


Florida Department of
Environmental Protection

Memorandum

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 SO₂ 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

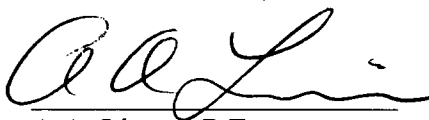
Project:

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 SO₂ 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).

 11/25/07

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

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

Authorized Representative:

Ms. Denise Stalls, Vice President – Environmental Affairs

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

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

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,

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

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

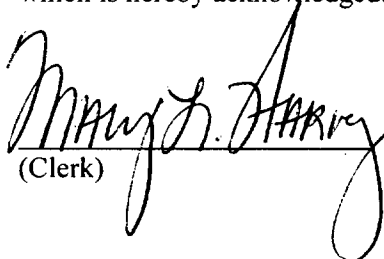
CERTIFICATE OF SERVICE

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 (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 (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

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

Joseph Kahn, Director
Division of Air Resource Management

(Date)

SECTION 1. GENERAL INFORMATION

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.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

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.]

SECTION 3. EMISSIONS UNITS SPECIFIC CONDITIONS

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/PM₁₀), a WFGD system for sulfur dioxide (SO₂) control, and low NO_x burners for nitrogen oxides (NO_x) control. The following parameters are continuously monitored on Unit 1: NO_x, opacity, SO₂, CO₂, 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 62-296.520(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]

SECTION 3. EMISSIONS UNITS SPECIFIC CONDITIONS

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.]



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.

**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.

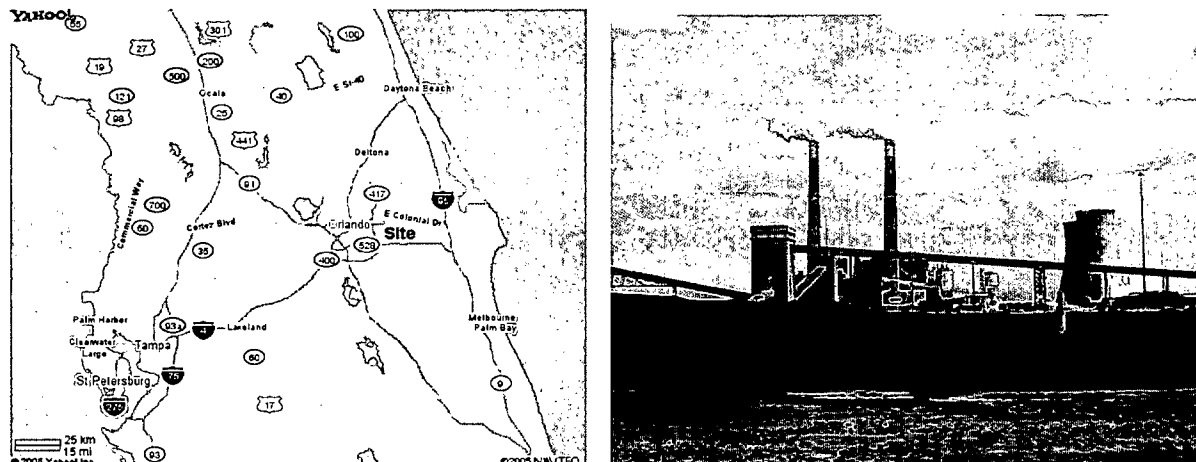


Figure 1. OUC Curtis H. Stanton Energy Center Location and Stanton Units 1 and 2.

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.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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/PM₁₀), sulfur dioxide (SO₂), 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 SO₂ Control

Stanton Units 1 and 2 utilize WFGD limestone-based scrubbers to control SO₂ 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 SO₂ from the flue gas and fall to the base of the absorber, where they are collected in a reaction tank.

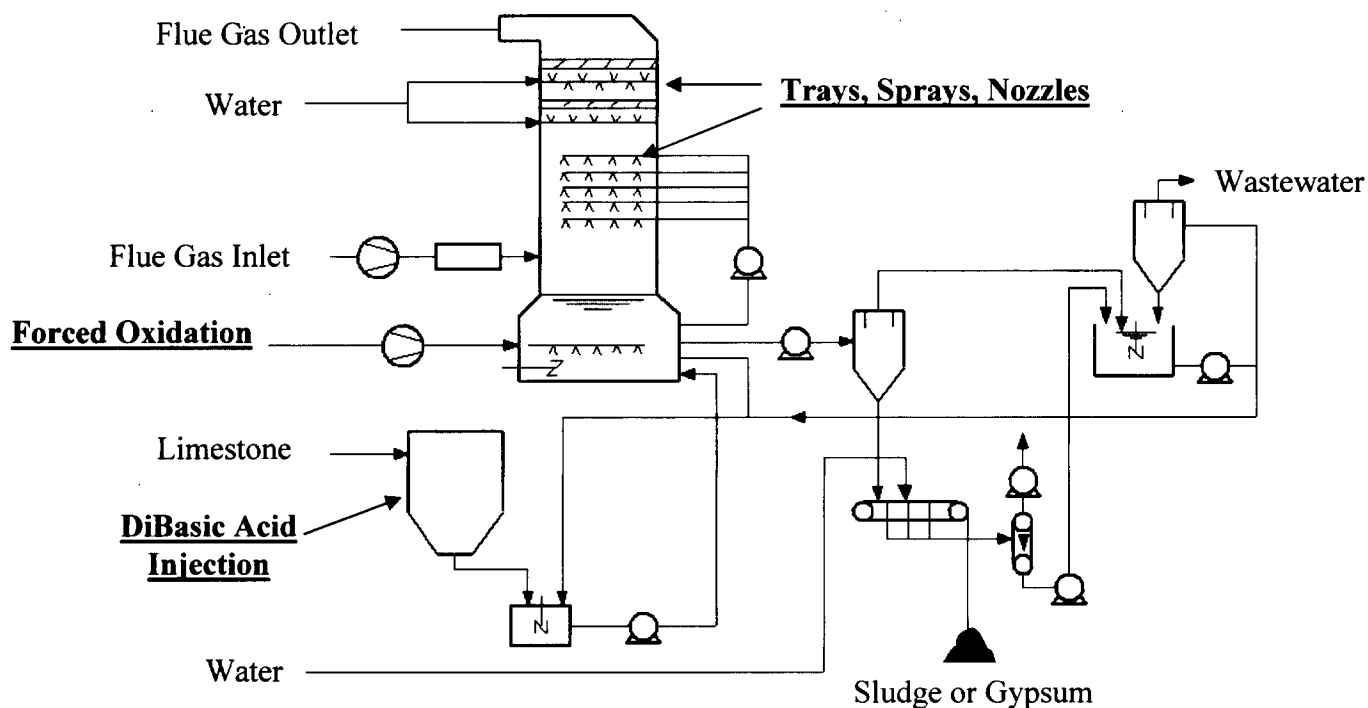
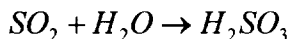


