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Golder Associates

April 1, 2010 103-89500

Al Linero, PE
Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400

RE: STANTON ENERGY CENTER, FACILITY ID NO. 0950137
MINOR SOURCE AIR CONSTRUCTION PERMIT APPLICATION
UNITS 1 AND 2 HEAT INPUT CORRECTION

Dear Mr. Linero:

Attached is an application for a minor source air construction permit for the Stanton Energy Center (SEC) associated with a correction in the allowable heat input limit for SEC Units 1 and 2. This correction does not involve any physical changes to the units, but implements a more accurate method of heat input monitoring and reporting. Specifically, these units are currently capable of operating at the higher requested short-term heat input rates (million British thermal units per hour [MMBtu/hr]) and nothing has really changed physically or operationally with either unit. Since future operation of these units will not be significantly different from historical operation, the reported annual emissions, post-correction, should not be significantly different.

Enclosed are an original and three copies of the application package. Per the settlement agreement with the Department on this issue, the Orlando Utilities Commission submits this application by the agreed-upon date of April 1, 2010. Please contact me at (813) 287-1717 if you have any questions.

Sincerely,

GOLDER ASSOCIATES INC.

Scott Osbourn, PE
Associate and Senior Consultant

Enclosure

cc: Caroline Shine, FDEP Central District
Garfield Blair, OUC Director of Environmental Affairs
Michael Cooke, Ruden & McClosky

SO/ev

H:\PROJECTS\2010proj\10389500 OUC SEC Heat Input\DEP Transmittal Ltr.docx

Golder Associates Inc.
5100 W. Lemon Street, Suite 208
Tampa, FL 33609 USA
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MINOR SOURCE AIR CONSTRUCTION PERMIT APPLICATION

UNITS 1 AND 2 HEAT INPUT CORRECTION
STANTON ENERGY CENTER
ORLANDO, ORANGE COUNTY, FLORIDA

Submitted To: Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400

Submitted By: Golder Associates Inc.
5100 W. Lemon Street
Suite 208
Tampa, FL 33609 USA

Distribution: 4 Copies–Florida Department of Environmental Protection
2 Copies—Orlando Utilities Commission
2 Copies—Golder Associates Inc.

April 2010

103-89500

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Golder Associates

PART I—FDEP APPLICATION FOR AIR PERMIT

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PART I

FDEP APPLICATION FOR AIR PERMIT

Department of
Environmental Protection
Division of Air Resource Management
APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: **Orlando Utilities Commission**	
2. Site Name: **Stanton Energy Center**	
3. Facility Identification Number: **0950137**	
4. Facility Location... **Stanton Energy Center** Street Address or Other Locator: **5100 South Alafaya Trail** City: **Orlando** County: **Orange** Zip Code: **32193**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact – Stanton Energy Center

1. Application Contact Name: **David R. Baez**
2. Application Contact Mailing Address... Organization/Firm: **Orlando Utilities Commission** Street Address: **P.O. Box 3193** City: **Orlando** State: **FL** Zip Code: **32802**
3. Application Contact Telephone Numbers... Telephone: **(407) 658 - 6444** ext. **3691** Fax: **(407) 244 - 8794**
4. Application Contact E-mail Address: **dbaez@ouc.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 4/2/10	3. PSD Number (if applicable):
2. Project Number(s): 0950137-032-AC	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

[X] Air construction permit.

[ ] Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).

[ ] Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

[ ] Initial Title V air operation permit.

[ ] Title V air operation permit revision.

[ ] Title V air operation permit renewal.

[ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

[ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

[ ] Air construction permit and Title V permit revision, incorporating the proposed project.

[ ] Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

[ ] I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

APPLICATION INFORMATION

This application is for a minor source air construction permit for the Stanton Energy Center (SEC), Facility ID No. 0950137, associated with a correction in the allowable heat input limit for SEC Units 1 and 2. This correction does not involve any physical or operational changes to the units, but implements a consistent, more accurate method of heat input monitoring and reporting. Specifically, these units are currently capable of operating at the higher requested short-term heat input rates (4,715 mmBtu/hr) and nothing has really changed physically or operationally with either unit. As future operation of these units will not be significantly different from historical operation, the reported annual emissions, post-correction, should not be significantly different. However, for purposes of this request, an emissions baseline assessment of the highest past actual emissions is presented and compared to estimated future (i.e., post-corrected) emissions. OUC proposes that future actual annual emissions be tracked and reported to demonstrate that the estimates provided in this assessment are representative of future operation.

