Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

June 21, 2010

Electronic Mail – Received Receipt Requested

Ms. Denise M. Stalls
Vice President – Human and Environmental Resources Department
Orlando Utilities Commission (OUC)
Stanton Energy Center
Reliable Plaza
100 West Anderson
Orlando, Florida 32802

Re: **Request for Additional Information - Reminder**
Project No. 0950137-032-AC
Orlando Utilities Commission- Stanton Energy Center
Heat Input Increase for Units 1 and 2

Dear Ms. Stalls:

On January 25, 2010, we received request for a heat input increase for Units 1 and 2 which was originally authorized under Site Certification PA81-14 and PSD-FL-084 at the Stanton Energy Center. The facility is located in Orange County at 5100 South Alafaya Trail in Orlando, Florida. The application was deemed incomplete and we requested additional information needed to process your application on February 15, 2010. We have not yet received the requested additional information. Rule 62-4.055(1) of the Florida Administrative Code (F.A.C.) requires the following:

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

It has been more than 54 days since our request for additional information (RAI). Based on the June 10 teleconference with OUC staff and your Consultant, we anticipate a response to the RAI in the near future. You are reminded that the permit processing time clock has stopped for this project and that we will not continue our review until we receive the additional information. If you require a period of time in addition to the 90 days allowed by rule, please submit a written request indicating the amount of time necessary. If you fail to provide the additional information or request additional time to submit the additional information, we will deny your application for air permit. If you have any questions regarding this matter, please contact me at 850/921-7744.

Sincerely,

Robert L. Bull, Jr., P.E.
New Source Review Section
Bureau of Air Regulation

JFK/rlb

This letter was sent to the following people by electronic mail with received receipt requested.

Ms. Denise M. Stalls, OUC (dstalls@ouc.com)
Mr. David Baez, OUC (dbaez@ouc.com)
Mr. Scott Osbourn, P.E., Golder Associates, Inc. (sosbourn@golder.com)
Ms. Kathleen Forney, U.S. EPA, Region 4 (forney.kathleen@epamail.epa.gov)
Ms. Heather Abrams, U.S. EPA, Region 4 (abrams.heather@epamail.epa.gov)
Ms. Ana Oquendo, U.S. EPA, Region 4 (oquendo.ana@epa.gov)
Ms. Catherine Collins, Fish and Wildlife Service (catherine_collins@fws.gov)
Ms. Vickie Gibson, DEP BAR Reading File (victoria.gibson@dep.state.fl.us)

JFK/rlb

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Monday, June 21, 2010 11:18 AM
To: 'dstalls@ouc.com'
Cc: 'dbaez@ouc.com'; 'sosbourn@golder.com'; 'forney.kathleen@epa.gov'; 'abrams.heather@epa.gov'; 'oquendo.ana@epa.gov'; 'catherine_collins@fws.gov'; Gibson, Victoria; Bull, Robert; Walker, Elizabeth (AIR)
Subject: Request for Additional Information June 21, 2010: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)
Attachments: RAI 0950137-032-AC_062110.pdf

Dear Sir/Madam:

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

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Thank you,

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
Department of Environmental Protection
850/921-9506
sylvia.livingston@dep.state.fl.us

Tracking:

Livingston, Sylvia

From: Stalls, Denise M. [DStalls@ouc.com]
Sent: Monday, June 21, 2010 11:29 AM
To: Livingston, Sylvia
Subject: RE: Request for Additional Information June 21, 2010: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

Received.

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Monday, June 21, 2010 11:18 AM
To: Stalls, Denise M.
Cc: Baez, David R.; sosbourn@golder.com; forney.kathleen@epa.gov; abrams.heather@epa.gov; oquendo.ana@epa.gov; catherine_collins@fws.gov; Gibson, Victoria; Bull, Robert; Walker, Elizabeth (AIR)
Subject: Request for Additional Information June 21, 2010: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

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Thank you,

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
Department of Environmental Protection
850/921-9506
sylvia.livingston@dep.state.fl.us

