stringent option. It has a unit of (dollars/incremental ton removed). The incremental cost-effectiveness is a good measure of viability when comparing technologies that have similar removal efficiencies.

Step 5--Select BACT

The highest ranked control technology that is not eliminated in Step 4 is proposed as BACT for the pollutant and emission unit under review.

1.2 Units 1 and 2 Coal Fired Boiler CO BACT Analysis

This section presents the top-down, five-step BACT process used to evaluate and determine the Project's CO emissions limits for Units 1 and 2. As this analysis will

demonstrate, the proposed CO BACT limits for Units 1 and 2 are 0.18 lb/mmBtu and 0.15 lb/mmBtu, respectively.

1.3 Step 1--Identify All Control Technologies

The first step in a top-down analysis, according to the USEPA's October 1990, Draft New Source Review Workshop Manual, is to identify all available control options. Available control options are those air pollution control technologies or techniques with a practical potential for application to the emission units and the CO emission limits that are being evaluated. CO is formed during the combustion process as a result of the incomplete oxidation of the carbon contained in the fuel; or simply, it is the product of incomplete combustion. The following subsections review the CO control technologies.

1.3.1 Good Combustion Controls

As products of incomplete combustion, CO emissions are very effectively controlled by ensuring the complete and efficient combustion of the fuel in the boilers (i.e., good combustion controls). Typically, measures taken to minimize the formation of NO_x during combustion inhibit complete combustion, which increases the emissions of CO. High combustion temperatures, adequate excess air, and good air/fuel mixing during combustion minimize CO emissions. These parameters, however, increase NO_x generation, in accordance with the conflicting goals of optimum combustion to limit CO. In addition, depending on the manufacturer, good combustion controls vary in terms of meeting CO emissions limits.

1.3.2 Oxidation Catalysts

This control process utilizes a platinum/vanadium catalyst that oxidizes CO to CO_2. The process is a straight catalytic oxidation/reduction reaction requiring no reagent. Catalytic CO emissions reduction methods have been proven for use on natural gas and oil fueled combustion turbine sources, but not coal fired boilers. The primary technical challenge for including an oxidation catalyst on a coal fired boiler is the location of the catalyst in a high temperature regime, which would most likely be prior to the economizer. This location, along with the potential fouling effects of the flue gas, would render the catalyst ineffective on even a short-term basis.

1.4 Step 2--Eliminate Technically Infeasible Options

Step 2 of the BACT analysis involves the evaluation of all the identified available control technologies in Step 1 of the BACT analysis to determine their technical feasibility. A control technology is technically feasible if it has been previously installed

and operated successfully at a similar type of source of comparable size, or there is technical agreement that the technology can be applied to the source. Available and applicable are the two terms used to define the technical feasibility of a control technology.

The application of an oxidation catalyst to a coal fired boiler presents many substantial challenges that render this control technology not technically feasible for further consideration as a control alternative for CO. A review of the USEPA RACT/BACT/LAER Clearinghouse (RBLC) reveals that the database contains no record of add-on control equipment for the control of CO, and OUC is not aware of this control technology having ever been applied to a solid fuel boiler. Technical challenges that render an oxidation catalyst control technically infeasible for Units 1 and 2 include the following:

- The oxidation catalyst will not only oxidize CO, but will also oxidize a predominant portion of SO_2 to SO_3. SO_3 in the presence of water (H_2O) forms corrosive and undesirable sulfuric acid vapor emissions. Additionally, the combination of SO_3 with SCR-related ammonia injection (Unit 2) will oxidize even more SO_2 to SO_3 and will likely result in the quick fouling of the air heater and equipment corrosion downstream, and when the flue containing sulfuric acid vapor is cooled, it condenses to form a submicron aerosol mist as it is emitted to the atmosphere. Although not planned at this time, should OUC decide to add additional NO_x controls to Unit 1 such as SCR, the same increased fouling issue would arise.
- Acid gases and trace metals in the flue gas from the combustion of solid fuel will quickly poison the catalyst, making the control technology ineffective in its intended role.

Good combustion controls are considered technically feasible for the control of CO and are considered further in the BACT analysis. CO catalyst is eliminated from further consideration. Table 1-1 summarizes the evaluation of the technically feasible CO options.

Table 1-1 Summary of Step 2 – Eliminate Technically Infeasible Options		
Technology Alternative	Technically Feasible (Yes/No)	
	Available	Applicable
Good Combustion Controls	Yes	Yes
Oxidation Catalyst	Yes	No – There are no documented installations on coal fired boilers that demonstrate it as a viable option.

1.5 Step 3--Rank Remaining Control Technologies by Effectiveness

A search of the information contained in the USEPA BACT/LAER Clearinghouse was conducted to determine the top level of CO control for pulverized coal boilers. A search was also conducted for recently permitted coal fired facilities whose BACT determinations have not yet been included in the current database. The results of this search for coal fired boilers are listed in the Appendix. The data presented in the Appendix show a range of BACT emission limits from 0.10 to 0.25 lb /mmBtu, which indicate the high variability of this pollutant, given the fuel input and boiler design (including fuel type, efficiency, and residence time). The data also provide that the only proposed control for CO in every case is good combustion control.

As previously discussed, CO emissions, as a product of incomplete combustion, are by their nature a function of the specific boiler type and the fuel characteristics, and are thus reflected in the emissions guarantees that vendors are willing to make. Additionally, the values given in the Appendix represent BACT limits for new boilers where as Units 1 and 2 are existing units being retrofitted with Low NO_x Burners/Overfire Air (LNB/OFA) systems for the sole purpose of reducing NO_x emissions as a strategy for compliance with CAIR and as such cannot be optimized as effectively as a new unit given the fixed design considerations of an existing unit. This is illustrated further in the proposed emission rate for Unit 2 of 0.15 lb/mmBtu versus the proposed emission rate for Unit 1, which is almost 10 years older than Unit 2, of 0.18 lb/mmBtu. Both emissions rates are based on vendor guarantees for each specific unit).

Therefore, it is more appropriate to focus on existing units that have recently undergone similar retrofit installations and permit actions. The Department recently issued a draft permit for Lakeland Electric's C.D. McIntosh, Jr. Power Plant for the installation of LNB/OFA on Unit 3. The BACT limit proposed for that unit, based on

vendor guarantee, was 0.20 lb/mmBtu. Similarly, the Department recently established a CO emission rate for Units 1 and 2 of 0.20 lb/mmBtu for the Seminole Generating Station. The guarantees proposed for OUC's Stanton Energy Center Units 1 and 2 are each lower than the recently permitted installations discussed immediately above.

1.6 Step 4--Evaluate Most Effective Controls and Document Results

In the following subsections, the technically feasible control alternatives are evaluated in a comparative approach with respect to their energy, environmental, and economic impacts on the Project.

1.6.1 Energy Evaluation of Alternatives

There are no significant energy impacts that would preclude the use of good combustion controls to limit the emissions of CO.

1.6.2 Environmental Evaluation of Alternatives

As previously discussed, the typical good combustion control measures taken to minimize the formation of CO, namely higher combustion temperatures, additional excess air, and optimum air/fuel mixing during combustion, are often counterproductive to the control of NO_x emissions during combustion. A proper balance of this phenomenon is a necessary task in obtaining and complying with the manufacturer's guarantees, since overly aggressive CO limits can jeopardize NO_x emissions design considerations.

1.6.3 Economic Evaluation of Alternatives

Since there is only one feasible control technology to limit the emissions of CO from Units 1 and 2, a comparative cost analysis is not applicable.

1.7 Step 5--Select CO BACT

OUC has determined that good combustion controls represent CO BACT for the Units 1 and 2. Consistent with the top control (i.e., good combustion practices) identified in Section 1.3, OUC proposes a CO BACT emissions limit of 0.18 lb/mmBtu for Unit 1 and 0.15 lb/mmBtu for Unit 2. The proposed BACT levels are based on LNB/OFA vendor guarantees for each of the units subsequent to the installation of the NO_x control technologies. Table 1-2 summarizes the CO BACT determinations for Units 1 and 2.

Table 1-2 Units 1 and 2 CO BACT Determinations		
	Emission Limit (lb/mmBtu)	
Control Technology	Unit 1	Unit 2
Good Combustion Controls	0.18	0.15
Note: Emission limits are requested on a 30-day basis.		

Appendix
To Attachment 1

CO Top Down RBLC Clearinghouse Review Results

FACILITY	COMPANY	STATE	FUEL	SIZE (MW)	BOILER TECHNOLOGY	LIMIT (LB/MBTU)	AVERAGING PERIOD	CONTROL TECHNOLOGY	STATUS	NSR BASIS	DATA SOURCE
EAST KENTUCKY POWER COOP., INC./SPURLOCK POWER STA (Unit 4)	EAST KENTUCKY POWER COOP., INC.	KY	Bituminous	300	CFB	0.100	30-Day	GCC	Draft Permit	BACT-PSD	Reg Spreadsheet
HIGHWOOD GENERATING STATION	SOUTHERN MONTANA ELECTRIC GENERATION & TRANSMISSION COOP	MT	Subbituminous	270	CFB	0.100	1-Hr	GCC	Proposed	BACT-PSD	Reg Spreadsheet
INDECK ELWOOD	INDECK ELWOOD	IL	Bituminous	2X330	CFB	0.100		GCC	under appeal - EAB remand	BACT-PSD	Reg Spreadsheet
TRIMBLE COUNTY GENERATINIG STATION	LOUISVILLE GAS & ELECTRIC COMPANY	KY	Subbituminous/Bituminous Blend	750	PC	0.100	3-Hr	GCC	Permit Issued	BACT-PSD	Reg Spreadsheet
THOROUGHBRED GENERATING STATION	THOROUGHBRED GENERATING COMPANY, LLC (PEABODY)	KY	Bituminous	2X750	PC	0.100	30-Day	GCC	Permit issued	BACT-PSD	RBLC
DESERT ROCK ENERGY FACILITY	SITHE GLOBAL	NM	Subbituminous	2X750	PC	0.100	24-Hr	GCC	Proposed	BACT-PSD	Reg Spreadsheet
TOUQUOP ENERGY PROJECT	TOUQUOP ENERGY PROJECT	NV	Subbituminous	750	PC	0.100	24-Hr	GCC	Proposed	BACT-PSD	Reg Spreadsheet
ELY ENERGY CENTER	SIERRA PACIFIC & NV POWER	NV	Subbituminous	2X750	PC	0.100	24-Hr	GCC	Proposed	BACT-PSD	Reg Spreadsheet
MAIDSVILLE	LONGVIEW POWER, LLC	WV	Bituminous	600	PC	0.110	3-Hr	GCC	Permit issued	BACT-PSD	RBLC
SEVIER POWER COMPANY	NEVCO - SEVIER POWER COMPANY	UT	Subbituminous	270	CFB	0.1150	1-Hr	GCC	Permit issued	BACT-PSD	RBLC/Reg Spreadsheet
ELM ROAD GENERATING STATION (EXISTING OAK CREEK FACILITY	WISCONSIN ENERGY	WI	Subbituminous	2X615	PC	0.120		GCC	Permit Issued	BACT-PSD	Reg Spreadsheet
COMANCHE STATION (UNIT 3)	XCEL ENERGY	CO	Subbituminous	750	PC	0.130	8-Hr	GCC	Permit issued	BACT-PSD	Reg Spreadsheet
BIG CAJUN II POWER PLANT	LOUISIANA GENERATING, LLC	LA	Subbituminous	675	PC	0.135	12-Month	GCC	Permit issued	BACT-PSD	RBLC
IATAN GENERATING STATION (UNIT 2)	KANSAS CITY POWER & LIGHT	MO	Subbituminous	800	PC	0.140	30-Day	GCC	Permit issued	BACT-PSD	RBLC
COTTONWOOD ENERGY CENTER	BHP BILLITON	NM	Subbituminous	500	PC	0.140		GCC	Proposed	BACT-PSD	Reg Spreadsheet
SOUTH HEART POWER PROJECT	GREAT NORTHERN POWER DEVELOPMENT	ND	Lignite	500	CFB	0.150		GCC	Proposed	BACT-PSD	Reg Spreadsheet
WYGEN 3	BLACK HILLS CORPORATION	WY	Subbituminous	100	PC	0.150		GCC	Permit issued	BACT-PSD	RBLC
TS POWER PLANT	NEWMONT NEVADA ENERGY INVESTMENT, LLC	NV	PRB	200	PC	0.150	24-Hr	GCC	Permit issued	BACT-PSD	RBLC
HOLCOMB POWER PLANT	SUNFLOWER ELECTRIC POWER	KS	PRB	3x700	PC	0.150		GCC	Draft Permit	BACT-PSD	Reg Spreadsheet
INTERMOUNTAIN POWER GENERATING STATION - UNIT #3	INTERMOUNTAIN POWER SERVICE CORPORATION	UT	Subbituminous/Bituminous Blend	900	PC	0.150	30-Day	GCC	Permit issued	BACT-PSD	RBLC
WYGEN 2	BLACK HILLS CORPORATION	WY	Subbituminous	500	PC	0.150		GCC	Permit issued	BACT-PSD	RBLC
BEECH HOLLOW POWER PROJECT	ROBINSON POWER COMPANY LLC	PA	Waste Coal	272	CFB	0.150		GCC	Permit issued - under appeal	BACT-PSD	RBLC/Reg Spreadsheet
BONANZA	DESERET GENERATION & TRANSMISSION	UT	Waste Coal	110	CFB	0.150		GCC	Proposed	BACT-PSD	Reg Spreadsheet