The air permit application consists of this application form [Part I; DEP Form 62-210.900(1)], a technical description of the project (Part II Section 2.0), rule applicability for the project (Part II Section 3.0) and a conclusion section (Part II Section 4.0). The detailed emissions assessment, which is the basis for this permitting action, is presented in Appendix A to this report.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
1	Fossil Fuel Steam Generation Unit No. 1		
2	Fossil Fuel Steam Generation Unit No. 2		

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

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

1. Owner/Authorized Representative Name : **Denise M. Stalls, Vice President of Human and Environmental Resources Department**
2. Owner/Authorized Representative Mailing Address... **P.O. Box 3193, Orlando FL 32802**
   Organization/Firm: **Orlando Utilities Commission**
   Street Address: **Reliable Plaza, 100 West Anderson**
   City: **Orlando** State: **FL** Zip Code: **32802**
3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(407) 423 - 9168** ext. Fax: **(407) 236 – 9606**
4. Owner/Authorized Representative E-mail Address: **dstalls@ouc.com**
5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.

   Denise M. Stalls — Signature

   3/31/2010 — Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

- ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.
- ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
- ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
- ☐ The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.

3. Application Responsible Official Mailing Address...
Organization/Firm:
Street Address:
City: State: Zip Code:

4. Application Responsible Official Telephone Numbers...
Telephone: ext. Fax:

5. Application Responsible Official E-mail Address:

6. Application Responsible Official Certification:

I, the undersigned, am a responsible official of the Title V source 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 applicable requirements identified in this application to which the Title V source 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. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

Signature Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **Scott H. Osbourn, Senior Consultant**
   Registration Number: **57557**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates, Inc.**
   Street Address: **5100 West Lemon Street, Suite 208**
   City: **Tampa** State: **FL** Zip Code: **33609**
3. Professional Engineer Telephone Numbers...
   Telephone: **(813) 287-1717** ext. Fax: **(813) 287-1716**
4. Professional Engineer E-mail Address: **sosbourn@golder.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.

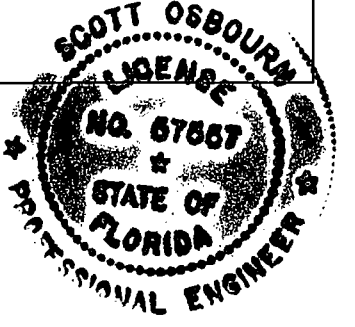
(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application 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 Date 4/1/10

(seal)



* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **483.5** North (km) **3150.6**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **28° 29` 1" N** Longitude (DD/MM/SS) **81° 10` 7" W**	
3. Governmental Facility Code: **4**	4. Facility Status Code: **Active**	5. Facility Major Group SIC Code: **49**	6. Facility SIC(s): **4911**
7. Facility Comment :			

Facility Contact – Stanton Energy Center

1. Facility Contact Name: **David R. Baez, Project Engineer, Environmental Affairs**
2. Facility Contact Mailing Address... Organization/Firm: **Orlando Utilities Commission** Street Address: **P.O. Box 3193** City: **Orlando** State: **FL** Zip Code: **32802**
3. Facility Contact Telephone Numbers: Telephone: **(407) 658 - 6444** ext. **3691** Fax: **(407) 244 - 8794**
4. Facility Contact E-mail Address: **dbaez@ouc.com**

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official E-mail Address:

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
SO2	A	N
CO	A	N
NOX	A	N
PM	A	N
PM10	A	N
VOC	A	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility-Wide Cap [Y or N]? (all units)	3. Emissions Unit ID's Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

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:_____ [X] Previously Submitted, Date: **5/21/09**

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)
   [X] Attached, Document ID:_____ [X] Previously Submitted, Date: **5/21/09**

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)
   [X] Attached, Document ID:_____ [X] Previously Submitted, Date: **5/21/09**

Additional Requirements for Air Construction Permit Applications

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

2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL):
   [X] Attached, Document ID: **See Report**

3. Rule Applicability Analysis:
   [X] Attached, Document ID: **See Report**

4. List of Exempt Emissions Units:
   ☐ Attached, Document ID:_____ [X] Not Applicable (no exempt units at facility)

5. Fugitive Emissions Identification:
   ☐ Attached, Document ID:_____ [X] Not Applicable

6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.):
   ☐ Attached, Document ID:_____ [X] Not Applicable

7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.):
   ☐ Attached, Document ID:_____ [X] Not Applicable

8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.):
   ☐ Attached, Document ID:_____ [X] Not Applicable

9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.):
   ☐ Attached, Document ID:_____ [X] Not Applicable

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

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications -- NA

1. List of Exempt Emissions Units:
   ☐ Attached, Document ID:_____ ☐ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications -- NA