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few

Livingston, Sylvia

From: Baez, David R. [DBaez@ouc.com]
Sent: Monday, June 21, 2010 2:51 PM
To: Livingston, Sylvia
Subject: RE: Request for Additional Information June 21, 2010: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

received, thank you

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Monday, June 21, 2010 11:18 AM
To: Stalls, Denise M.
Cc: Baez, David R.; sosbourn@golder.com; forney.kathleen@epa.gov; abrams.heather@epa.gov; oquendo.ana@epa.gov; catherine_collins@fws.gov; Gibson, Victoria; Bull, Robert; Walker, Elizabeth (AIR)
Subject: Request for Additional Information June 21, 2010: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

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Thank you,

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
Department of Environmental Protection
850/921-9506
sylvia.livingston@dep.state.fl.us

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

April 28, 2010

Sent by Electronic Mail – Received Receipt Requested

Ms. Denise M. Stalls
Vice President – Human and Environmental Resources Department
Orlando Utilities Commission (OUC)
Stanton Energy Center
Reliable Plaza
100 West Anderson
Orlando, Florida 32802

Re: Project No. 0950137-032-AC
Request for Additional Information (RAI)
Stanton Energy Center, Units 1 and 2
Heat Input Increase, Scrubber Modifications, and Permit Modifications

Dear Ms. Stalls:

On April 2, 2010 and April 14, 2010, the Department received a request for a heat input increase for Units 1 and 2, Unit 1 flue gas desulfurization scrubber modification, and permit condition modifications. Initial construction was authorized under Site Certification PA81-14 and PSD-FL-084. The application is incomplete. Based on our review of the proposed project, we have determined that the following additional information is needed in order to continue processing this request. Please provide all assumptions, calculations and reference materials that are used or reflected in any of your responses to the following issues.

1. The original heat input limit for Unit 1 was 4136 MMBtu/hr as part of the original site certification under PA81-14. This limit was increased to 4,286 MMBtu/hr under PSD-FL-084 as well as the limit for Unit 2 was set at 4,286 MMBtu/hr. Both units have been operating under these conditions since 1996. Based upon hourly acid rain data (calendar years 2005-2007)*, both units demonstrate the ability to operate at 468 MW and within the 4,286 MMBtu/hr limit. However, this information also shows the units operating above the heat input limit and the ability of the units to operate at the higher values. Provide an explanation for the numerous heat input rate excursions when the facility has demonstrated the ability to operate at maximum generating capacity and within the permitted maximum heat input rates. Are there operational changes which could alleviate some of the issues such as coal storage or drying?

   *Calendar years 2005 through 2007 were chosen since they represented the timeframes for the highest two-year averages in Table A-6.

2. The units have shown the ability to operate at heat input values higher than the permitted values. Please provide any modifications to each unit which may have assisted in the units to perform at the higher heat input values. Please provide representative data documenting operation at elevated heat input rates from 1996 through 2004.

3. Please calculate baseline actual emissions and projected actual emissions as defined in Rules 62-212.300 (1)(e) and 62-210.370(2), F.A.C. to determine actual emissions from the project. The application calculations showed the CO emission calculations would be greater than the significant emission rates. Please provide a BACT Analysis for CO and any other pollutants which exceed the significant emission rates. A project which triggers the significant emission rates and is subject to PSD review requires a $7,500.00 check submittal along with the

response to this RAI. Please provide all assumptions, calculations and reference materials that are used for these values analysis.

4. The application requests that limits and testing requirements for mercury, beryllium, lead, and fluorides be removed from Unit 2. The mercury testing and emission limit will remain in the permit since this is a coal fired unit and mercury is a pollutant of concern. Beryllium is no longer a regulated PSD pollutant and the emission limits will be removed from the permit. Fluoride was not a BACT pollutant. The fluoride emission limit will be removed from the permit provided the applicant reports fluoride content as part of its routine coal analysis. Lead is a BACT pollutant and the emission limit will remain in the permit. However, based on the results of the proposed compliance testing for lead, future lead compliance testing may based upon the special testing requirements of 62-297.310, F.A.C.
5. If necessary, please update the project discussion and/or associated tables in Appendix A of the application as submitted for the heat input portion of the application.