CO Top Down RBLC Clearinghouse Review Results

FACILITY	COMPANY	STATE	FUEL	SIZE (MW)	BOILER TECHNOLOGY	LIMIT (LB/MBTU)	AVERAGING PERIOD	CONTROL TECHNOLOGY	STATUS	NSR BASIS	DATA SOURCE
HARDIN GENERATOR PROJECT	ROCKY MOUNTAIN POWER, INC.	MT	Subbituminous	116	PC	0.150		GCC	Permit issued	BACT-PSD	RBLC/Reg Spreadsheet
LAMAR LIGHT & POWER POWER PLANT	LAMAR UTILITIES BOARD DBA LAMAR LIGHT & POWER	CO	Subbituminous/Bituminous Blend	44	CFB	0.150	3-Hr (75.3 lb/h)	GCC	Permit issued	BACT-PSD	RBLC
OTTER TAIL POWER COMPANY	OTTER TAIL POWER COMPANY	SD	Subbituminous	600	PC	0.150	3-Hr	GCC	Proposed	BACT-PSD	Reg Spreadsheet
GLADES POWER PARK	FLORIDA POWER & LIGHT COMPANY	FL	Bituminous/Pet Coke	2X980	PC	0.150		GCC	Proposed	BACT-PSD	Reg Spreadsheet
WHITEPINE ENERGY STATION	LS POWER DEVELOPMENT	NV	PRB	3x530	PC	0.150		GCC	Proposed	BACT-PSD	Reg Spreadsheet
SWEPCO UNIT	AMERICAN ELECTRIC POWER (AEP)	AR	PRB	600	PC	0.150		GCC	Proposed	BACT-PSD	Reg Spreadsheet
BULL MOUNTAIN, NO. 1, LLC - ROUNDUP POWER PROJECT	BULL MOUNTAIN DEV. COMPANY	MT	Subbituminous	2X390	PC	0.150		GCC	Permit issued	BACT-PSD	RBLC/Reg Spreadsheet
ESTILL COUNTY ENERGY PARTNERS	ESTILL COUNTY ENERGY PARTNERS	KY	Bituminous	110	CFB	0.150	30-Day	GCC	Proposed	BACT-PSD	Reg Spreadsheet
EAST KENTUCKY POWER COOP., INC./SPURLOCK POWER STA (UNIT 3)	EAST KENTUCKY POWER COOP., INC.	KY	Bituminous	270	CFB	0.150	30-Day	GCC	Permit issued	BACT-PSD	RBLC
CLIFFSIDE	DUKE POWER	NC	Subbituminous/Bituminous Blend	2x800	PC	0.150	3-Hr	GCC	Proposed	BACT-PSD	Reg Spreadsheet
PALATKA GENERATIING STATION	SEMINOLE ELECTRIC COORP	FL	Bituminous	800	PC	0.150	3-Hr	GCC	Proposed	BACT-PSD	Reg Spreadsheet
WPS - WESTON PLANT (UNIT 4)	WISCONSIN PUBLIC SERVICE	WI	PRB	500	PC	0.150	24-Hr	GCC	Permit issued	BACT-PSD	RBLC/Reg Spreadsheet
WHELAN ENERGY CENTER	HASTINGS UTILITIES	NE	Subbituminous	220	PC	0.150		GCC	Permit issued	BACT-PSD	RBLC/Reg Spreadsheet
MUSTANG GENERATING STATION	MUSTANG ENERGY (PEABODY)	NM	Subbituminous	300	PC	0.150		GCC	Under review - BACT unresolved	BACT-PSD	Reg Spreadsheet
PRAIRIE STATE GENERATING STATION	PEABODY	IL	Bituminous	2X750	PC	0.150		GCC	Permit issued - under appeal	BACT-PSD	Reg Spreadsheet
CALAVERAS LAKE STATION (J K SPRUCE)	CITY PUBLIC SERVICE OF SAN ANTONIO	TX	Subbituminous	750	PC	0.150		GCC	Permit issued	BACT-PSD	Reg Spreadsheet
HUGO STATION	WESTERN FARMERS ELECTRIC COOP	OK	Subbituminous	750	PC	0.150		GCC	Permit issued	BACT-PSD	Reg Spreadsheet
MANITOWOC PUBLIC UTILITIES	MANITOWOC PUBLIC UTILITIES	WI	Coal/Pet Coke	64	CFB	0.150		GCC	Permit issued	BACT-PSD	RBLC
LONGLEAF ENERGY ASSOCIATES	LS POWER DEVELOPMENT	GA	Subbituminous/Bituminous Blend	2x600	PC	0.150	30-Day	GCC	Permit issued	BACT-PSD	Reg Spreadsheet
TWIN OAKS POWER PLANT (UNIT 3)	SEMPRA GENERATION	TX	Lignite	600	PC	0.150		GCC	Proposed	BACT-PSD	Reg Spreadsheet
SANDY CREEK ENERGY STATION	SANDY CREEK ENERGY ASSOCIATES	TX	Subbituminous	800	PC	0.150		GCC	Permit issued	BACT-PSD	RBLC/Reg Spreadsheet
MUTIPLE GENERATING STATIONS	TXU	TX		800	PC	0.150		GCC	Proposed	BACT-PSD	Reg Spreadsheet
FORMOSA	FORMOSA PLASTICS CORP	TX	Subbituminous/Pet Coke	2X150	CFB	0.150		GCC	Proposed	BACT-PSD	Reg Spreadsheet

CO Top Down RBLC Clearinghouse Review Results

FACILITY	COMPANY	STATE	FUEL	SIZE (MW)	BOILER TECHNOLOGY	LIMIT (LB/MBTU)	AVERAGING PERIOD	CONTROL TECHNOLOGY	STATUS	NSR BASIS	DATA SOURCE
ELK RUN ENERGY STATION	LS POWER DEVELOPMENT	IA	Subbituminous/Bituminous Blend	750	PC	0.150	30-Day	GCC	Proposed	BACT-PSD	Draft Application
GASCOYNE GENERATING STATION	MONTANA DAKOTA UTILITIES / WESTMORELAND POWER	ND	Lignite	175	CFB	0.154	3-Hr	GCC	Permit issued	BACT-PSD	RBLC
AMERICAN MUNICIPAL POWER OHIO GENERATING STATION	AMP-OHIO	OH	Subbituminous/Bituminous Blend	2x480	PC	0.154	3-Hr	GCC	Proposed	BACT-PSD	Reg Spreadsheet
MIDAMERICAN ENERGY COMPANY	MIDAMERICAN ENERGY COMPANY	IA	PRB	790	PC	0.154	24-Hr	GCC	Permit issued	BACT-PSD	RBLC
SANTEE COOPER CROSS GENERATING STATION	SANTEE COOPER	SC	Bituminous	2X660	PC	0.160		GCC	Permit issued	BACT-PSD	RBLC
OPPD - NEBRASKA CITY STATION	OMAHA PUBLIC POWER DISTRICT	NE	Subbituminous	660	PC	0.160	3-Hr	GCC	Permit issued	BACT-PSD	RBLC/Reg Spreadsheet
PEE DEE GENERATING STATION	SANTEE COOPER	SC	Bituminous/Pet Coke	2X660	PC	0.160	3-Hr	GCC	Proposed	BACT-PSD	Reg Spreadsheet
CITY UTILITIES OF SPRINGFIELD - SOUTHWEST POWER STATION	CITY UTILITIES OF SPRINGFIELD	MO	Subbituminous	275	PC	0.160		GCC	Permit issued	BACT-PSD	RBLC
PLUM POINT ENERGY	PLUM POINT ASSOCIATES, LLC	AR	Subbituminous	800	PC	0.160		GCC	Permit issued	BACT-PSD	RBLC
OAK GROVE (UNITS 1 & 2)	TXU	TX	Lignite	2x800	PC	0.170		GCC	Proposed	BACT-PSD	Reg Spreadsheet
GREENE ENERGY RESOURCE RECOVERY PROJECT	WELLINGTON DEV/GREENE ENERGY	PA	Waste Coal	2X250	CFB	0.200		GCC	Permit issued - under appeal	BACT-PSD	RBLC
WESTERN GREENBRIER CO-GENERATION, LLC	WESTERN GREENBRIER CO-GENERATION, LLC	WV	Waste Coal	98	CFB	0.200	24-Hr	GCC	Permit issued - under appeal	BACT-PSD	RBLC
RIVER HILL POWER COMPANY, LLC	RIVER HILL POWER COMPANY, LLC	PA	Waste Coal	290	CFB	0.250	12-Month	GCC	Permit issued	BACT-PSD	RBLC/Reg Spreadsheet
HUNTER	PACIFICORP	UT	Subbituminous	575	PC				Proposed	BACT-PSD	Reg Spreadsheet - CO Limit Not Listed

Color Code Legend

Data from EPA Regions 4 and 7 Spreadsheet

Data from Draft Application

Data from EPA's RBLC Clearinghouse

Attachment 2

Air Quality Impact Analysis
and
Additional Impact Analysis

1.0 Air Quality Impact Analysis

The following sections discuss the air dispersion modeling performed for the Prevention of Significant (PSD) air quality impact analysis (AQIA) for that PSD pollutant which has a significant emission increase due to the modification greater than the PSD significant emission rate (i.e. CO). The specific modification requiring this PSD application is the installation of Low NO_x Burners/Overfire Air (LNB/OFA) systems at Units 1 and 2 of the Stanton Energy Center. This AQIA was conducted in accordance with United States Environmental Protection Agency's (USEPA) *Guideline on Air Quality Models* (incorporated as Appendix W of 40 CFR 51).

1.1 Model Selection

Consistent with the Appendix W *Guideline on Air Quality Models*, the American Meteorological Society/Environmental Protection Agency (AMS/EPA) Regulatory Model (AERMOD) (Version 07026) air dispersion model was used to predict maximum ground-level concentrations associated with the modification. AERMOD is the product of AMS/EPA Regulatory Model Improvement Committee (AERMIC), formed to introduce state-of-the-art modeling concepts into USEPA's air quality models. AERMOD incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The AERMOD model includes a wide range of options for modeling air quality impacts of pollution sources.

1.2 Model Input and Options

This section discusses the model input parameters, source and emission parameters, and the AERMOD model options and input databases.

1.2.1 Model Input Source Parameters

The AERMOD model was used to determine the maximum predicted ground-level concentration for CO and its applicable averaging periods resulting from the modification. The stack parameters and emissions rates used in the model for Units 1 and 2 are presented in Table 1-1. Stack parameters were based on information contained in the appropriate FDEP forms submitted to the Department in February 2007. CO emissions were based on vendor guarantees after LNB/OFA installation on a lb/mmBtu

basis and each unit's Title V-listed heat input of 4,286 mmBtu/hr. This was a conservative approach in that it accounts for total CO emissions post LNB/OFA modification in the model and not simply the increase in CO emissions due to the modification.

Table 1-1
Stack Parameters and Emission Rates
Used in the AERMOD Model

Source	Stack Height (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temperature (K)	CO Emission Rate (g/s)
Unit 1	167.64	5.79	25.44	325.93	97.21
Unit 2	167.64	5.79	23.47	324.26	81.00

Note:
Emission rates based on vendor guarantees for CO after the installation of LNB/OFA systems. Specifically, 0.18 lb/mmBtu for Unit 1 and 0.15 lb/mmBtu for Unit 2. Each unit's Title V-listed heat input of 4,286 mmBtu/hr was used in the calculations to derive lb/hr emission rates which were converted to the modeling units of g/s.

1.2.2 Good Engineering Practice and Building Downwash Evaluation

The dispersion of a plume can be affected by nearby structures when the stack is short enough to allow the plume to be significantly influenced by surrounding building turbulence. This phenomenon, known as structure-induced downwash, generally results in higher model predicted ground-level concentrations in the vicinity of the influencing structure. Sources included in a PSD permit application are subject to Good Engineering Practice (GEP) stack height requirements outlined in 40 CFR Part 51, Sections 51.100 and 51.118. In accordance with regulations, the stacks do not exceed their GEP heights and structure-induced downwash was therefore accounted for within the model.

For these analyses, the buildings and structures of the facility were analyzed to determine the potential to influence the plume dispersion from Units 1 and 2. Building and structure dimensions and relative locations were entered into the USEPA's Plume Rise Model Enhancement (PRIME) version of the Building Profile Input Program (BPIP) to produce an AERMOD input file with direction-specific building downwash parameters.

1.2.3 Model Default Options

Since the AERMOD model is especially designed to support the USEPA's regulatory modeling program, the regulatory modeling options are considered the default mode of operation for the model. These options include the use of stack-tip downwash and a routine for processing averages when calm winds or missing meteorological data occur.

1.2.4 Receptor Grid and Terrain Considerations

The air dispersion modeling receptor locations were established at appropriate distances to ensure sufficient density and aerial extent to adequately characterize the pattern of pollutant impacts in the area. Specifically, a nested rectangular grid network that extends out 15 km from the center of the facility was used. The nested rectangular grid network consists of three tiers: the first tier extends from the center of the site to 3 km with 100 m spacing; the second tier extends from 3 km to 6 km with 250 m spacing; and the third tier extends from 6 km to 15 km with 500 m spacing. Receptor spacing at a 50 m interval was used along the fence line. Figure 1-1 illustrates the nested rectangular grid used in the model.

Terrain elevations at receptors were obtained from 7.5-minute United States Geological Survey (USGS) Digital Elevation Model (DEM) files and incorporated into the AERMOD model. There is no distinction in AERMOD between elevated terrain below release height and terrain above release height, as with earlier regulatory models that distinguished between simple terrain and complex terrain. For applications involving elevated terrain, the user must now also input a hill height scale along with the receptor elevation. To facilitate the generation of hill height scales for AERMOD, a terrain preprocessor, called AERMAP, has been developed by USEPA. For each receptor, AERMAP searches for the terrain height and location that has the greatest influence on dispersion. The same receptor grid and terrain elevations that were used and approved in the modeling submitted for the Stanton B IGCC project in February 2006 was used in this analysis for modeling consistency purposes and to aide in the review of the modeling.