1. List of Insignificant Activities: (Required for initial/renewal applications only)
   ☐ Attached, Document ID:_____ ☐ Not Applicable (revision application)

2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
   ☐ Attached, Document ID:_____
   ☐ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
   ☐ Attached, Document ID:_____
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID:_____
   ☐ Equipment/Activities Onsite but Not Required to be Individually Listed
   ☐ Not Applicable

5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID:_____ ☐ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID:_____ ☐ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

1. Acid Rain Program Forms:

   Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):
   ☐ Attached, Document ID_____ ☒ Previously Submitted, Date: **5/21/09**
   ☐ Not Applicable (not an Acid Rain source)

   Phase II NO_X Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

   New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):
   ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date: **5/21/09**
   ☐ Not Applicable (not a CAIR source)

3. Hg Budget Part (DEP Form No. 62-210.900(1)(c)):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable (not a Hg Budget unit)

Additional Requirements Comment

PART II

APPLICATION REPORT

1.0 INTRODUCTION AND EXECUTIVE SUMMARY

This application is for a minor source air construction permit for the Orlando Utilities Commission (OUC) Stanton Energy Center (SEC), Facility ID No. 0950137, associated with a correction in the allowable heat input limit for SEC Units 1 and 2. This correction does not involve any physical or operational changes to the units, but implements a consistent, more accurate method of heat input monitoring and reporting. Specifically, these units are currently capable of operating at the higher requested short-term heat input rates (4,715 million British thermal units per hour [MMBtu/hr]) and nothing has really changed physically or operationally with either unit. Since future operation of these units will not be significantly different from historical operation, the reported annual emissions, post-correction, should not be significantly different. However, for purposes of this request, an emissions baseline assessment of the highest past actual emissions is presented and compared to estimated future (i.e., post-corrected) emissions. The OUC proposes that future actual annual emissions be tracked and reported to demonstrate that the estimates provided in this assessment are representative of future operation.

The air permit application consists of the appropriate application form [Part I; Florida Department of Environmental Regulation (FDEP or the Department) Form 62-210.900(1)], a technical description of the project (Part II, Section 2.0), rule applicability for the project (Part II, Section 3.0), and a conclusion section (Part II, Section 4.0). The detailed emissions assessment, which is the basis for this permitting action, is presented in Appendix A to this report.

2.0 PROJECT DESCRIPTION

This issue surfaced during the recent Title V permit renewal efforts for the SEC. Consequently, the FDEP issued a stipulation for settlement of this issue, which stated the following facts:

- The SEC received air construction permit No. PSD-FL-084 in 1984 for two new boilers, Units 1 and 2. The air construction permit contains heat input values for Units 1 and 2 of 4,286 MMBtu/hr. The prevention of significant deterioration (PSD) permit did not specify an averaging time for these values.

- The Title V permit has contained the following permitting note for the past 10 years:

  {Permitting note: The heat input limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability.}

- The heat input permitting note was removed from the draft/proposed Title V renewal permit that was issued on October 26, 2009.

- The OUC has submitted comments expressing concern that the heat input values established by the PSD permit are not sufficient to allow the units to reach their rated megawatt output, and that complying with the heat input values on a short-term basis would be equivalent to de-rating the units.

- The OUC has agreed to submit an application for an air construction permit revision to address concerns related to the PSD permit-established heat input values no later than April 1, 2010.

- Both the OUC and the FDEP will work expeditiously and in good faith to establish as soon as possible a heat input limit and reasonable averaging time in an air construction permit.

- In the interim and to resolve this dispute, the FDEP agreed to add the following permitting note after the capacity condition in the final Title V renewal:

  {Permitting note: The heat input limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability. In accordance with the Stipulation Agreement dated December 22, 2009, a change in the heat input value and/or a change in the method of determining compliance with the existing heat input values will be established through the issuance of an Air Construction permit in the near future. As such, this permitting note will not be valid after a final Air Construction permit has been issued by the Department or December 31, 2010, whichever occurs sooner.}

Golder Associates Inc.'s understanding of this issue goes even further. During the initial round of electric utility Title V permits, the U.S. Environmental Protection Agency (USEPA) objected to several proposed permits for grandfathered units because they lacked periodic monitoring requirements for heat input values contained in the permits. To resolve these objections, a permitting note was added to these heat input values and language was added to the statement of basis. After this, the permitting note continued to be inconsistently applied.