The above information is requested pursuant to the following F.A.C. regulations: Rule 62-4.050 (Procedures to Obtain Permits and Other Authorizations; Applications); 62-4.055 (Permit Processing); 62-4.070 (Standards for Issuing or Denying Permits; Issuance; Denial); 62-4.120 (Construction Permits); 62-204.800 (Federal Regulations Adopted by Reference); 62-212.300 (Permits Required); 62-210.370 (Emissions Computations and Reporting); 62-210.900 (Forms and Instructions); 62-212.300 (General Preconstruction Review); and 62-212.400 (Prevention of Significant Deterioration). All applications for a Department permit must be certified by a professional engineer registered in the State of Florida pursuant to Rule 62-4.050(3), F.A.C. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official.

We will resume processing your application after receipt of the requested information. You are reminded that Rule 62-4.055(1), F.A.C., requires applicants to respond to requests for information within 90 days or to provide a written request for an additional period of time to submit the information. If you have any questions regarding this matter, please contact me at 850/921-7744.

Sincerely,

Robert L. Bull, Jr., P.E.
New Source Review Section
Bureau of Air Regulation

JFK/rlb

This letter was sent to the following people by electronic mail with received receipt requested.

Ms. Denise M. Stalls, OUC (dstalls@ouc.com)
Mr. David Baez, OUC (dbaez@ouc.com)
Mr. Scott Osbourn, P.E., Golder Associates, Inc. (sosbourn@golder.com)
Ms. Kathleen Forney, U.S. EPA, Region 4 (forney.kathleen@epamail.epa.gov)
Ms. Heather Abrams, U.S. EPA, Region 4 (abrams.heather@epamail.epa.gov)
Ms. Ana Oquendo, U.S. EPA, Region 4 (oquendo.ana@epa.gov)
Ms. Catherine Collins, Fish and Wildlife Service (catherine_collins@fws.gov)
Ms. Vickie Gibson, DEP BAR Reading File (victoria.gibson@dep.state.fl.us)

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Wednesday, April 28, 2010 8:20 AM
To: 'dstalls@ouc.com'
Cc: 'dbaez@ouc.com'; 'sosbourn@golder.com'; 'forney.kathleen@epa.gov'; 'abrams.heather@epa.gov'; 'oquendo.ana@epa.gov'; 'catherine_collins@fws.gov'; Gibson, Victoria; Bull, Robert; Walker, Elizabeth (AIR)
Subject: Request for Additional Information: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)
Attachments: RAI 0950137-032-AC.pdf

Dear Sir/Madam:

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Thank you,

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
Department of Environmental Protection
850/921-9506
sylvia.livingston@dep.state.fl.us

Tracking:

Livingston, Sylvia

From: Stalls, Denise M. [DStalls@ouc.com]
Sent: Friday, April 30, 2010 9:28 AM
To: Livingston, Sylvia
Subject: RE: Request for Additional Information: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

received. Thanks

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Wednesday, April 28, 2010 8:20 AM
To: Stalls, Denise M.
Cc: Baez, David R.; sosbourn@golder.com; forney.kathleen@epa.gov; abrams.heather@epa.gov; oquendo.ana@epa.gov; catherine_collins@fws.gov; Gibson, Victoria; Bull, Robert; Walker, Elizabeth (AIR)
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Thank you,

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
Department of Environmental Protection
850/921-9506
sylvia.livingston@dep.state.fl.us

Livingston, Sylvia

From: Baez, David R. [DBaez@ouc.com]
Sent: Wednesday, April 28, 2010 9:08 AM
To: Livingston, Sylvia
Subject: RE: Request for Additional Information: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

I can view the document.

thank you

David R. Báez
Project Engineer, Environmental Affairs
Orlando Utilities Commission
407-658-6444 x.3691(office)
407-719-6515 (cell)
407-244-8794 (fax)
dbaez@ouc.com

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Wednesday, April 28, 2010 8:20 AM
To: Stalls, Denise M.
Cc: Baez, David R.; sosbourn@golder.com; forney.kathleen@epa.gov; abrams.heather@epa.gov; oquendo.ana@epa.gov; catherine_collins@fws.gov; Gibson, Victoria; Bull, Robert; Walker, Elizabeth (AIR)
Subject: Request for Additional Information: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