1.2.5 Meteorological and Land Use Data

The AERMOD model utilizes a file of surface boundary layer parameters and a file of profile variables including wind speed, wind direction, and turbulence parameters. These

two types of meteorological inputs are generated by the meteorological preprocessor for AERMOD, which is called AERMET. AERMET includes three stages of preprocessing of the meteorological data. The first two stages extract, quality check, and merge the available meteorological data. The third stage requires input of certain surface characteristics (surface roughness, Bowen ratio, and Albedo) from the proposed location. AERMET requires hourly input of specific surface and upper air meteorological data. These data at a minimum include the wind flow vector, wind speed, ambient temperature, cloud cover, and morning radiosonde observation, including height, pressure, and temperature. Surface characteristics in the vicinity of the emissions sources are important in determining the boundary layer parameter estimates. Obstacles to the wind flow, amount of moisture at the surface, and reflectivity of the surface affect the calculations of the boundary layer parameters and are quantified by the following variables: surface roughness length, surface Albedo, and Bowen ratio, respectively.

The same meteorological data files that were used and approved in the modeling submitted for the Stanton B IGCC project in February 2006 were used in this analysis for modeling consistency purposes and to aide in the review of the modeling. Specifically, the meteorological data is from Orlando International Airport (WBAN 92801) for surface data and Tampa Bay/Ruskin (WBAN 12842) for upper air data for 1996 through 2000. The final surface and profile files for each meteorological year are contained on the CD with this response submittal.

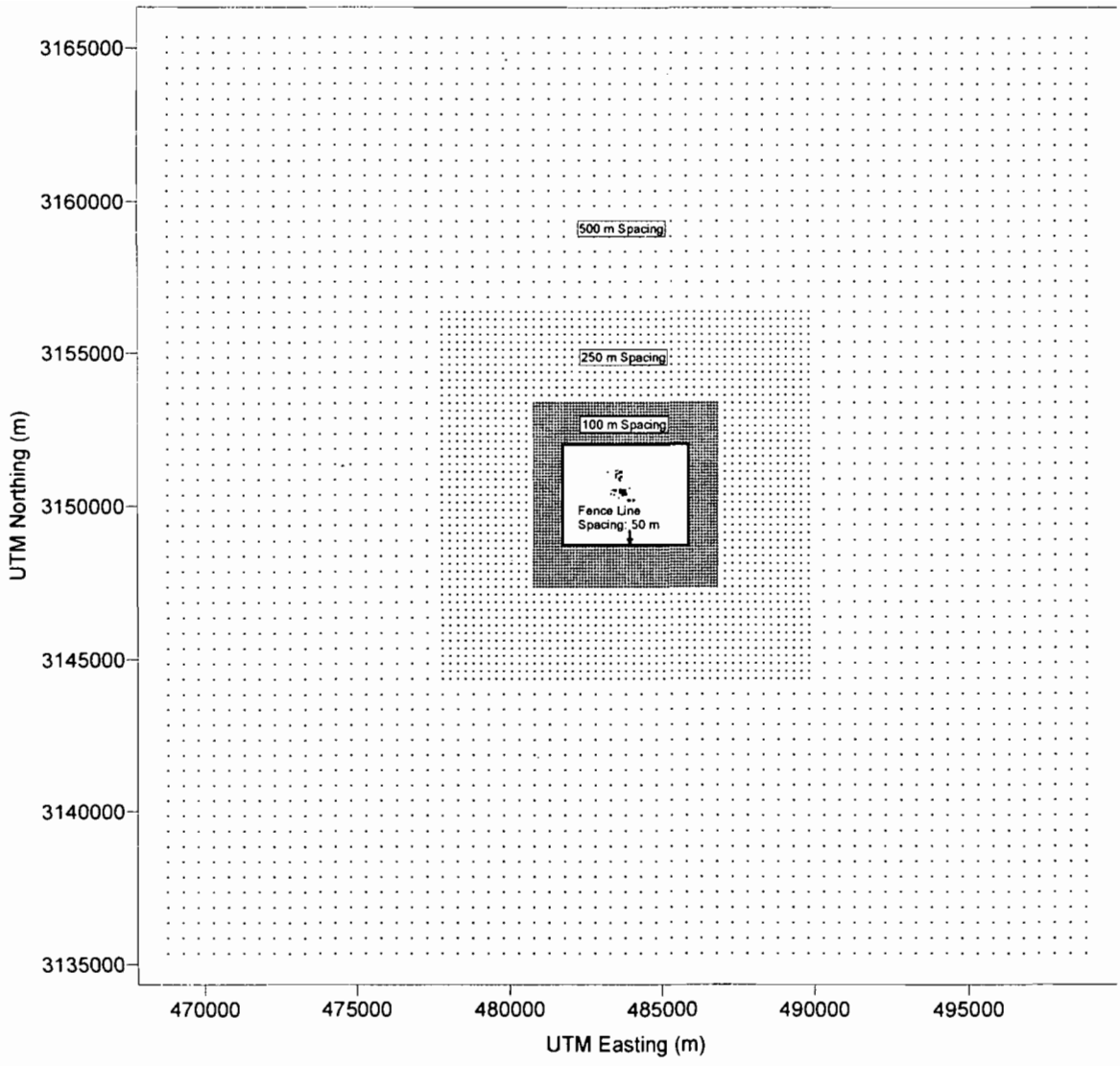

Figure 1-1
Receptor Location Plot

1.3 Model Results

As presented in the response letter, the increase in emissions from Units 1 and 2 due to the modification of adding the LNB/OFA system for NO_x control exceeds the PSD significant emission thresholds for CO. In accordance with the *Guideline*, AERMOD air dispersion modeling was performed as described in the preceding sections. Table 1-2 compares the maximum model predicted concentrations for each applicable averaging period with the PSD Class II significant impact levels (SILs) and the De Minimis monitoring requirements. As Table 1-2 indicates, the maximum model-predicted concentrations are less than the PSD Class II SILs for each applicable averaging period. Therefore, under the PSD program, no further air quality impact analyses (i.e., PSD increment and NAAQS analyses) are required.

If any of the maximum impacts, from each year and averaging period modeled, occurred at the edge of or beyond the 100 m fine grid, a 100 m refined receptor grid would be placed around the impact to ensure that an absolute maximum concentration was obtained from the model. This procedure was not required, as each of the maximum impacts were within the 100 m fine grid.

Additionally, as indicated in Table 1-2, the maximum predicted concentrations are less than the pre-construction monitoring De Minimis levels for the applicable averaging period. Therefore, by this application, the applicant requests an exemption from the PSD pre-construction monitoring requirements. The electronic modeling files are on the CD provided with this response submittal.

Table 1-2
AERMOD Model-Predicted Class II Impacts

Pollutant	Averaging Period	Model-Predicted Impact[a] ($\mu g/m^3$)	PSD Class II SIL[b] ($\mu g/m^3$)	Exceed SIL?	De Minimis Monitoring Level[c] ($\mu g/m^3$)	Pre-Construction Monitoring Required?
CO	8 Hour	38.65	500	NO	575	NO
	1 Hour	103.19	2,000	NO	--	N/A

[a]Impacts represent the highest first high model-predicted concentration from all 5 years of meteorological data modeled.
[b]Predicted impacts that are below the specified level indicate that the project will not have predicted significant impacts for that pollutant and further modeling is not necessary for that pollutant.
[c]This criterion is used to determine if pre-construction ambient air monitoring is required to assess current and future compliance with National Ambient Air Quality Standards.
The full range of model-predicted impacts is given in electronic output on the CD included with this response submittal.

2.0 Additional Impact Analyses

The following sections discuss the modifications' impacts upon commercial, residential, and industrial growth, as well as vegetation and soils, and visibility.

2.1 Commercial, Residential, and Industrial Growth

Because the modifications are of a pollution control nature and being installed at an existing facility, it is anticipated that little growth will be associated with its operation. There will be an increase in the local labor force during the construction phase of the modifications, but this increase will be temporary, short-lived, and will not result in permanent/significant commercial and residential growth occurring in the vicinity of the facility. The central Florida area has sufficient temporary accommodations to house any temporary labor that may come from outside the commuting area.

No additional electrical generating capacity will be created by modifications such that there would be a significant effect upon the industrial growth in the immediate area.

Population increase is a secondary growth indicator of potential increases in air quality levels. Changes in air quality due to population increase are related to the amount of vehicle traffic, commercial/institutional facilities, and home fuel use. According to the US Census Bureau, the population of Orange County has grown by approximately 50 percent between the 1980 and 2000 censuses and an additional 16.4 percent through the first half of 2006. It can be concluded that the air quality impacts associated with secondary growth will not be significant because the increase in population due to the operation of the units post-modification will be little to none, especially when compared to the overall existing population size of the surrounding area (896,344 people within Orange County as of the 2000 census, 1,043,500 by the 2006 estimate).

2.2 Vegetation, Soils, and Wildlife

The NAAQS were established to protect public health and welfare from any adverse effects of air pollutants. The definition of public welfare also encompasses vegetation, soils, and wildlife. Specifically, and as indicated in the *Draft New Source Review Workshop Manual* (EPA, 1990), ambient concentrations below the secondary NAAQS will not result in harmful effects for most types of soils and vegetation.

The criteria pollutant which triggered an additional impact analysis is CO. Comparing the modeled impacts presented in Table 1-2 to the NAAQS as the basis for assessing impacts indicates CO model-predicted impacts are well below the standards (i.e., orders of magnitude below). The impacts are even less than the much lower SIL thresholds as discussed previously.

Additional literature suggests that CO does not poison vegetation since it is rapidly oxidized to form CO_2 which is used for photosynthesis. However, extremely high concentrations can reduce the photosynthetic rate. According to the EPA document *A Screening Procedure for the Impacts of Air Pollution Sources on Plant, Soils, and Animals*, hereafter referred to as EPA Screening Document, for the most sensitive vegetation, a CO concentration of 1,800,000 micrograms per cubic meter (1 week averaging period) could potentially reduce the photosynthetic rate. The maximum model-predicted 1-hour CO impact of 103.19 $\mu g/m^3$ produced by Units 1 and 2 is significantly (more than three orders of magnitude) lower than this screening level (even at a conservative 1 hour averaging period using the maximum expected emissions). Because the emissions do not significantly impact the NAAQS or the Screening levels discussed above, it is reasonable to conclude that no adverse effects on soils and vegetation will occur.

Furthermore, since the installation of the LNB/OFA systems will decrease the emissions of NO_x, the modifications are expected to improve the units' current impact on soils, vegetation, and wildlife. There would also be an expected improvement in ozone concentrations as NO_x is a precursor pollutant to ozone formation.

2.3 Visibility

As previously discussed in this submittal, the modifications will result in significant decreases in NO_x and SO_2 emissions from Units 1 and 2 while experiencing increases in CO emissions due to the NO_x optimizations. The decreases in NO_x and SO_2 will improve visibility related indices from Units 1 and 2. Additionally, CO emissions are not a visibility impairing pollutant. As such, and commensurate with similar projects recently approved by the Department, OUC has not performed a Class II visibility or Class I regional haze analysis as part of this application.

Attachment 3

Update to FDEP Forms

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name:
   Registration Number: 64188
2. Professional Engineer Mailing Address...
   Organization/Firm: Black & Veatch
   Street Address: 9000 Regency Parkway, Suite 300
   City: Cary State: NC Zip Code: 27518
3. Professional Engineer Telephone Numbers...
   Telephone: (919) 462-7415 ext. Fax: (919) 468-9212
4. Professional Engineer Email Address: newlandlt@bv.com
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☑*, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.*

(4) If the purpose of this application is to obtain an air construction permit (check here ☐*, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here* ☐*, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.*

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature 8.24.07 Date

(seal) LICENSED No. 64188 STATE OF FLORIDA

* Attach any exception to certification statement.

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☑ Attached, Document ID: Attach. A (Feb 07 App.) ☐ Previously Submitted, Date:

2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☑ Attached, Document ID: Attach. B (Feb 07 App.) ☐ Previously Submitted, Date:

3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☑ Attached, Document ID: Attach. C (Feb 07 App.) ☐ Previously Submitted, Date:

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   ☐ Attached, Document ID:_____ ☑ Not Applicable (existing permitted facility)

2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL):
   ☑ Attached, Document ID: Attach. D (Feb 07 App.)