Current standard practice is for the FDEP to more clearly establish in all construction permits whether the inclusion of a heat input for a unit is a description of the unit or a limit. If the heat input value constitutes a limit, the FDEP will include averaging times and the method of compliance in the construction permit. Therefore, as has been established by the FDEP, the OUC requests the use of a four-hour rolling averaging period for the heat input data that will be reported by the continuous emissions monitoring (CEM). The use of CEM data as the monitoring and reporting method is the accepted method of reporting heat input under the USEPA's Acid Rain Program. Therefore, implementing such an approach for Title V compliance will result in more consistent reporting of emissions. Historical reporting used a combination of CEM data and fuel flow data, which resulted in differences in annual reporting that were more an artifact of the measurement method rather than actual differences in emissions.

3.0 REGULATORY APPLICABILITY

Under federal and State of Florida PSD review requirements, all major new or modified sources of air pollutants regulated under the Clean Air Act (CAA) must be reviewed and a pre-construction permit issued. The USEPA has approved Florida's State Implementation Plan (SIP), which contains PSD regulations; therefore, PSD approval authority has been granted to the FDEP. For projects approved under the Florida Power Plant Siting Act, the PSD program is delegated.

3.1 Background

A "major facility" is defined as any 1 of 28 named source categories that have the potential to emit 100 tons per year (TPY) or more, or any other stationary facility that has the potential to emit 250 TPY or more of the 6 criteria pollutants regulated under the CAA. "Potential to emit" means the capability, at maximum design capacity, to emit a pollutant after the application of control equipment. Once a new source is determined to be a "major facility" for a particular pollutant, any pollutant emitted in amounts greater than the PSD significant emission rates (SERs) is subject to PSD review. For an existing source for which a modification is proposed, the modification is subject to PSD review if the net increase in emissions due to the modification is greater than the PSD SERs.

PSD review is used to determine whether significant air quality deterioration will result from the new or modified facility. Federal PSD requirements are contained in 40 Code of Federal Regulations (CFR) 52.21, *Prevention of Significant Deterioration of Air Quality*. The State of Florida has adopted the federal PSD regulations by reference [Rule 62-212.400, Florida Administrative Code (FAC)]. Major facilities and major modifications are required to undergo the following analysis related to PSD for each pollutant emitted in significant amounts:

- Control technology review
- Source impact analysis
- Air quality analysis (monitoring)
- Source information
- Additional impact analyses

Units 1 and 2 are a part of the SEC complex, which is a major facility under FDEP rules. The proposed correction (increase) to the heat input provision eliminates the need for the permitting note incorporated into previous permits. While this correction does not involve any physical or operational changes to the units, it implements a consistent, more accurate method of heat input monitoring and reporting. Specifically, these units are currently capable of operating at the higher requested short-term heat input rates (MMBtu/hr), and nothing has really changed physically or operationally with either unit. Since future operation of these units will not be significantly different from historical operation, the reported annual

emissions, post-correction, should not be significantly different. Strictly as a precaution, however, for purposes of this request, the OUC is treating this correction as an implied operational change (i.e., a change in the method of heat input monitoring and reporting). Based on this approach, the OUC has evaluated this project as though it were a modification, as defined in the FDEP rules in 62-210.200 and under the PSD rules in 62-212.400 FAC, subject to PSD review if there were a significant net increase in emissions.

The SEC is classified as an existing major facility. A modification to an existing major facility that results in a significant net emissions increase equal to or exceeding the SER listed in Section 62-212.400, Table 212.400-2, FAC, is classified as a major modification and will be subject to the PSD new source review (NSR) preconstruction permitting program for those pollutants that exceed the PSD SERs. The USEPA has approved Florida's SIP, which contains PSD regulations; therefore, PSD approval authority has been granted to the FDEP.

The procedures for determining applicability of the PSD NSR permitting program are specified in Rule 62-212.400, FAC. The term "significant net emissions increase" is also defined in this rule. For each regulated pollutant, the net emissions increase for a modification project is equal to the sum of the increases in emissions associated with the proposed project plus all facility-wide creditable, contemporaneous emissions increases minus all facility-wide creditable, contemporaneous emissions decreases. If this net change in emissions is equal to or greater than the applicable thresholds, then the net emissions increase is considered to be significant and the modification will be subject to PSD NSR for that particular regulated pollutant.

The recent FDEP rulemaking with respect to NSR reform provides for consideration of start-up and shutdown emissions, as well as fugitive emissions, in NSR applicability determinations (FDEP Rule 210.200(36)(a)(1), Definitions). The Units 1 and 2 emissions characteristics during start-up and shutdown operations post-change will not be any different than current operations, since this corrective action does not involve any physical change to the units. Fugitive emissions potential should also be consistent with the current baseline and, therefore, not be an issue in this assessment.