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Thank you,

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
Department of Environmental Protection

Livingston, Sylvia

From: Baez, David R. [DBaez@ouc.com]
Sent: Wednesday, April 28, 2010 9:29 AM
To: Livingston, Sylvia
Subject: RE: Request for Additional Information: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

Good Morning Sylvia,

Could you send the letter in a higher resolution pdf ? The text recognition portion of acrobat cannot read this low resolution one.

thank you,
David R. Báez
Project Engineer, Environmental Affairs
Orlando Utilities Commission
407-658-6444 x.3691(office)
407-719-6515 (cell)
407-244-8794 (fax)
dbaez@ouc.com

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Sent: Wednesday, April 28, 2010 8:20 AM
To: Stalls, Denise M.
Cc: Baez, David R.; sosbourn@golder.com; forney.kathleen@epa.gov; abrams.heather@epa.gov; oquendo.ana@epa.gov; catherine_collins@fws.gov; Gibson, Victoria; Bull, Robert; Walker, Elizabeth (AIR)
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Thank you,

Sylvia Livingston
Bureau of Air Regulation

Livingston, Sylvia

From: Baez, David R. [DBaez@ouc.com]
Sent: Monday, May 10, 2010 11:15 AM
To: Livingston, Sylvia
Subject: RE: Request for Additional Information: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

Thank you

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Thursday, May 06, 2010 11:56 AM
To: Baez, David R.
Subject: FW: Request for Additional Information: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

David,

Here is the RAI in a higher resolution. Let me know if you need an even higher resolution pdf.

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-9506
sylvia.livingston@dep.state.fl.us

From: Baez, David R. [mailto:DBaez@ouc.com]
Sent: Wednesday, April 28, 2010 9:29 AM
To: Livingston, Sylvia
Subject: RE: Request for Additional Information: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

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thank you,
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Project Engineer, Environmental Affairs
Orlando Utilities Commission
407-658-6444 x.3691(office)
407-719-6515 (cell)

407-244-8794 (fax)
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To: Stalls, Denise M.
Cc: Baez, David R.; sosbourn@golder.com; forney.kathleen@epa.gov; abrams.heather@epa.gov; oquendo.ana@epa.gov; catherine_collins@fws.gov; Gibson, Victoria; Bull, Robert; Walker, Elizabeth (AIR)
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Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
Department of Environmental Protection
850/921-9506
sylvia.livingston@dep.state.fl.us

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Livingston, Sylvia

From: Osbourn, Scott [Scott_Osbourn@golder.com]
To: Livingston, Sylvia
Sent: Wednesday, April 28, 2010 9:16 AM
Subject: Read: Request for Additional Information: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

Your message was read on Wednesday, April 28, 2010 9:16:18 AM (GMT-05:00) Eastern Time (US & Canada).

Livingston, Sylvia

From: Abrams.Heather@epamail.epa.gov
Sent: Wednesday, April 28, 2010 9:59 AM
To: Livingston, Sylvia
Subject: Re: Request for Additional Information: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

Received
Heather Abrams
Air Permits Section
U.S. EPA - Region 4
61 Forsyth St. SW
Atlanta, Georgia 30303

Phone: 404-562-9185
Fax: 404-562-9019

From: "Livingston, Sylvia" <Sylvia.Livingston@dep.state.fl.us>

To: "dstalls@ouc.com" <dstalls@ouc.com>

Cc: "dbaez@ouc.com" <dbaez@ouc.com>, "sosbourn@golder.com" <sosbourn@golder.com>, Kathleen Forney/R4/USEPA/US@EPA, Heather Abrams/R4/USEPA/US@EPA, Ana Oquendo/R4/USEPA/US@EPA, "catherine collins@fws.gov" <catherine_collins@fws.gov>, "Gibson, Victoria" <Victoria.Gibson@dep.state.fl.us>, "Bull, Robert" <Robert.Bull@dep.state.fl.us>, "Walker, Elizabeth (AIR)" <Elizabeth.Walker@dep.state.fl.us>

Date: 04/28/2010 08:23 AM

Subject: Request for Additional Information: Orlando Utilities Commission - Stanton Energy Center (0950137-032-AC)

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Golder Associates

April 12, 2010

103-89505

DEP/DARM
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

RECEIVED
APR 14 2010
BUREAU OF AIR REGULATION

Attention: Mr. Al Linero, P.E.