3. Rule Applicability Analysis:
   ☑ Attached, Document ID: Attach. E (Feb 07 App.)

4. List of Exempt Emissions Units (Rule 62-210.300(3), F.A.C.):
   ☑ Attached, Document ID: Attach. F (Feb 07 App.) ☐ Not Applicable (no exempt units at facility)

5. Fugitive Emissions Identification:
   ☑ Attached, Document ID: Attach. G (Feb 07 App.) ☐ Not Applicable

6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.):
   ☑ Attached, Document ID: Attachment 2 of this submittal ☐ Not Applicable

7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.):
   ☑ Attached, Document ID: Attachment 2 of this submittal ☐ Not Applicable

8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.):
   ☑ Attached, Document ID: Attachment 2 of this submittal ☐ Not Applicable

9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.):
   ☑ Attached, Document ID: Attachment 2 of this submittal ☐ Not Applicable

10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    ☐ Attached, Document ID:_____ ☑ Not Applicable

1.8 F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 771.5 lb/hour 3379.2 tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.18 lb/mmBtu Reference: Vendor guarantee	7. Emissions Method Code: 0
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years
10. Calculation of Emissions: (4286 mmBtu/hr) x (0.18 lb/mmBtu) = 771.5 lb/hr (4286 mmBtu/hr) x (0.18 lb/mmBtu) x (8760 hr/yr) x (ton/2000 lb) = 3379.2 tpy	
11. Potential, Fugitive, and Actual Emissions Comment:	

1.9 F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: Guarantee	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.18 lb/mmBtu	4. Equivalent Allowable Emissions: 771.5 lb/hour 3379.2 tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emission value is based on vendor guarantee after Low NOx Burner/Overfire Air system installation.	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of ___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Memorandum

Florida Department of
Environmental Protection

TO: Trina Vielhauer

THROUGH: Al Linero

FROM: David Read

DATE: November 25, 2007

SUBJECT: Orlando Utilities Commission – Stanton Energy Center
Unit 1 Scrubber Upgrade, Phase 2
DEP File No. 0950137-012-AC

Attached is the Intent to Issue and associated document for Phase 2 of the Unit 1 Scrubber Upgrade at the OUC Stanton Energy Center. Phase 1 of the upgrade involves installation of a dibasic acid (DBA) chemical feed system that was addressed in construction permit 0950137-011-AC and a forced oxidation system that was addressed in construction permit 0950137-014-AC.

Phase 2 of the scrubber upgrade includes:

- Installation of a new distribution tray or an additional spray level with increased recycle pump capacity;
- Modifications to the spray nozzle arrangement and piping; and
- Modifications to the induced draft fan.

No emissions increases are expected due to the Phase 2 upgrades when considering the Unit 1 and 2 NO_X emission cap and the likely SO_2 reductions from the scrubber upgrades. Unit 1 CO emissions are limited by a recently noticed BACT determination.

Unit 1 is permit-limited with respect to short-term heat input. The draft permit will nevertheless include recordkeeping provisions to insure that the Phase 2 Unit 1 scrubber upgrade, particularly improvements to the ID fan, will not result in significant emissions increases.

We recommend your approval of the attached Intent to Issue.

AAL/dlr

Attachments

Professional Engineer Certification Statement

Permittee:

Orlando Utilities Commission (OUC)
Curtis H. Stanton Energy Center

DEP File No. 0950137-012
Unit 1 Scrubber Upgrade, Phase 2
Orange County

Project:

The project is for Phase 2 of the Unit 1 Scrubber Upgrade at the OUC Stanton Energy Center. Phase 2 of the scrubber upgrade includes:

- Installation of a new distribution tray or an additional spray level with increased recycle pump capacity;
- Modifications to the spray nozzle arrangement and piping; and
- Modifications to the induced draft fan.

No emissions increases are expected due to the Phase 2 upgrades when considering the Unit 1 and 2 NO_X emission cap and the likely SO_2 reductions from the scrubber upgrades. Unit 1 CO emissions are limited by a recently noticed BACT determination.

I HEREBY CERTIFY *that the engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).*

11/2/07

A A. Linero, P.E. Date
Registration Number: 26032

Department of Environmental Protection
Bureau of Air Regulation
Permitting South Section
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Phone (850) 488-1344
Fax (850) 921-9533

Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

November 28, 2007

Electronically Sent – Received Receipt Requested.

Ms. Denise Stalls DStalls@ouc.com
Vice President, Environmental Affairs
Orlando Utilities Commission
500 South Orange Avenue
Post Office Box 3193
Orlando, Florida 32802

Re: DEP File No. 0950137-012-AC
Curtis H. Stanton Energy Center
Unit 1 Scrubber Upgrade, Phase 2

Dear Ms. Stalls:

Enclosed is one copy of the Draft Air Construction Permit Modification to allow the implementation of Phase 2 of the scrubber upgrades on Unit 1 at the Curtis H. Stanton Energy Center in Orange County. The Department's Intent to Issue PSD Permit, the Technical Evaluation, and the "Public Notice of Intent to Issue Air Construction Permit" are also included.

The Public Notice must be published one time only as soon as possible in a newspaper of general circulation in the area affected, pursuant to the requirements of Chapter 50, Florida Statutes. Proof of publication, such as a newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in denial of the permit modification.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. David Read at the letterhead address (Mail Station #5505). If you have any questions regarding this matter, please contact Mr. Read at (850) 414-7268.

Sincerely,

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/aal/dlr

Enclosures

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

In the Matter of an
Application for Permit by:

Orlando Utilities Commission (OUC)
Post Office Box 3193
Orlando, Florida 32802

Authorized Representative:
Ms. Denise Stalls, Vice President – Environmental Affairs

DEP File No. 0950137-012-AC
Stanton Energy Center Unit 1
Unit 1 Scrubber Upgrade, Phase 2
Orange County, Florida

Facility Location: The Orlando Utilities Commission (OUC) operates the Stanton Energy Center, which is located in Orange County, Southeast of Orlando and North of Highway 528 at 5100 South Alafaya Trail.

Project: OUC, applied on February 5, 2007 to the Florida Department of Environmental Protection for a permit to conduct additional upgrades to the flue gas desulfurization system on Unit 1 at the existing Curtis H. Stanton Energy Center Southeast of Orlando in Orange County. The proposed project includes: installation of a new distribution tray or an additional spray level with increased recycle pump capacity; modifications to the spray nozzle arrangement and piping; and modifications to the induced draft fan.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212 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 perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, Mail Station (MS) #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 application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the Draft Permit by visiting the following website: http://www.dep.state.fl.us/air/eproducts/ards and entering the permit number indicated above. A copy of the complete project file is also available at the Air Resources Section of the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The telephone number is 407/894-7555.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment 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, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its

intended action. 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 Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 921-9533). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final construction permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

Comments: The Department will accept written comments concerning the proposed permit issuance action for a period of 14 days from the date of publication of Public Notice. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

Petitions: The Department will issue the construction permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, MS #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 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) of the Florida Statutes must be filed within 14 days of publication of the public notice or within 14 days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department 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 (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department'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 petitioner received notice of the agency decision; (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,

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, including an explanation of how the alleged facts relate to the specified rules or statutes; 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 Department'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.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. Mediation is not available in this proceeding.

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue Air Construction Permit (including the Public Notice, Technical Evaluation, and the Draft permit) and all copies were sent electronically (with Received Receipt) before the close of business on **November 28, 2007** to the persons listed:

Denise Stalls, OUC: dstalls@ouc.com
Jim Bradner, DEP CD: james.bradner@dep.state.fl.us
Lori Cunniff, Orange County EPD: lori.cunniff@ocfl.net
Jim Little, EPA Region 4: little.james@epamail.epa.gov
Katy Forney, EPA Region 4: forney.kathleen@epa.gov
Larry Todd Newland, P.E., Black & Veatch: newlandlt@bv.com
Mike Halpin, DEP Siting: mike.halpin@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 11/28/07 (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0950137-012-AC

OUC Curtis H. Stanton Energy Center Unit 1
Unit 1 Scrubber Upgrade, Phase 2

Orange County

Applicant: The applicant for this project is the Orlando Utilities Commission (OUC). The applicant's authorized representative and mailing address are: Ms. Denise Stalls, Vice President, Environmental Affairs, Orlando Utilities Commission, 500 South Orange Avenue, Post Office Box 3193, Orlando, Florida 32802

Facility Location: OUC operates the Stanton Energy Center, which is located in Orange County, Southeast of Orlando and North of Highway 528 at 5100 South Alafaya Trail. OUC Stanton Unit 1 is a coal fired boiler/steam generator and steam turbine with a 468 megawatts nominal capacity rating. The unit is equipped with an electrostatic precipitator for control of particulate matter, and a wet flue gas desulfurization (WFGD) system for sulfur dioxide (SO_2) control.

Project: OUC applied on February 5, 2007 to the Florida Department of Environmental Protection for a permit to conduct additional upgrades to the WFGD system on Unit 1 at the existing Curtis H. Stanton Energy Center Southeast of Orlando in Orange County. The proposed project includes: installation of a new distribution tray or an additional spray level with increased recycle pump capacity; modifications to the spray nozzle arrangement and piping; and modifications to the induced draft fan. These modifications are expected to reduce the operating costs of the Unit 1 scrubber system and improve its reliability. Emissions of SO_2 are expected to decrease as a direct result of the improved efficiency of the WFGD system. The project is part of a continuing program at the OUC Stanton Energy Center to reduce emissions of SO_2 and nitrogen oxides (NO_X) for the purpose of complying with the Clean Air Interstate Rule. The Department has reasonable assurance that the project will not result in significant net emission increases from the unit that would otherwise require a review under the Rules for the Prevention of Significant Deterioration (PSD) at Paragraph 62-212.400, Florida Administrative Code (F.A.C.) or 40 Code of Federal Regulations, Part 52, Section 52.21.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212, F.A.C. The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, Mail Station (MS) #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 application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the Draft Permit by visiting the following website: http://www.dep.state.fl.us/air/eproducts/ards and entering the permit number indicated above. A copy of the complete project file is also available at the Air Resources Section of the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The telephone number is 407/894-7555.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment 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, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions. A best available control technology (BACT) determination was not required.

The Department has reasonable assurance that the project will not result in significant net emission increases from the unit that would otherwise require a review under the Rules for the Prevention of Significant Deterioration (PSD) at Section 62-212.400, F.A.C

The Department will issue the final air construction permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

(Public Notice to be Published in the Newspaper)

Comments: The Department will accept written comments concerning the proposed permit issuance action for a period of 14 days from the date of publication of Public Notice. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

Petitions: The Department will issue the construction permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, MS #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 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) of the Florida Statutes must be filed within 14 days of publication of the public notice or within 14 days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department 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 (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department'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 petitioner received notice of the agency decision; (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, 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, including an explanation of how the alleged facts relate to the specified rules or statutes; 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 Department'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. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0114
Fax: 850/921-9533

Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
Telephone: 407/894-7555
Fax: 407/897-5963

The complete project file includes the technical evaluation and the Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Program Administrator, South Permitting Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information. The draft permit and technical evaluation can be accessed at the following site by clicking the link to OUC Stanton in the power plant category: www.dep.state.fl.us/Air/permitting/construction.htm

(Public Notice to be Published in the Newspaper)

PERMITTEE:

Orlando Utilities Commission (OUC)
500 South Orange Avenue
Orlando, Florida 32802

Authorized Representative:
Ms. Denise Stalls, Vice President
Environmental Affairs

DEP File No. 0950137-014-AC
Curtis H. Stanton Energy Center
SIC No. 4911
Unit 1 Scrubber Upgrade, Phase 2
Orange County, Florida

PROJECT AND LOCATION

This permit authorizes the addition of or modification to components of the existing wet flue gas desulfurization (WFGD) system and the induced draft fan on Unit 1 of the OUC Curtis H. Stanton Energy Center. The facility is located at 5100 Alafaya Trail, Orlando, Orange County.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Parts 60 and 63 of the Code of Federal Regulations (CFR). The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

CONTENTS

Joseph Kahn, Director
Division of Air Resource Management

(Date)

JK/tlv/aal

FACILITY AND PROJECT DESCRIPTION

The existing facility consists of two 468 megawatts (MW) fossil fuel fired steam electric generating units (Units 1 and 2), and one 640 MW combined cycle unit. There are storage and handling facilities for solid fuels, fly ash, limestone, gypsum, slag, and bottom ash.

The project under this permit is for the Phase 2 of scrubber upgrades to Unit 1 including:

- Installation of a new distribution tray or an additional spray level with increased recycle pump capacity;
- Modifications to the spray nozzle arrangement and piping; and
- Modifications to the induced draft fan.

The present permitting action is related to the following emissions unit (EU):

EU ID	Emissions Unit Description
001	Fossil Fuel Fired Steam Electric Generator No. 1

REGULATORY CLASSIFICATION

The facility is a potential major source of hazardous air pollutants (HAPs).

The facility operates existing units subject to the Acid Rain provisions of Title IV of the Clean Air Act (CAA).

The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

The facility is a major stationary source (PSD-major source) in accordance with Rule 62-212.400, F.A.C.

The facility operates units subject to the Standards of Performance for New Stationary Sources pursuant to 40 CFR Part 60.

The facility does not operate electrical generating units subject to National Emissions Standards for Hazardous Air Pollutants pursuant to 40 CFR Part 63.

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

The facility is subject to the Clean Air Mercury Rule (CAMR) set forth in Rule 62-296.480, F.A.C.

The facility operates units that were certified under the Florida Power Plant Siting Act, 403.501-518, F.S.

RELEVANT DOCUMENTS

The following relevant documents are not a part of this permit, but helped form the basis for this permitting action: the permit application and additional information received to make it complete; and the Department's Technical Evaluation and Preliminary Determination.

1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Department. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Central District Office. The mailing address and phone number of the Central District Office are: Department of Environmental Protection, Central District Office, 3319 Maguire Boulevard, Suite 232, Orlando Florida 32803-3767. Telephone: (407)894-7555. Fax: (407)897-5963.
3. Appendices: The following Appendices are attached as part of this permit: Appendix GC (General Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Bureau of Air Regulation with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

This section of the permit addresses the following existing emissions units.

Emissions Unit 001
Fossil Fuel Fired Steam Generators 1 is a wall-fired, dry bottom boiler, firing pulverized coal as the primary fuel and No. 6 fuel oil for purposes of startup and flame stabilization. The unit has a maximum heat input rate of 4,286 million Btu per hour with a nominal generating capacity of 468 MW. The unit is equipped with an electrostatic precipitator (ESP) for control of particulate matter (PM/PM_{10}), a WFGD system for sulfur dioxide (SO_2) control, and low NO_X burners for nitrogen oxides (NO_X) control. The following parameters are continuously monitored on Unit 1: NO_X, opacity, SO_2, CO_2, and stack gas flow rate.