These applicable rules in 40 CFR 52.21 are stated as follows:

> **52.21(b)(21)(v)** For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit, provided the source owner or operator maintains and submits to the Administrator on an annual basis for a period of 5 years from the date the unit resumes regular operation, information demonstrating that the physical or operational change did not result in an emissions increase. A longer period, not to exceed 10 years, may be required by the Administrator if he determines such a period to be more representative of normal source post-change operations.
>
> **52.21(b)(33)** Representative actual annual emissions means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or

change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the Administrator determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator shall:

(i) Consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under title IV of the Clean Air Act; and

(ii) Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.

3.2 Emissions Assessment

As a precaution, the OUC has reviewed the proposed heat input correction in light of the definition of "representative actual annual emissions" in 40 CFR 52.21(b)(33). As discussed above, the SEC is a baseload facility. Tables A-1 through A-5 (Appendix A) present annual emissions (nitrogen oxides [NO_x], carbon monoxide [CO], sulfur dioxide [SO_2], particulate matter [PM], particulate matter less than 10 microns [PM_{10}], and volatile organic compounds [VOCs]) and heat inputs reported in the Annual Operating Reports for the period 2005 through 2009. These tables also present the capacity factors for Units 1 and 2 for these years. These data demonstrate the consistent operation of both units. During the period 2005 through 2009, the capacity factor based on heat input (for both units combined) ranged from 78 percent in 2008 to 93 percent in 2005. The average capacity factors for the years 2005, 2006, 2007, 2008 and 2009 were 93, 88, 85, 78 and 80 percent, respectively.

It should be noted that the capacity factors are determined by the annual heat input as measured by the CEM, required under the USEPA Acid Rain Program. When comparing these values to other heat input measurement methods (e.g., determined from fuel flow and the fuel's heating value, etc.) there may be variability in results. Implementation of the use of CEM heat input data for compliance purposes will ensure consistency in reporting going forward.

Table A-6 presents the annual average emissions and capacity factors for each consecutive two-year period from 2005 through 2009 based on the annual average emissions in Tables A-1 through A-5. The annual average emissions for each consecutive two-year period is consistent with the current USEPA policy for steam generating units under the provisions in 40 CFR 52.21 (b)(3)(vi)a and (b)(21)(v). The highest consecutive two years for emissions are proposed as the basis for future comparisons. Similarly, the average two-year capacity factors based on heat input were 90 (the highest two-year average), 87, 82, and 79 percent for the periods 2005-2006, 2006-2007, 2007-2008, and 2008-2009, respectively. The average five-year capacity factor was 85 percent.

Finally, Table A-7 presents the highest two-year average baseline for each pollutant. Future actual emission estimates are then presented, based on the revised allowable short-term heat input rate of 4,715 MMBtu/hr), a historical highest two-year average capacity factor of 90 percent, and estimated annual average emission rates for each pollutant as follows:

- CO annual average emission rate of 0.0715 pound per million British thermal units (lb/MMBtu)
- NO_x annual average emission rate of 0.25 lb/MMBtu (based on a rate of 0.33 lb/MMBtu and 0.17 lb/MMBtu for Units 1 and 2, respectively)
- PM/PM_{10} annual average emission rate of 0.007 lb/MMBtu
- SO_2 annual average emission rate of 0.225 lb/MMBtu (based on a rate of 0.30 lb/MMBtu and 0.15 lb/MMBtu for Units 1 and 2, respectively)
- VOC annual average emission rate of 0.001 lb/MMBtu

Table A-7 then compares the baseline to the projected actual emissions, with the heat input correction (i.e., the requested 10 percent correction [increase] in the short-term allowable heat input limit, which will be based on a four-hour average). This comparison illustrates that none of the SER levels will be exceeded, except for emissions of CO.

As described previously, the "project" for PSD review purposes consists of the requested correction (increase) in the allowable heat input limit, as well as the emissions increases and decreases associated with other permitting actions for these two units within the contemporaneous window described above (e.g., installation of low-NO_x burners, flue gas desulfurization [FGD] system upgrades). In fact, these upgrades are the basis for the estimated annual average short-term emission rates for NO_x and SO_2 presented above. This application demonstrates that the projected actual emissions for the project will not exceed the PSD significant emission rates (SERs) for SO_2, NO_x, PM/PM_{10}, and VOCs. This is the estimated outcome due to recent pollution control upgrades associated with these two units and because projected actual emissions are based on actual emissions that account for these control upgrades, as well as historical capacity factors, to estimate future operation. The exception is emissions of CO, which were projected to be slightly in excess of the SER.