RE: STANTON ENERGY CENTER, FACILITY ID NO. 0950137
MINOR SOURCE AIR CONSTRUCTION PERMIT APPLICATION
SCRUBBER MODIFICATION AND HAP REVISIONS

Attached is an application for a minor source air construction permit for the Stanton Energy Center (SEC) Unit 1 FGD system, which is proposed to be modified with an upgrade to the mist eliminator vanes and fixed grid wash system. This upgrade is only to the mist eliminator part of the FGD system. There may be a slight improvement in acid gas control, but no significant impact on emissions is expected. The justification for this project is a lower maintenance design and increased reliability of the cleaning water lances.

In addition, this application serves to correct a misstatement in the current Title V (TV) operating permit. Previous permits have been unclear as to whether the Stanton Energy Center (SEC) is a major source of hazardous air pollutants (HAPs). Some previous construction and operation permits have either stated that this facility is not a major source of HAPs or that the facility is a "potential" major source of HAPs. Based on a review of data in the annual operating reports (AORs), it's clear that at least one HAP (HCl) exceeds the applicable 10 ton per year (TPY) threshold that would qualify this facility for major source HAP status. The appropriate box has been checked in this application form.

Finally, during the recent TV renewal (Permit No. 0950137-029-AV), the Department added a requirement for recurring (every 5 years) compliance testing for emissions of mercury, beryllium, lead and fluorides from Unit 2. This application serves to request that these limits, as well as the associated testing requirements, be removed from the permit.

Enclosed are an original and three copies of the application package. OUC would appreciate your timely processing of the application. 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, DEP Central District
Garfield Blair, OUC Director of Environmental Affairs

Golder Associates Inc.
5100 W. Lemon Street, Suite 208
Tampa, FL 33609 USA
Tel: (813) 287-1717 Fax: (813) 287-1716 www.golder.com

REPORT

MINOR SOURCE AIR CONSTRUCTION PERMIT APPLICATION

SCRUBBER MODIFICATION AND HAP REVISIONS
STANTON ENERGY CENTER
ORLANDO, ORANGE COUNTY, FLORIDA

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

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

Distribution: 4 Copies - Department of Environmental Protection
2 Copies - OUC
2 Copies - Golder Associates Inc.

April 2010

103-89505

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Golder Associates

PART I - FDEP APPLICATION FOR AIR PERMIT

PART II - FDEP APPLICATION REPORT

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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 SEC Unit 1. The proposed project would modify the Unit 1 FGD system with an upgrade to the mist eliminator vanes and fixed grid wash system. This upgrade is only to the mist eliminator part of the FGD system. There may be a slight improvement in acid gas control, but no significant impact on emissions is expected. The justification for this project is a lower maintenance design and increased reliability of the cleaning water lances.

In addition, this application serves to correct a misstatement in the current Title V (TV) operating permit. Previous permits have been unclear as to whether the Stanton Energy Center (SEC) is a major source of hazardous air pollutants (HAPs). Some previous construction and operation permits have either stated that this facility is not a major source of HAPs or that the facility is a "potential" major source of HAPs. Based on a review of data in the annual operating reports (AORs), it's clear that at least one HAP (HCl) exceeds the applicable 10 ton per year (TPY) threshold that would qualify this facility for major source HAP status. The appropriate box has been checked in this application form.

Finally, during the recent Title V renewal (Permit No. 0950137-029-AV), the Department added a requirement for recurring (every 5 years) compliance testing for emissions of mercury, beryllium, lead and fluorides from Unit 2. This application serves to request that these limits, as well as the associated testing requirements, be removed from the permit.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
EU 001	Fossil Fuel Steam Generation Unit No.1		
EU 002	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 114**
   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 4/12/10

(seal)

SCOTT OSBOURN LICENSE NO. 57557 STATE OF FLORIDA PROFESSIONAL ENGINEER

* 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: **Note that Item 6 above is now checked.**	