APPLICABLE STANDARDS AND REGULATIONS

1. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. The requirements of this permit are in addition to and supplement any other permits. [Rule 62-210.300, F.A.C.]
2. The facility is subject to all of the requirements specified in Title V Air Operation Permit Renewal No. 1050004-016-AV.

GENERAL OPERATION REQUIREMENTS

3. Unconfined Particulate Emissions. During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4), F.A.C.]
4. 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 Department 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.]
5. 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.]
6. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

EQUIPMENT AND CONTROL TECHNOLOGY

7. Scrubber Upgrades. The permittee is authorized to install a new distribution tray or an additional spray level with increased recycle pump capacity on the Unit 1 WFGD scrubber and to modify the spray nozzles and their arrangement and piping as described in the application. [Applicant Request]
8. Induced Draft Fan. The permittee is authorized to make modification to and increase the speed of the Unit 1 induced draft fan to account for the additional pressure drop caused by the scrubber upgrades described in condition 7 and to resolve vibration problems. [Applicant Request]

REPORTING AND NOTIFICATION REQUIREMENTS

9. Notification. Within one week of beginning construction of the Phase 2 Unit 1 scrubber upgrade, the permittee shall notify the Compliance Authority that the project has commenced and provide a general schedule of construction activities. Within one week following the end of construction, the permittee shall notify the Compliance Authority that the project was completed. [Rule 62-4.210, F.A.C.]

10. Future Actual Emissions Reporting. The permittee shall maintain and submit to the Department on an annual basis for a period of 5 years from the date the Phase 2 Unit 1 scrubber upgrade project is placed in operation, information demonstrating in accordance with Rule 62-212.300(1)(e), F.A.C., using the emissions computation and reporting procedures in Rule 62-210.370, F.A.C., that the implementation of the initiative did not result in an emissions increase that would equal or exceed the significant emission rates as defined in Rule 62-210.200, F.A.C. [Rule 62-212.300(1)(e), F.A.C.]

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

   a. Have access to and copy and records that must be kept under the conditions of the permit;
   b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
   c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

   Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

   a. A description of and cause of non-compliance; and

b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (Not Applicable);
    b. Determination of Prevention of Significant Deterioration (Not Applicable);
    c. Compliance with National Emission Standards for Hazardous Air Pollutants (Not Applicable); and
    d. Compliance with New Source Performance Standards (Not Applicable).

14. The permittee shall comply with the following:

    a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

    b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

    c. Records of monitoring information shall include:

        1) The date, exact place, and time of sampling or measurements;
        2) The person responsible for performing the sampling or measurements;
        3) The dates analyses were performed;
        4) The person responsible for performing the analyses;
        5) The analytical techniques or methods used; and
        6) The results of such analyses.

When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

Orlando Utilities Commission
Curtis H. Stanton Energy Center

Unit 1 Scrubber Upgrades, Phase 2

Orange County

DEP File No. 0950137-012-AC

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Permitting South

November 28, 2007

1.0 GENERAL FACILITY DESCRIPTION

Facility Description and Location

The OUC Curtis H. Stanton Energy Center is located in Orange County, Southeast of Orlando and North of Highway 528 at 5100 South Alafaya Trail. The site is located 144 km southeast from the Chassahowitzka National Wildlife Area; the nearest Federal Prevention of Significant Deterioration (PSD) Class I Area. The UTM coordinates for this site are 483.6 km East and 3151.1 North. The location of the OUC Stanton Energy Center is shown in Figure 1.

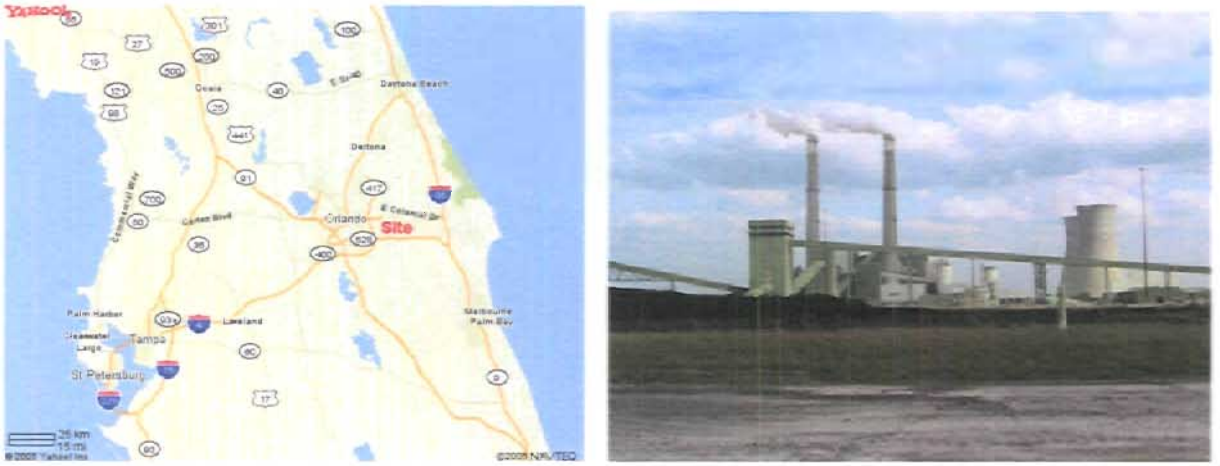

Figure 1. OUC Curtis H. Stanton Energy Center Location and Stanton Units 1 and 2.

The OUC Stanton Energy Center presently consists of two fossil fuel-fired steam electrical generating units and a combined cycle unit. Fossil fuel-fired steam electric generating Units 1 and 2 (468 megawatts-MW each) began operation in 1987 and 1996 while Combined Cycle Unit A (640 MW) began operation in 2003.

Table 1. OUC Curtis H. Stanton Energy Center SIC Codes

STANDARD INDUSTRIAL CLASSIFICATION CODES (SIC)		
Industry Group No.	49	Electric, Gas, and Sanitary Services
Industry No.	4911	Electric Services

Key Regulatory Categories

The key regulatory provisions applicable to Stanton Units 1 and 2 are:

Title I, Part C, Clean Air Act (CAA): The facility is located in an area that is designated as "attainment", "maintenance", or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. It is classified as a "fossil fuel-fired steam electric plant of more than 250 million BTU per hour of heat input", which is one of the 28 Prevention of Significant Deterioration (PSD) Major Facility Categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year, therefore the facility is classified as a "major stationary source" of air pollution with respect to Rule 62-212.400 F.A.C., Prevention of Significant Deterioration of Air Quality.

Title I, Section 111, CAA: Units 1 and 2 are subject to Subpart Da (Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978) of the New Source Performance Standards in 40 CFR 60.

Title I, Section 112, CAA: The facility is a "Major Source" of hazardous air pollutants (HAP).

Title IV, CAA: The facility operates units subject to the Acid Rain provisions of the Clean Air Act.

Title V, CAA: The facility is a Title V or "Major Source of Air Pollution" in accordance with Chapter 62-213, F.A.C. because the potential emissions of at least one regulated pollutant exceed 100 tons per year (TPY). Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

CAIR: The facility is subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, Florida Administrative Code (FAC).

CAMR: The facility is subject to the Clean Air Mercury Rule (CAMR) set forth in Rule 62-296.480, F.A.C.

Siting: The facility was originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

Application Processing Schedule

02/05/07: Received application to construct, install or improve low NO_X burners (LNBs), overfire air (OFA), forced oxidation, ash loadout system and wet flue gas desulfurization (WFGD) systems on Units 1 and 2.

03/07/07: Application determined incomplete. Sent request for additional information (RAI).

08/09/07: Received partial responses to RAI.

09/04/07: Received additional responses to RAI.

09/06/07: Separated out requests into three different projects including the present for the Phase 2 upgrades on the Unit 1 WFGD system.

11/28/07: Distributed public notice package for the Phase 2 upgrades on the Unit 1 WFGD system.

Wet Flue Gas Desulfurization (WFGD) Limestone Scrubbing for SO_2 Control

Stanton Units 1 and 2 utilize WFGD limestone-based scrubbers to control SO_2 emissions. The figure on the following page is a simplified flow diagram of a design from the early 1990s that reasonably represents the scrubbing principles used at OUC Stanton Units 1 and 2. Each unit's scrubber system includes three (3) 50 percent (%) capacity absorber modules, with two normally in operation and the other designated as a spare. Authority to inject dibasic acid (DBA) was given under permit No. 0950137-011 issued January 10, 2007. Authority to install a forced oxidation system was given under permit No. 0950137-014-AC.

Limestone is ground and mixed with water in a reagent preparation area. The resultant slurry is pumped to the absorber and sprayed into the flue-gas stream. The slurry droplets absorb SO_2 from the flue gas and fall to the base of the absorber, where they are collected in a reaction tank.

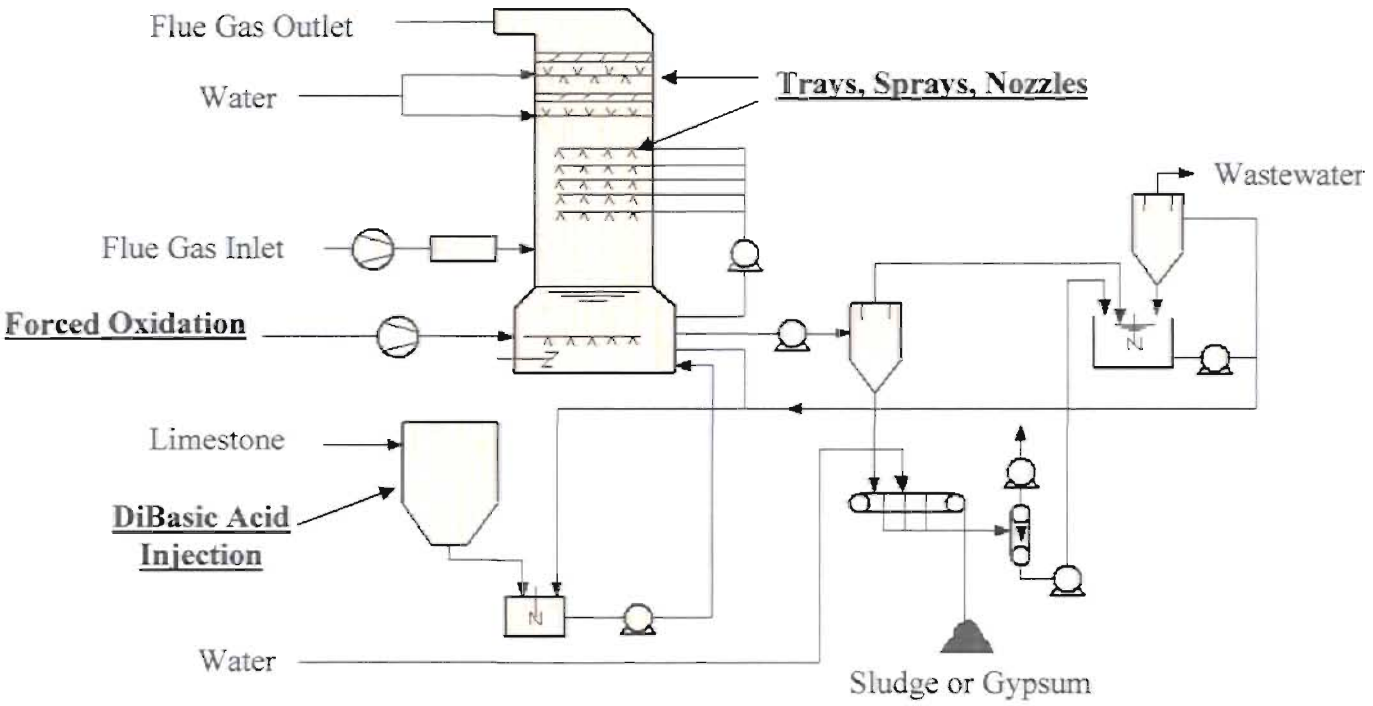

Figure 2. Diagram of a WFGD Limestone Scrubber System (Soud and Takeshita, 1994).

The reactions in the absorber and tank can be represented by the following simplified description:

Equation 1. Sulfur dioxide and water react to form sulfurous acid.

$$SO_2 + H_2O \rightarrow H_2SO_3$$

Equation 2. Sulfurous acid reacts with limestone to form calcium sulfite ($CaSO_3 \cdot ½H_2O$), carbon dioxide (CO_2) and water (H_2O).

$$2H_2SO_3 + 2CaCO_3 \rightarrow 2CaSO_3 \cdot 0.5H_2O + 2CO_2 + H_2O$$

Equation 3. Most $CaSO_3 \cdot 0.5H_2O$ is further oxidized to form gypsum ($CaSO_4 \cdot 2H_2O$).

$$2CaSO_3 \cdot 0.5H_2O + O_2 + H_2O \rightarrow 2CaSO_4 \cdot H_2O$$

It is estimated that in the existing natural oxidation WFGD systems approximately 75 % of the SO_2 reaction product is $CaSO_4 \cdot 2H_2O$, while in a forced oxidation system (such as recently approved for Units 1 and 2) approximately 98 % of the SO_2 reaction product is expected to be $CaSO_4 \cdot 2H_2O$, with the remainder in both cases being $CaSO_3 \cdot 0.5H_2O$.

At the present time, fly ash removed by the electrostatic precipitators (ESPs) prior to scrubbing is blended with scrubber sulfite/sulfate sludge and hydrated lime to solidify the material. It is then deposited in special retention areas on site, and covered with soil and vegetation.