Regarding the best available control technology (BACT) implications for the pollutant CO, the OUC believes that this was adequately addressed in a recent permitting action in February 2008. Specifically, Permit No. 0950137-015-AC, for the installation of low-NO_x burners on Units 1 and 2, resulted in a BACT determination on these units for CO. The current permit limits for CO are 0.18 lb/MMBtu and 0.15 lb/MMBtu for Units 1 and 2, respectively. Compliance is determined by the use of CEM on a 30-day

rolling average. These limits are consistent with other recent CO BACT determinations for modifications to existing coal-fired units. Therefore, the OUC does not expect this permitting action to result in a revision of the existing BACT limits.

Finally, the OUC notes that the baseline and future actual projections for emissions of SO_2 are based on the use of coal with a fuel sulfur content of approximately 1.2 to 1.3 percent. The OUC needs to retain the flexibility to utilize coals with fuel sulfur levels as high as 2.2 percent, as long as compliance is still being achieved with the current permit limits for SO_2. Since this permitting action only relates to the ability of these units to continue to operate at historical heat input levels (both short-term and long-term values), the OUC believes that the ability to utilize higher than historical fuel sulfur coal should not be constrained. In other words, this permitting action does not result in the OUC's ability to fire higher sulfur coals, since this ability currently exists. Therefore, the OUC proposes that, to the extent that future emissions of SO_2 are determined to exceed the historic baseline, the amount of the difference that is directly related to an increase in the fuel sulfur content should be excluded, in the same way that the "demand growth exclusion" is considered in this type of comparison. Specifically, in calculating any increase in SO_2 emissions that results from the change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that *could have been accommodated* during the representative baseline period may be excluded.

The use of the current lower sulfur coal becomes increasingly difficult as a long-term sustainable solution due to industry and market dynamics that will likely impact the production and supply of this rank of coal in the long term. As the use of scrubbers in the utility industry becomes more prevalent, the industry is moving toward the use of higher sulfur coals. As the number of un-scrubbed generating sites continues to dwindle, it is expected that the demand and production of lower sulfur coal will follow this same trend. In the long term, this will impact the ability to readily acquire this coal type on relatively short notice. Secondly, and more notably, the cost of these low- to mid-sulfur coals is currently significantly higher than higher sulfur coals in today's market. Due to the changes noted previously, it is anticipated that there would be an inevitable market shift resulting in significant increases in the costs of this rank of coal as production/supply decreases.

Determining the amount of the change, if any, in the facility's future emissions would be performed by following the requirements in 40 CFR Parts 52.21(b)(21)(v) and 52.21(b)(33) based on a tons-per-year comparison. The demonstration will be based on CEM systems for SO_2, NO_x, and CO, and compliance tests for PM and VOCs. This is similar to the Unit 1 burner replacement project (Permit No. 0950137-009-AC) and to the replacement of the primary superheat tube banks for Unit 2 (Permit No. 0950137-008-AC).

The annual emission reports, referenced above, have been submitted three times on an annual basis (of the five-year period required), and demonstrated in accordance with 40 CFR 52.21 (b)(21)(v) and (b)(33)

that the physical changes did not result in emissions increases of these pollutants. These annual demonstrations were submitted to the FDEP.

4.0 FINDINGS AND CONCLUSION

SEC Units 1 and 2 are normally operated as baseload units, but, as is evident from Table A-6, for any given year's operation can vary slightly due to electric demand and operational variability due to outages and maintenance. Units 1 and 2 are a part of the SEC complex, which is a major facility under FDEP rules. The proposed correction (increase) to the heat input provision eliminates the need for the permitting note incorporated into previous permits and implements a more accurate and consistent method of heat input monitoring and reporting. It is not a physical change or an operational change (i.e., a change in the method of operation of the facility). Actual emissions are not impacted. Specifically, these units are currently capable of operating at the higher requested short-term heat input rates (MMBtu/hr) and nothing has really changed physically or operationally with either unit.

Accordingly, since future operation of these units will not be significantly different from historical operation, the reported annual emissions, post-correction, should not be significantly different. Strictly as a precaution, however, for purposes of this request, the OUC is treating this correction as an implied operational change (i.e., a change in the method of heat input monitoring and reporting). Based on this approach, the OUC has evaluated this project as though it were a modification, as defined in the FDEP Rules in 62-210.200 and under the PSD rules in 62-212.400 FAC, subject to PSD review if there were a significant net increase in emissions.