Figure 2. Diagram of a WFGD Limestone Scrubber System (Soud and Takeshita, 1994).

The reactions in the absorber and tank can be represented by the following simplified description:

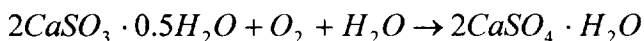
Equation 1. Sulfur dioxide and water react to form sulfurous acid.



Equation 2. Sulfurous acid reacts with limestone to form calcium sulfite ($CaSO_3 \cdot \frac{1}{2}H_2O$), carbon dioxide (CO_2) and water (H_2O).



Equation 3. Most $CaSO_3 \cdot 0.5H_2O$ is further oxidized to form gypsum ($CaSO_4 \cdot 2H_2O$).



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 SO₂. 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 SO₂ 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 SO₂ 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 SO₂ 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 SO₂ 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 SO₂ 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 SO₂ 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 SO₂ 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 SO₂ emissions and possibly slight increases in limestone material handling emissions resulting from slightly higher limestone usage associated with improved SO₂ removal.

3.0 MODIFICATION AND PERMITTING APPLICABILITY

Addition of Control Equipment

The applicant expects emissions of SO₂ 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:

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

*“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 SO₂ 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 SO₂) 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

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

*“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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The significant emissions rates (SER) for CO, NO_x and SO₂ 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 SO₂) is a consideration.

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2005	2,692	2,779	385	78	78	44
Highest 2 years	2,629	2,814	392	96	95	44

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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.

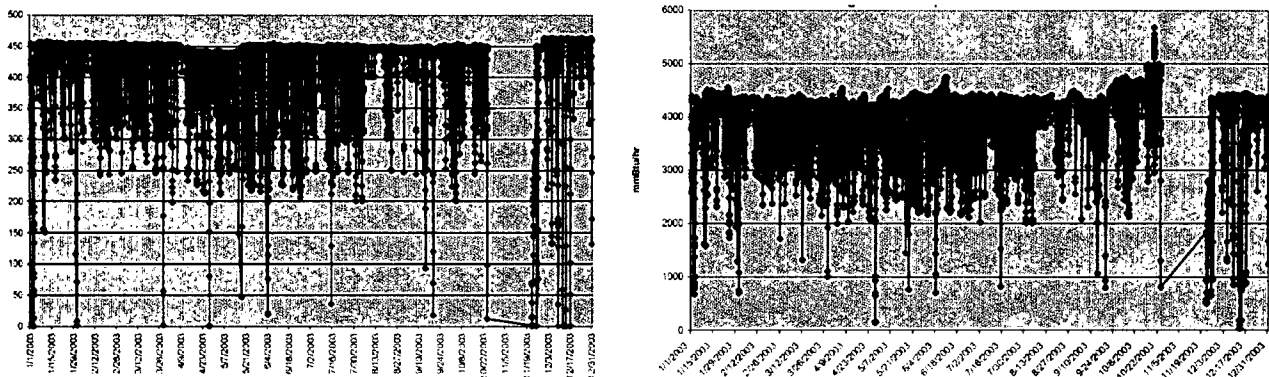


Figure 3. Hourly Power (MW) and Heat Input Values (mmBtu/hr) for Unit 1 in 2003

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.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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
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	'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

11/30/2007

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
Subject: DRAFT AIR CONSTRUCTION PERMIT MODIFICATION - 0950137-012 - ORLANDO UTILITIES COMMISSION

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11/30/2007

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

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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

Good Afternoon,

Please email me back if you have received the above draft permit. The read receipt is need for tracking purpose for the files. Thanks and have a good day.

Mary Harvey

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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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11/30/2007

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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was read on 11/28/2007 2:17 PM.

Harvey, Mary

From: Halpin, Mike
To: Harvey, Mary
Sent: Wednesday, November 28, 2007 2:38 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'; 'newlandt@bv.com'; Halpin, Mike
Cc: Linero, Alvaro; Read, David; Adams, Patty; Gibson, Victoria
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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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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

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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

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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

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

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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.

From: Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
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; Newland, Larry T. (Todd); 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: 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
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