2.0 PROJECT DESCRIPTION

The following description is based on information provided by Black and Veatch (BV) for OUC.

Description of Phase 2 Scrubber Upgrades on Unit 1

Based on 2004 data from the continuous emissions monitoring system (CEMS), the Unit 1 absorbers are removing an average of 82.4% of SO_2. The previously approved Phase 1 scrubber upgrades consist of installation of a DBA chemical feed system and a forced oxidation system to improve scrubber efficiency and performance.

To further increase reliability and flexibility of the Unit 1 WFGD system, OUC commissioned a study to evaluate improvements in SO_2 removal capability of the FGD system for Unit 1. This study was performed by BV with assistance from Wheelabrator Air Pollution Control Company (WAPC). The goals for this study were to identify the most cost effective means to improve SO_2 removal performance, mitigate process problems, improve reliability, and reduce operating costs. Based on this study, OUC plans the following modifications.

Installation of Distribution Tray

Based on the existing absorber modules, the study indicated that the Unit 1 WFGD system performance can be significantly improved with the addition of a perforated distribution tray in conjunction with spray header modifications. Distribution trays provide intimate contact between the gas and liquid phases and the resulting increased mass transfer surface area improves the amount of SO_2 absorbed in the scrubbers.

Based on review of the absorber arrangement, removal of the bottom internal spray header would be required to allow the distribution trays to have adequate space between the flue gas inlet and the "new" first recycle spray level. The spray header elevations for the three higher levels will remain in place and use existing support steel.

The bottom header replaced by the distribution tray will be relocated higher in the module. This modification will require new absorber penetrations and possible internal support modifications.

Additional Spray Level

As an alternative to a distribution tray, addition of an additional spray level and an increase in recycle pump capacity is also being considered which would also increase the liquid-to-gas (L/G) ratio and provide significant improvement in SO_2 control performance. This option will be studied in more depth to verify the structural integrity of the scrubbers. This additional spray level would have some space restrictions and would probably only be used as a spare except at higher SO_2 loadings due to the potential for erosion of the adjacent lower header.

Modification of Nozzle Arrangement, Piping and Pumps

In addition to the perforated tray, a modified nozzle arrangement with more modern nozzles can be used to maximize spray coverage via a modified spray nozzle arrangement. Current industry practice for recycle spray nozzles is to use silicon carbide material, with a hollow cone spray pattern that have a large free passage, usually greater than 2 inches. This modification may allow the existing pumps to produce higher flow rates (thus increasing the L/G) without changing the current pump operating speeds. Additional modifications such as replacing existing piping with larger piping or modifying the pumps will also be considered.

Induced Draft (ID) Fan Modifications

The addition of a distribution tray to each absorber module will cause the absorber pressure drop to increase, which will require additional fan static pressure. ID fan modifications would probably be needed to increase the pressure capacity to offset the increased component pressure drops. The switch to high speed operation would provide significant additional ID fan pressure capacity, estimated at approximately 18 inches water column of additional static pressure capability. The precise modifications needed would be determined during detailed design.

The described measures will increase the mass transfer capability of the existing scrubber modules. Preliminary modeling by the WFGD system supplier indicated that SO_2 removal efficiencies of 85 to 94 percent could be expected when operating two of the three absorbers. With the previously approved addition of DBA, removal rates near 95 percent can be expected with coal sulfur levels up to 4 pounds of SO_2 per million Btu heat input.

OUC plans to leave the final details of the design modifications open until further site investigations are performed and detailed data can be obtained from equipment manufacturers.

Ultimately the purpose and primary result of the Unit 1 scrubber upgrade is to improve the removal efficiency of the scrubber and the Unit 1 scrubber upgrade will not include the addition of any new emission units at the facility. The only expected effect of the Unit 1 scrubber upgrade on facility air emissions would involve a decrease in Unit 1 SO_2 emissions and possibly slight increases in limestone material handling emissions resulting from slightly higher limestone usage associated with improved SO_2 removal.

3.0 MODIFICATION AND PERMITTING APPLICABILITY

Addition of Control Equipment

The applicant expects emissions of SO_2 to decrease as a result of the Phase 2 upgrades on the Unit 1 WFGD system. The addition of a distribution tray or spray level constitutes addition of control equipment. A permit is required in accordance with paragraph 62-210.300 that states:

> *"Unless exempted from permitting pursuant to paragraph 62-210.300(3)(a) or (b), F.A.C., or Rule 62-4.040, F.A.C., or unless specifically authorized by provision of Rule 62-210.300(4), F.A.C., or Rule 62-213.300, F.A.C., the owner or operator of any facility or emissions unit which emits or can reasonably be expected to emit any air pollutant shall obtain an appropriate permit from the Department prior to beginning construction, reconstruction pursuant to 40 CFR 60.15 or 63.2, modification,* ***or the addition of pollution control equipment****; ..... etc."*

Definition of Modification

The definition of a modification is given in Rule 62-210.200(Definitions), F.A.C. as:

> *"Modification" – Any physical change in, change in the method of operation of, or addition to a facility which would result in an increase in the* ***actual*** *emissions of any air pollutant subject to regulation under the Act, including any not previously emitted, from any emissions unit or facility. A physical change or change in the method of operation shall not include routine maintenance, repair, or replacement of component parts of an emissions unit.*

Department concludes that the proposed project constitutes a modification and an air construction permit is required.

Major Modification and PSD Permitting Applicability

It is also necessary to determine whether the modification is subject to the Department's PSD rules at 62-212.400, F.A.C. The requirements of Sections 62-212.400(4) through (12), F.A.C., apply to major modifications of existing major stationary source. The key criterion is a comparison of *baseline actual* to *projected actual* emissions. Baseline actual emissions are defined for electric utility steam units at Section 62-210.200(36), F.A.C. as follows:

> *For any existing electric utility steam generating unit, **baseline actual emissions** means the average rate, in tons per year, at which the unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding the date a complete permit application is received by the Department. The Department shall allow the use of a different time period upon a determination that it is more representative of normal source operation.*

Projected future actual emissions are defined at Section 62-210.200(Definitions) as follows:

> *"Projected Actual Emissions" – The maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a PSD pollutant in any one of the 5 years following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit that PSD pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source. One year is one 12-month period. In determining the projected actual emissions, the Department:*
>
> *(a) Shall consider all relevant information, including historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the State or Federal regulatory authorities, and compliance plans or orders, including consent orders; and*
>
> *(b) Shall include fugitive emissions to the extent quantifiable and emissions associated with startups and shutdowns; and*
>
> *(c) Shall exclude that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions and that are also unrelated to the particular project including any increased utilization due to product demand growth; or*
>
> *(d) In lieu of using the method set out in paragraphs (a) through (c) above, may be directed by the owner or operator to use the emissions unit's potential to emit, in tons per year.*

A *major modification* requires a PSD permit and is defined at Section 62-210.200(191), F.A.C. as follows:

"Major Modification" – (a) Any physical change in or change in the method of operation of a major stationary source that would result in a ***significant emissions increase*** *of a PSD pollutant and a* ***significant net emissions increase*** *of that pollutant from the major stationary source.*

Significant emissions rate, for the purpose of determining whether a significant net emissions increase (SNEI) has occurred, is defined at 62-210.200(Definitions), F.A.C. The part of the definition that includes the pollutants emitted at the greatest levels for this project is as follows:

"Significant Emissions Rate" – (a) With respect to any emissions increase or any net emissions increase, or the potential of a facility to emit any of the following pollutants, significant emissions rate means a rate of pollutant emissions that would equal or exceed:

1. *A rate listed at 40 CFR 52.21(b)(23)(i), adopted by reference at Rule 62-204.800, F.A.C.; specifically, any of the following rates:*
   a. *Carbon monoxide: 100 tons per year (tpy);*
   b. *Nitrogen oxides: 40 tpy;*
   c. *Sulfur dioxide: 40 tpy; etc.*

The significant emissions rates (SER) for CO, NO_X and SO_2 are 100, 40 and 40 TPY respectively. The SER for these three pollutants are very low especially compared with the emissions from Units 1 and 2 during recent years as shown in the following table. Therefore the possibility of a SNEI for NO_X or CO (if not for SO_2) is a consideration.

Table 1. Recent Historical Emissions from OUC Stanton Units 1 and 2

Historical Emissions from Stanton Unit 1						
Year	NO_X	SO_2	CO	PM	PM_{10}	VOC
2001	7,460	6,661	388	135	30	44
2002	6,494	5,321	413	43	27	45
2003	6,375	4,833	413	47	30	45
2004	5,860	4,274	395	40	40	44
2005	7,533	6,059	327	67	64	49
Highest 2 years	6,977	5,991	401	89	52	47
Historical Emissions from Stanton Unit 2						
Year	NO_X	SO_2	CO	PM	PM_{10}	VOC
2001	2,826	3,268	383	67	42	44
2002	2,349	2,359	371	102	64	43
2003	2,520	2,305	359	95	64	41
2004	2,566	2,501	399	113	111	44
2005	2,692	2,779	385	78	78	44
Highest 2 years	2,629	2,814	392	96	95	44

"Major Modification" – (a) Any physical change in or change in the method of operation of a major stationary source that would result in a ***significant emissions increase*** *of a PSD pollutant and a* ***significant net emissions increase*** *of that pollutant from the major stationary source.*

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2005	2,692	2,779	385	78	78	44
Highest 2 years	2,629	2,814	392	96	95	44

Combined Historical Emissions from Stanton Units 1 and 2						
Year	NO_X	SO_2	CO	PM	PM_{10}	VOC
2001	10,285	9,929	771	202	73	88
2002	8,843	7,679	784	145	91	88
2003	8,895	7,138	771	143	95	86
2004	8,426	6,774	794	152	151	88
2005	10,225	8,838	712	145	142	94
Highest 2 years	9,564	8,804	783	174	146	91

An NO_X emissions cap of 8,300 TPY was established on Unit 1 and 2 in permit No. 0950137-011-AC, Section III, Specific Condition 4. Clearly most of the NO_X reductions will come from Unit 1 following a planned project to install low NO_X burners (LNB) and overfire air (OFA) pursuant to draft permit 0950137-015-AC. The latter permit action includes a draft determination of best available control technology (BACT) for CO on both units.

According to the applicant, Units 1 and 2 are and will continue to be base load units. The applicant also believes there will be no increase in the unit demand due to the project. The applicant believes that any increase in unit use over time would be due to an increase in natural demand growth and as such any emission increases associated with increased operation will be excludable when determining any future emissions increases.

According to the applicant, the project will not result in an increase in the Unit 1 or Unit 2 short-term heat input rate. The various projects at the facility, including those covered by other permits are for the purpose of facilitating compliance with CAIR or to the Unit 1 and 2 NO_X cap. To test the applicant's claim that there will be no increase in short-term heat input rate that could cause annual increases, the Department developed the following heat input and power output diagrams using data available from the EPA Clean Air Markets website for 2003.

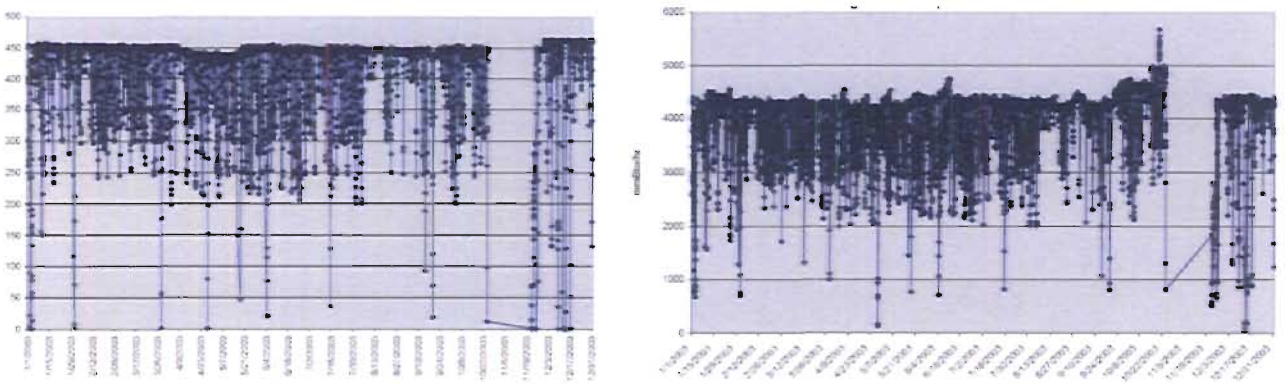

Figure 3. Hourly Power (MW) and Heat Input Values (mmBtu/hr) for Unit 1 in 2003

Units 1 is described as nominal 468 MW unit in the facility Title V operation permit and as a nominal 465 MW unit in the facility site certification. Heat input to Unit 1 is limited by enforceable permits to 4,268 mmBtu/hr. It is clear from Figure 3 that Unit 1 consistently runs near its nominal rating and near the maximum allowable heat input limit. It appears that at times Unit 1 actually registers heat input rates above the permitted limits.

The reasons for apparent exceedances of the permitted heat input limits in October 2003 (just before an outage) are unknown, but it is noted that they occurred with no concurrent increase in power production. After the outage, the recorded heat input values returned to their previous levels.

Unit 1 is presently limited in its ability to accept fuel by permit limitations rather than by mechanical limitations. It is therefore unlikely that modifications to the ID fan will cause short-term heat input increases that would in turn cause long-term emission increases.