As described previously, the "project" for PSD review purposes consists of the requested correction (increase) in the allowable heat input limit, as well as the emissions increases and decreases associated with other permitting actions for these two units within the contemporaneous five-year window (e.g., installation of low-NO_x burners, FGD system upgrades). This application demonstrates that the projected actual emissions for the project will not exceed the PSD significant emission rates for SO_2, NO_x, PM/PM_{10}, and VOCs. This is the estimated outcome due to recent pollution control upgrades associated with these two units and because projected actual emissions are based on actual emissions that account for these control upgrades, as well as historical capacity factors, to estimate future operation. The exception is emissions of CO, which were projected to be slightly in excess of the SER.

Since a BACT determination was recently conducted on these units for CO, the OUC does not expect this permitting action to result in a revision of the existing BACT limits. In addition, the OUC believes that the ability to utilize higher than historical fuel sulfur coal should not be constrained by this permitting action, as long as compliance is maintained with current permit limits. In other words, this permitting action does not result in the OUC's ability to fire higher sulfur coals, since this ability currently exists. Therefore, the OUC proposes that, to the extent that future emissions of SO_2 are determined to exceed the historic baseline, the amount of the difference that is directly related to an increase in the fuel sulfur content should be excluded, in the same way that the "demand growth exclusion" is considered in this type of comparison. Specifically, in calculating any increase in SO_2 emissions that results from the change in the

method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that *could have been accommodated* during the representative baseline period may be excluded.

This methodology of annual tracking and reporting is similar to that employed in the SEC Unit 1 burner replacement project (Permit No. 0950137-009-AC) and for the replacement of the primary superheat tube banks for Unit 2 (Permit No. 0950137-008-AC). The annual emission reports, referenced above, have been submitted for Units 1 and 2 three times on an annual basis (of the five-year period required), that demonstrated in accordance with 40 CFR 52.21 (b)(21)(v) and (b)(33) that the previous physical changes did not result in emissions increases of these pollutants. The OUC proposes to continue to submit these annual reports for a five-year period (post-correction) to demonstrate that the estimates provided in this assessment are representative of future operation. Since future operation of these units will not be significantly different from historical operation, the reported annual emissions, post-correction, should not be significantly different. These units are currently capable of operating at the higher requested short-term heat input rates and nothing has really changed physically or operationally with either unit. This permitting action simply serves to memorialize the method of monitoring and reporting the heat input, with no anticipated change in *actual* emissions.

The OUC, therefore, requests a permit correction to an allowable heat input limit of 4,715 MMBtu/hr (four-hour average) for each unit and will continue to track and report emissions annually for five years to demonstrate that the estimates provided in this assessment are representative of future operation.

APPENDIX A

EMISSIONS ASSESSMENT

TABLE A-1

2005 FACILITY EMISSIONS SUMMARY
Stanton Energy Center - ID No. 0950137

Air Pollutant	Emission Unit 1	Emission Unit 2	Total 2005 Emissions (TPY)
CO *	1,304	1,176	2,480
NO_x	7,343	2,690	10,033
PM	73	82	155
PM_{10}	73	82	155
SO_2	6,059	2,779	8,838
VOC	18	16	35

Heat Input (mmBtu/yr)	36,475,115	32,905,551	34,690,333
Capacity Factor (%)	97	88	93

* The CO CEMs were certified on Unit 1 on 1/21/09 and on Unit 2 on 10/21/08. 2005 estimates use the 2009 annual avg (0.0715 lb/mmBtu) and 2005 heat input.

Reviewed by:
Reviewed on:

Golder Associates

TABLE A-2

2006 FACILITY EMISSIONS SUMMARY
Stanton Energy Center - ID No. 0950137

Air Pollutant	Emission Unit 1	Emission Unit 2	Total 2006 Emissions (TPY)
CO *	1,117	1,245	2,361
NO_x	6,125	2,860	8,985
PM	141	104	245
PM_{10}	141	104	245
SO_2	5,486	2,639	8,125
VOC	16	17	33

Heat Input (mmBtu/yr)	31,233,371	34,820,403	33,026,887
Capacity Factor (%)	83	93	88

* The CO CEMs were certified on Unit 1 on 1/21/09 and on Unit 2 on 10/21/08. 2006 estimates use the 2009 annual avg (0.0715 lb/mmBtu) and 2006 heat input.

Reviewed by:
Reviewed on:

TABLE A-3

2007 FACILITY EMISSIONS SUMMARY
Stanton Energy Center - ID No. 0950137

Air Pollutant	Emission Unit 1	Emission Unit 2	Total 2007 Emissions (TPY)
CO *	1,152	1,125	2,277
NO_x	5,995	2,586	8,581
PM	64	220	285
PM_{10}	64	220	285
SO_2	4,611	1,857	6,468
VOC	16	16	32

Heat Input (mmBtu/yr)	32,228,342	31,456,921	31,842,632
Capacity Factor (%)	86	84	85

* The CO CEMs were certified on Unit 1 on 1/21/09 and on Unit 2 on 10/21/08. 2007 estimates use the 2009 annual avg (0.0715 lb/mmBtu) and 2007 heat input.