4.0 CONCLUSION

The Department has made a determination that the proposed project will comply with applicable state and federal air pollution regulations. The Department's preliminary determination is based on the facts and representations provided by OUC, information on file regarding the other OUC CAIR-related projects at Units 1 and 2, and historical data available through the EPA Air Markets Program. The Department will issue a Draft air construction permit to the applicant for the Phase 2 scrubber upgrades to Unit 1. Recordkeeping will be required for determining in future years whether any SNEI are caused by the project, particularly the modifications of the ID fan. The Department's determination is strictly limited to this specific case and should not be used as a precedent for other cases, or lead to unintended consequences construed from the language contained in this determination.

Harvey, Mary

From: Harvey, Mary

Sent: Wednesday, November 28, 2007 2:16 PM

To: 'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike

Cc: Linero, Alvaro; Read, David; Adams, Patty; Gibson, Victoria

Subject: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

Attachments: COVER012.pdf; INTENT012.pdf; NOTICE012.pdf; TECHNICAL012.pdf; DPERMIT012.pdf

Tracking:

Recipient	Delivery	Read
'dstalls@ouc.com'		
Bradner, James	Delivered: 11/28/2007 2:16 PM	Read: 11/28/2007 2:45 PM
'lori.cunniff@ocfl.net'		
'little.james@epamail.epa.gov'		
'forney.kathleen@epa.gov'		
'newlandlt@bv.com'		
Halpin, Mike	Delivered: 11/28/2007 2:16 PM	Read: 11/28/2007 2:38 PM
Linero, Alvaro	Delivered: 11/28/2007 2:16 PM	Read: 11/28/2007 3:03 PM
Read, David	Delivered: 11/28/2007 2:16 PM	Read: 11/28/2007 2:17 PM
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Thank you,

DEP, Bureau of Air Regulation

Harvey, Mary

From: Stalls, Denise M. [DStalls@ouc.com]
Sent: Friday, November 30, 2007 2:38 PM
To: Harvey, Mary
Subject: RE: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Wednesday, November 28, 2007 2:16 PM
To: Stalls, Denise M.; Bradner, James; lori.cunniff@ocfl.net; little.james@epamail.epa.gov; forney.kathleen@epa.gov; newlandlt@bv.com; Halpin, Mike
Cc: Linero, Alvaro; Read, David; Adams, Patty; Gibson, Victoria
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Harvey, Mary

From: Lori.Cunniff@ocfl.net
To: Harvey, Mary
Sent: Friday, November 30, 2007 3:07 PM
Subject: Read: FW: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

Your message

To: Lori.Cunniff@ocfl.net
Subject:

was read on 11/30/2007 3:07 PM.

Harvey, Mary

From: Lori.Cunniff@ocfl.net
Sent: Friday, November 30, 2007 3:09 PM
To: Harvey, Mary
Subject: RE: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

Received

Lori Cunniff, Manager
Orange County Environmental Protection Division
800 Mercy Drive
Orlando, FL 32808
407-836-1405

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Friday, November 30, 2007 2:36 PM
To: dstalls@ouc.com; Cunniff, Lori; little.james@epamail.epa.gov; Katy Forney, EPA Region 4
Subject: FW: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

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Mary Harvey

From: Harvey, Mary
Sent: Wednesday, November 28, 2007 2:16 PM
To: 'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc: Linero, Alvaro; Read, David; Adams, Patty; Gibson, Victoria
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Harvey, Mary

From: Read, David
To: Harvey, Mary
Sent: Wednesday, November 28, 2007 2:17 PM
Subject: Read: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

Your message

To:	'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc:	Linero, Alvaro; Read, David; Adams, Patty; Gibson, Victoria
Subject:	DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION
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Harvey, Mary

From: Halpin, Mike
To: Harvey, Mary
Sent: Wednesday, November 28, 2007 2:38 PM
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Your message

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Sent:	11/28/2007 2:16 PM

was read on 11/28/2007 2:38 PM.

Harvey, Mary

From: Bradner, James
Sent: Wednesday, November 28, 2007 2:47 PM
To: Harvey, Mary
Subject: RE: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

Received—thanks!

From: Harvey, Mary
Sent: Wednesday, November 28, 2007 2:16 PM
To: 'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc: Linero, Alvaro; Read, David; Adams, Patty; Gibson, Victoria
Subject: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

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DEP, Bureau of Air Regulation

Harvey, Mary

From: Bradner, James
To: Harvey, Mary
Sent: Wednesday, November 28, 2007 2:46 PM
Subject: Read: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

Your message

To:	'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc:	Linero, Alvaro; Read, David; Adams, Patty; Gibson, Victoria
Subject:	DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION
Sent:	11/28/2007 2:16 PM

was read on 11/28/2007 2:45 PM.

Harvey, Mary

From: Linero, Alvaro
To: Harvey, Mary
Sent: Wednesday, November 28, 2007 3:03 PM
Subject: Read: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

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To:	'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc:	Linero, Alvaro; Read, David; Adams, Patty; Gibson, Victoria
Subject:	DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION
Sent:	11/28/2007 2:16 PM

was read on 11/28/2007 3:03 PM.

Harvey, Mary

From: Newland, Larry T. (Todd) [NewlandLT@bv.com]
Sent: Wednesday, November 28, 2007 2:43 PM
To: Harvey, Mary
Subject: RE: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

Received.

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To: dstalls@ouc.com; Bradner, James; lori.cunniff@ocfl.net; little.james@epamail.epa.gov; forney.kathleen@epa.gov; Newland, Larry T. (Todd); Halpin, Mike
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Thank you,

DEP, Bureau of Air Regulation

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey. Thank you in advance for completing the survey.

Harvey, Mary

From: Newland, Larry T. (Todd) [NewlandLT@bv.com]
To: undisclosed-recipients
Sent: Wednesday, November 28, 2007 2:43 PM
Subject: Read: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

Your message

To: NewlandLT@bv.com
Subject:

was read on 11/28/2007 2:43 PM.

Harvey, Mary

From: Adams, Patty
To: Harvey, Mary
Sent: Wednesday, November 28, 2007 3:55 PM
Subject: Read: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

Your message

To:	'dstalls@ouc.com'; Bradner, James; 'lori.cunniff@ocfl.net'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'newlandlt@bv.com'; Halpin, Mike
Cc:	Linero, Alvaro; Read, David; Adams, Patty; Gibson, Victoria
Subject:	DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION
Sent:	11/28/2007 2:16 PM

was read on 11/28/2007 3:55 PM.

Orlando Sentinel

Published Daily

State of Florida } S.S.
COUNTY OF ORANGE

Before the undersigned authority personally appeared Rachael Washington, who on oath says that he/she is the Legal Advertising Representative of Orlando Sentinel, a daily newspaper published at Orlando in Orange County, Florida; that the attached copy of advertisement, being a Public Notice in the matter of DEP FILE# 0950137-012-AC In the Orange _____ Court, was published in said newspaper in the issue; of 12/20/07

Affiant further says that the said Orlando Sentinel is a newspaper published at Orlando, in said Orange County, Florida, and that the said newspaper has heretofore been continuously published in said Orange County, Florida, each Week Day and has been entered as second-class mail matter at the post office in Orlando in said Orange County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

The foregoing instrument was acknowledge before me this 21st day of December, 2007, by Rachael Washington, who is personally known to me and who did take an oath.

(SEAL)

Order# 581796

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0950137-012-AC

OUC Curtis H. Stanton Energy Center Unit 1 Unit 1 Scrubber Upgrade, Phase 2

Orange County

Applicant: The applicant for this project is the Orlando Utilities Commission (OUC). The applicant's authorized representative and mailing address are: Ms. Denise Stalls, Vice President, Environmental Affairs, Orlando Utilities Commission, 500 South Orange Avenue, Post Office Box 3193, Orlando, Florida 32802

Facility Location: OUC operates the Stanton Energy Center, which is located in Orange County, Southeast of Orlando and North of Highway 528 at 5100 South Alafaya Trail. OUC Stanton Unit 1 is a coal fired boiler/steam generator and steam turbine with a 468 megawatts nominal capacity rating. The unit is equipped with an electrostatic precipitator for control of particulate matter, and a wet flue gas desulfurization (WFGD) system for sulfur dioxide (SO2) control.

Project: OUC applied on February 5, 2007 to the Florida Department of Environmental Protection for a permit to conduct additional upgrades to the WFGD system on Unit 1 at the existing Curtis H. Stanton Energy Center Southeast of Orlando in Orange County. The proposed project includes: installation of a new distribution tray or an additional spray level with increased recycle pump capacity; modifications to the spray nozzle arrangement and piping; and modifications to the induced draft fan. These modifications are expected to reduce the operating costs of the Unit 1 scrubber system and improve its reliability. Emissions of SO2 are expected to decrease as a direct result of the improved efficiency of the WFGD system. The project is part of a continuing program at the OUC Stanton Energy Center to reduce emissions of SO2 and nitrogen oxides (NOX) for the purpose of complying with the Clean Air Interstate Rule. The Department has reasonable assurance that the project will not result in significant net emission increases from the unit that would otherwise require a review under the Rules for the Prevention of Significant Deterioration (PSD) at Paragraph 62-212.400, Florida Administrative Code (F.A.C.) or 40 Code of Federal Regulations, Part 52, Section 52.21.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212, F.A.C. The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, Mail Station (MS) #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 application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the Draft Permit by visiting the following website:
http://www.dep.state.fl.us/air/eproducts/ards
and entering the permit number indicated above. A

and entering the permit number indicated above. A copy of the complete project file is also available at the Air Resources Section of the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The telephone number is 407/894-7555.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment 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, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions. A best available control technology (BACT) determination was not required.

The Department has reasonable assurance that the project will not result in significant net emission increases from the unit that would otherwise require a review under the Rules for the Prevention of Significant Deterioration (PSD) at Section 62-212.400, F.A.C

The Department will issue the final air construction permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

Comments: The Department will accept written comments concerning the proposed permit issuance action for a period of 14 days from the date of publication of Public Notice. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

Petitions: The Department will issue the construction permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, MS #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 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) of the Florida Statutes must be filed within 14 days of publication of the public notice or within 14 days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department 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

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 (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department'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 petitioner received notice of the agency decision; (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, 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, including an explanation of how the alleged facts relate to the specified rules or statutes; 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 Department'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. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of
Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive,
Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0114
Fax: 850/921-9533

Department of
Environmental Protection
Central District Office
3319 Maguire Boulevard,
Suite 232
Orlando, Florida 32803-3767
Telephone: 407/894-7555
Fax: 407/897-5963

The complete project file includes the technical evaluation and the Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Program Administrator, South Permitting Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information. The draft permit and technical evaluation can be accessed at the following site by clicking the link to OUC Stanton in the power plant category:
www.dep.state.fl.us/Air/permitting/construction.htm

Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE:

Orlando Utilities Commission (OUC)
500 South Orange Avenue
Orlando, Florida 32802

Authorized Representative:
Ms. Denise Stalls, Vice President
Environmental Affairs

DEP File No. 0950137-012-AC
Curtis H. Stanton Energy Center
SIC No. 4911
Unit 1 Scrubber Upgrade, Phase 2
Orange County, Florida
Expiration Date: December 31, 2008

PROJECT AND LOCATION

This permit authorizes the addition of or modification to components of the existing wet flue gas desulfurization (WFGD) system and the induced draft fan on Unit 1 of the OUC Curtis H. Stanton Energy Center. The facility is located at 5100 Alafaya Trail, Orlando, Orange County.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Parts 60 and 63 of the Code of Federal Regulations (CFR). The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

CONTENTS

Tina L Vielhauer 2/6/08

Joseph Kahn, Director (Date)
Division of Air Resource Management

JK/tlv/aal/dlr

FACILITY AND PROJECT DESCRIPTION

The existing facility consists of two 468 megawatts (MW) fossil fuel fired steam electric generating units (Units 1 and 2), and one 640 MW combined cycle unit. There are storage and handling facilities for solid fuels, fly ash, limestone, gypsum, slag, and bottom ash.

The project under this permit is for the Phase 2 of scrubber upgrades to Unit 1 including:

- Installation of a new distribution tray or an additional spray level with increased recycle pump capacity;
- Modifications to the spray nozzle arrangement and piping; and
- Modifications to the induced draft fan.

The present permitting action is related to the following emissions unit (EU):

EU ID	Emissions Unit Description
001	Fossil Fuel Fired Steam Electric Generator No. 1

REGULATORY CLASSIFICATION

The facility is a potential major source of hazardous air pollutants (HAP).

The facility operates existing units subject to the Acid Rain provisions of Title IV of the Clean Air Act (CAA).

The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

The facility is a major stationary source (PSD-major source) in accordance with Rule 62-212.400, F.A.C.

The facility operates units subject to the Standards of Performance for New Stationary Sources pursuant to 40 CFR Part 60.

The facility does not operate electrical generating units subject to National Emissions Standards for Hazardous Air Pollutants pursuant to 40 CFR Part 63.

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

The facility is subject to the Clean Air Mercury Rule (CAMR) set forth in Rule 62-296.480, F.A.C.

The facility operates units that were certified under the Florida Power Plant Siting Act, 403.501-518, F.S.

RELEVANT DOCUMENTS

The following relevant documents are not a part of this permit, but helped form the basis for this permitting action: the permit application and additional information received to make it complete; and the Department's Technical Evaluation and Preliminary Determination.

1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Department. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Central District Office. The mailing address and phone number of the Central District Office are: Department of Environmental Protection, Central District Office, 3319 Maguire Boulevard, Suite 232, Orlando Florida 32803-3767. Telephone: (407)894-7555. Fax: (407)897-5963.

3. Appendices: The following Appendices are attached as part of this permit: Appendix GC (General Conditions).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Bureau of Air Regulation with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

This section of the permit addresses the following existing emissions units.

Emissions Unit 001
Fossil Fuel Fired Steam Generator 1 is a wall-fired, dry bottom boiler, firing pulverized coal as the primary fuel and No. 6 fuel oil for purposes of startup and flame stabilization. The unit has a maximum heat input rate of 4,286 million Btu per hour with a nominal generating capacity of 468 MW. The unit is equipped with an electrostatic precipitator (ESP) for control of particulate matter (PM/PM_{10}), a Wet Flue Gas Desulfurization (WFGD) system for sulfur dioxide (SO_2) control, and low nitrogen oxides (NO_X) burners for NO_X control. The following parameters are continuously monitored on Unit 1: NO_X, opacity, SO_2, carbon dioxide (CO_2), and stack gas flow rate.

APPLICABLE STANDARDS AND REGULATIONS

1. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. The requirements of this permit are in addition to and supplement any other permits. [Rule 62-210.300, F.A.C.]
2. The facility is subject to all of the requirements specified in Title V Air Operation Permit Renewal No. 1050004-016-AV.

GENERAL OPERATION REQUIREMENTS

3. Unconfined Particulate Emissions. During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4), F.A.C.]
4. 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 Department 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.]
5. 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.]
6. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

EQUIPMENT AND CONTROL TECHNOLOGY

7. Scrubber Upgrades. The permittee is authorized to install a new distribution tray or an additional spray level with increased recycle pump capacity on the Unit 1 WFGD scrubber and to modify the spray nozzles and their arrangement and piping as described in the application. [Applicant Request]
8. Induced Draft Fan. The permittee is authorized to make modification to and increase the speed of the Unit 1 induced draft fan to account for the additional pressure drop caused by the scrubber upgrades described in condition 7 and to resolve vibration problems. [Applicant Request]

REPORTING AND NOTIFICATION REQUIREMENTS

9. Notification. Within one week of beginning construction of the Phase 2 Unit 1 scrubber upgrade, the permittee shall notify the Compliance Authority that the project has commenced and provide a general schedule of construction activities. Within one week following the end of construction, the permittee shall notify the Compliance Authority that the project was completed. [Rule 62-4.210, F.A.C.]

10. Future Actual Emissions Reporting. The permittee shall maintain and submit to the Department on an annual basis for a period of 5 years from the date the Phase 2 Unit 1 scrubber upgrade project is placed in operation, information demonstrating in accordance with Rule 62-212.300(1)(e), F.A.C., using the emissions computation and reporting procedures in Rule 62-210.370, F.A.C., that the implementation of the initiative did not result in an emissions increase that would equal or exceed the significant emission rates as defined in Rule 62-210.200, F.A.C. [Rule 62-212.300(1)(e), F.A.C.]

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

   a. Have access to and copy and records that must be kept under the conditions of the permit;
   b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
   c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

   Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

   a. A description of and cause of non-compliance; and

b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (Not Applicable);
    b. Determination of Prevention of Significant Deterioration (Not Applicable);
    c. Compliance with National Emission Standards for Hazardous Air Pollutants (Not Applicable); and
    d. Compliance with New Source Performance Standards (Not Applicable).

14. The permittee shall comply with the following:

    a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

    b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

    c. Records of monitoring information shall include:

        1) The date, exact place, and time of sampling or measurements;
        2) The person responsible for performing the sampling or measurements;
        3) The dates analyses were performed;
        4) The person responsible for performing the analyses;
        5) The analytical techniques or methods used; and
        6) The results of such analyses.

When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Air Permit by:

Ms. Denise Stalls, Vice President –
Environmental Affairs
Orlando Utilities Commission (OUC)
500 South Orange Ave
Orlando, Florida 32802

DEP File No. 0950137-012-AC
Curtis H. Stanton Energy Center
Unit 1 Scrubber Upgrade, Phase 2
Orange County

_____/

Enclosed is the Final Permit Number 0950137-012-AC authorizing the applicant OUC to conduct additional upgrades to the Wet Flue Gas Desulfurization (WFGD) system on Unit 1 at the existing Curtis H. Stanton Energy Center Southeast of Orlando in Orange County. The proposed project includes: installation of a new distribution tray or an additional spray level with increased recycle pump capacity and modifications to the spray nozzle arrangement and piping. These modifications are expected to reduce the operating costs of the Unit 1 scrubber system and improve its reliability. Emissions of sulfur dioxide (SO_2) are expected to decrease as a direct result of the improved efficiency of the WFGD system. The project is part of a continuing program at the OUC Stanton Energy Center to reduce emissions of SO_2 and nitrogen oxides (NO_X) for the purpose of complying with the Clean Air Interstate Rule.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Permit) and all copies were sent electronically (with Received Receipt Requested) before the close of business on 2/7/08 to the person(s) listed:

Denise Stalls, OUC: dstalls@ouc.com
Jim Bradner, DEP CD: james.bradner@dep.state.fl.us
Lori Cunniff, Orange County EPD: lori.cunniff@ocfl.net
Jim Little, EPA Region 4: little.james@epamail.epa.gov
Katy Forney, EPA Region 4: forney.kathleen@epa.gov
Larry Todd Newland, P.E., Black & Veatch: newlandlt@bv.com
Mike Halpin, DEP Siting: mike.halpin@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 2/7/08 (Date)

Memorandum

Florida Department of Environmental Protection

TO: Joseph Kahn, Director, Division of Air Resource Management

THROUGH: Trina Vielhauer, Chief, Bureau of Air Regulation

THROUGH: Al Linero

FROM: David Read

DATE: February 4, 2008

SUBJECT: Final Air Permit No. 0950137-012-AC
Orlando Utilities Commission (OUC)
Curtis H. Stanton Energy Center
Unit 1 Scrubber Upgrade, Phase 2

Attached for your review are the following items:

- Final Notice;
- Final Determination; and
- Final Permit.

The Final Determination explains the purpose of the project. We recommend your approval of the attached final permit for this project.

Attachments

FINAL DETERMINATION

PERMITTEE

Orlando Utilities Commission (OUC)
500 South Orange Ave
Orlando, Florida 32802

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
2600 Blair Stone Road, MS# 5505
Tallahassee, Florida 32399-2400

PROJECT

Air Permit No. 0950137-012-AC

Curtis H. Stanton Energy Center
Unit 1 Scrubber Upgrade, Phase 2

This project involves OUC conducting additional upgrades to the Wet Flue Gas Desulfurization (WFGD) system on Unit 1 at the existing Curtis H. Stanton Energy Center Southeast of Orlando in Orange County. The proposed project includes: installation of a new distribution tray or an additional spray level with increased recycle pump capacity and modifications to the spray nozzle arrangement and piping. These modifications are expected to reduce the operating costs of the Unit 1 scrubber system and improve its reliability. Emissions of sulfur dioxide (SO_2) are expected to decrease as a direct result of the improved efficiency of the WFGD system. The project is part of a continuing program at the OUC Stanton Energy Center to reduce emissions of SO_2 and nitrogen oxides (NO_X) for the purpose of complying with the Clean Air Interstate Rule.

NOTICE AND PUBLICATION

The Department distributed an "Intent to Issue Permit" package on November 28, 2007. The applicant published the "Public Notice of Intent to Issue" in the Orlando Sentinel on December 20, 2007 with proof of publication received by the Department on January 11, 2008. No petitions for administrative hearings or extensions of time to petition for an administrative hearing were filed. No comments were received from EPA Region 4, the applicant, or the public at large on the Intent to Issue the Air Construction Permit package

CONCLUSION

The final action of the Department is to issue the air construction permit.

Tracking Page

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Air Permit by:

Ms. Denise Stalls, Vice President –
Environmental Affairs
Orlando Utilities Commission (OUC)
500 South Orange Ave
Orlando, Florida 32802

DEP File No. 0950137-012-AC
Curtis H. Stanton Energy Center
Unit 1 Scrubber Upgrade, Phase 2
Orange County

Enclosed is the Final Permit Number 0950137-012-AC authorizing the applicant OUC to conduct additional upgrades to the Wet Flue Gas Desulfurization (WFGD) system on Unit 1 at the existing Curtis H. Stanton Energy Center Southeast of Orlando in Orange County. The proposed project includes: installation of a new distribution tray or an additional spray level with increased recycle pump capacity and modifications to the spray nozzle arrangement and piping. These modifications are expected to reduce the operating costs of the Unit 1 scrubber system and improve its reliability. Emissions of sulfur dioxide (SO_2) are expected to decrease as a direct result of the improved efficiency of the WFGD system. The project is part of a continuing program at the OUC Stanton Energy Center to reduce emissions of SO_2 and nitrogen oxides (NO_X) for the purpose of complying with the Clean Air Interstate Rule.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

Trina L. Vielhauer

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Permit) and all copies were sent electronically (with Received Receipt Requested) before the close of business on 2/7/08 to the person(s) listed:

Denise Stalls, OUC: dstalls@ouc.com
Jim Bradner, DEP CD: james.bradner@dep.state.fl.us
Lori Cunniff, Orange County EPD: lori.cunniff@ocfl.net
Jim Little, EPA Region 4: little.james@epamail.epa.gov
Katy Forney, EPA Region 4: forney.kathleen@epa.gov
Larry Todd Newland, P.E., Black & Veatch: newlandlt@bv.com
Mike Halpin, DEP Siting: mike.halpin@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Mary L. Stamp 2/7/08
(Clerk) (Date)

Harvey, Mary

From: Newland, Larry T. (Todd) [NewlandLT@bv.com]
Sent: Thursday, February 07, 2008 3:56 PM
To: Harvey, Mary
Subject: RE: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Received.

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Thursday, February 07, 2008 3:47 PM
To: Denise Stalls, OUC:; Bradner, James; Lori Cunniff, Orange County EPD:; Jim Little, EPA Region 4 ; Katy Forney, EPA Region 4:; Newland, Larry T. (Todd); Halpin, Mike
Cc: Read, David; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

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http://www.adobe.com/products/acrobat/readstep.html.

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Thank you,

DEP, Bureau of Air Regulation

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey. Thank you in advance for completing the survey.

Harvey, Mary

From: Forney.Kathleen@epamail.epa.gov
Sent: Friday, February 08, 2008 12:59 PM
To: Harvey, Mary
Subject: Re: FW: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

thanks

Katy R. Forney
Air Permits Section
EPA - Region 4
61 Forsyth St., SW
Atlanta, GA 30303

Phone: 404-562-9130
Fax: 404-562-9019

"Harvey, Mary" <Mary.Harvey@dep.state.fl.us>
02/07/2008 03:47 PM

To: Kathleen Forney/R4/USEPA/US@EPA
cc:
Subject: FW: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

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From: Harvey, Mary
Sent: Thursday, February 07, 2008 3:47 PM
To: 'Denise Stalls, OUC:'; Bradner, James; 'Lori Cunniff, Orange County EPD:'; 'Jim Little, EPA Region 4:'; 'Katy Forney, EPA Region 4:'; 'Larry Todd Newland, P.E., Black & Veatch:'; Halpin, Mike
Cc: Read, David; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Dear Sir/Madam:

Harvey, Mary

From: Lori.Cunniff@ocfl.net
Sent: Friday, February 08, 2008 1:05 PM
To: Harvey, Mary
Subject: RE: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Received.

Lori Cunniff, Manager
Orange County Environmental Protection Division
800 Mercy Drive
Orlando, FL 32808
407-836-1405

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Thursday, February 07, 2008 3:47 PM
To: Denise Stalls, OUC:; Bradner, James; Cunniff, Lori; Jim Little, EPA Region 4:; Katy Forney, EPA Region 4:; Larry Todd Newland, P.E., Black & Veatch:; Halpin, Mike
Cc: Read, David; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

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Harvey, Mary

From: Bradner, James
Sent: Friday, February 08, 2008 8:53 AM
To: Harvey, Mary
Subject: RE: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Received—thank you.

From: Harvey, Mary
Sent: Thursday, February 07, 2008 3:47 PM
To: 'Denise Stalls, OUC:'; Bradner, James; 'Lori Cunniff, Orange County EPD:'; 'Jim Little, EPA Region 4:'; 'Katy Forney, EPA Region 4:'; 'Larry Todd Newland, P.E., Black & Veatch:'; Halpin, Mike
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Subject: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

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Thank you,

DEP, Bureau of Air Regulation

Harvey, Mary

From: Stalls, Denise M. [DStalls@ouc.com]
Sent: Thursday, February 21, 2008 8:32 AM
To: Harvey, Mary
Subject: RE: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Received.

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
Sent: Thursday, February 07, 2008 3:47 PM
To: Stalls, Denise M.; Bradner, James; Lori Cunniff, Orange County EPD:; Jim Little, EPA Region 4:; Katy Forney, EPA Region 4:; Larry Todd Newland, P.E., Black & Veatch:; Halpin, Mike
Cc: Read, David; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

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Thank you,

DEP, Bureau of Air Regulation

Harvey, Mary

From: Halpin, Mike
To: Harvey, Mary
Sent: Wednesday, February 20, 2008 4:17 PM
Subject: Read: RE: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Your message

To: 'dstalls@ouc.com'; Halpin, Mike
Subject: RE: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)
Sent: 2/20/2008 4:06 PM

was read on 2/20/2008 4:17 PM.

Harvey, Mary

From: Halpin, Mike
To: Harvey, Mary
Sent: Wednesday, February 20, 2008 4:17 PM
Subject: Read: FW: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)

Your message

To: Halpin, Mike
Subject: FW: Final Air Permit No. 0950137-012-AC - Orlando Utilities Commission (OUC)
Sent: 2/20/2008 4:07 PM

was read on 2/20/2008 4:17 PM.