Reviewed by:
Reviewed on:

TABLE A-4

2008 FACILITY EMISSIONS SUMMARY
Stanton Energy Center - ID No. 0950137

Air Pollutant	Emission Unit 1	Emission Unit 2	Total 2008 Emissions (TPY)
CO *	1,082	992	2,075
NO_x	5,866	2,271	8,137
PM	121	69	190
PM_{10}	121	69	190
SO_2	3,933	2,083	6,016
VOC	15	14	29

Heat Input (mmBtu/yr)	30,267,692	27,760,724	29,014,208
Capacity Factor (%)	81	74	78

* The CO CEMs were certified on Unit 1 on 1/21/09 and on Unit 2 on 10/21/08. 2008 estimates use the 2009 annual avg (0.0715 lb/mmBtu) and 2008 heat input.

Reviewed by:
Reviewed on:

TABLE A-5

2009 FACILITY EMISSIONS SUMMARY
Stanton Energy Center - ID No. 0950137

Air Pollutant	Emission Unit 1	Emission Unit 2	Total 2009 Emissions (TPY)
CO	1,121	1,009	2,131
NO_x	4,779	2,302	7,081
PM	47	71	118
PM_{10}	47	71	118
SO_2	2,415	1,951	4,366
VOC	16	14	30

Heat Input (mmBtu/yr)	31,366,416	28,235,235	29,800,826
Capacity Factor (%)	84	75	80

Reviewed by:
Reviewed on:

TABLE A-6

EMISSION ANALYSIS
Stanton Energy Center - ID No. 0950137

Air Pollutant	Total 2005 Emissions (Tons/Year)	Total 2006 Emissions (Tons/Year)	Total 2007 Emissions (Tons/Year)	Total 2008 Emissions (Tons/Year)	Total 2009 Emissions (Tons/Year)	Highest 2-yr Average	CY
CO	2,480	2,361	2,277	2,075	2,131	2,421	2005-2006
NO_x	10,033	8,985	8,581	8,137	7,081	9,509	2005-2006
PM	155	245	285	190	118	265	2006-2007
PM_{10}	155	245	285	190	118	265	2006-2007
SO_2	8,838	8,125	6,468	6,016	4,366	8,482	2005-2006
VOC	35	33	32	29	30	34	2005-2006

Heat Input (mmBtu/yr)	34,690,333	33,026,887	31,842,632	29,014,208	29,800,826	33,858,610	2005-2006
Capacity Factor (%)	93	88	85	78	80	90	2005-2006

TABLE A-7

EMISSION ANALYSIS
Stanton Energy Center - ID No. 0950137

Air Pollutant	Highest 2-yr Average		10% HI Increase (TPY)*	PSD Netting Analysis		
	Capacity Factor	TPY		Increase (TPY)	PSD SER	PSD ?
CO [a]	90	2,421	2,639	218	100	YES
NO_x [b]	90	9,509	9,293	-216	40	NO
PM [c]	86	265	260	-5	25	NO
PM_{10} [c]	86	265	260	-5	15	NO
SO_2 [d]	90	8,482	8,364	-118	40	NO
VOC [e]	90	34	37	3.3	40	NO

Heat Input (mmBtu/yr)	33,858,610	NA	37,173,060	3,314,450
Capacity Factor (%)	90	NA	90	0

a Based on a heat input rate of 4,715 mmBtu/hr, a 90% capacity factor and an annual average rate of 0.0715 lb/mmBtu (Unit 1- 0.072 and Unit 2- 0.071)

b Based on a heat input rate of 4,715 mmBtu/hr, a 90% capacity factor and an annual average rate of 0.25 lb/mmBtu (Unit 1- 0.33 and Unit 2- 0.17)

c Based on a heat input rate of 4,715 mmBtu/hr, a 90% capacity factor and an annual average rate of 0.007 lb/mmBtu

d Based on a heat input rate of 4,715 mmBtu/hr, a 90% capacity factor and an annual average rate of 0.225 lb/mmBtu (unit 1- 0.30 and Unit 2- 0.15)

e Based on a heat input rate of 4,715 mmBtu/hr, a 90% capacity factor and an annual average rate of 0.001 lb/mmBtu

Although emissions of H_2SO_4 are not directly measured and reported, the relative increase and decreases in SO_2 emissions are a representative surrogate for purposes of this assessment