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
HAP	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:_____ ☒ 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)
   ☐ Attached, Document ID:_____ ☒ 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)
   ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date: **5/21/09**

Additional Requirements for Air Construction Permit Applications

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

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

3. Rule Applicability Analysis:
   ☒ Attached, Document ID: **See Report**

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

5. Fugitive Emissions Identification:
   ☐ Attached, Document ID:_____ ☒ Not Applicable

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

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

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

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

10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    ☐ Attached, Document ID:_____ ☒ 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 a modification of the Unit 1 Flue Gas Desulfurization (FGD) system. Based on discussions with OUC, Golder understands that the Unit 1 FGD system will be modified with an upgrade to the mist eliminator vanes and fixed grid wash system. This upgrade is only to the mist eliminator part of the FGD system. There may be a slight improvement in acid gas control, but no significant impact on emissions is expected. The justification for this project is a lower maintenance design and increased reliability of the cleaning water lances.

As a result of this permitting action, no increase in the corresponding allowable emissions limits [either concentration (ppm) or mass (lb/hr)] is sought and there is a slight possibility that this proposed upgrade project may actually result in a reduction in certain actual emissions. An emissions baseline assessment of the highest past actual emissions is presented and future (i.e., post-modification) emissions will be tracked, reported and compared to this baseline to determine whether a significant emission rate (SER) increase occurs.

This application also serves to correct a misstatement in the current Title V (TV) operating permit. Previous permits have been unclear as to whether the Stanton Energy Center (SEC) is a major source of hazardous air pollutants (HAPs). Some previous construction and operation permits have either stated that this facility is not a major source of HAPs or that the facility is a "potential" major source of HAPs. Based on a review of data in the annual operating reports (AORs), it's clear that at least one HAP (HCl) exceeds the applicable 10 ton per year (TPY) threshold that would qualify this facility for major source HAP status. The appropriate box has been checked on the attached application form.

Finally, during the recent TV renewal (Permit No. 0950137-029-AV), the Department added a requirement for recurring (every 5 years) compliance testing for emissions of mercury, beryllium, lead and fluorides from Unit 2. This application serves to request that these limits, as well as the associated testing requirements, be removed from the permit. Associated information is presented in an appendix to this report.

This air permit application consists of the appropriate application form [Part I; DEP Form 62-210.900(1)], a technical description of the project (Part II Section 2.0), a regulatory applicability analysis for the project (Part II Section 3.0) and a findings and conclusions section (Part II Section 4.0). An emissions summary and analysis is presented in Appendix A to this report. Relevant specifications for the proposed equipment to be used in the scrubber upgrade are provided in Appendix B. Finally, Appendix C presents the initial 1996 stack test report for Unit 2 HAPs, as well as the requested permit language revisions in a track change format.

2.0 PROJECT DESCRIPTION

The proposed modification to the Unit 1 FGD system will be an upgrade to the mist eliminator vanes and fixed grid wash system. Specifically, this capital project is for the installation of the upgraded mist eliminator vanes and fixed grid wash system on the Unit-1 FGD system. The existing Combustion Engineering (CE) A-Frame design of fiberglass mist eliminator vanes and wash system have been in service since 1987 and need to be upgraded in the very near future. The upgraded two-stage polysuflone mist eliminator system will provide significantly improved performance and reliability over the current three-stage mist eliminator/bulk entrainment system (ME/BES) system. The improvements include: 1) higher droplet break-through velocity; 2) improved on-line cleaning; 3) low operating pressure drop; 4) reliable and low maintenance design; and 5) material of construction improvement; polysulfone is a homogeneous thermoplastic that has the added benefit of a high continuous temperature rating, increased corrosion resistance due to its homogeneous nature and high impact strength, further increasing vane (assembly) life.

Relevant specifications for the proposed equipment to be used are provided in Appendix B to this report. Specifically, attached are a series of three figures that illustrate the general location of the proposed upgrade within the absorber modules, as well as further detail on the arrangement of the mist eliminator vanes and the fixed grid wash system.

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. EPA 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 PPSA, the PSD program is delegated.

A "major facility" is defined as any 1 of 28 named source categories that have the potential to emit 100 TPY or more, or any other stationary facility that has the potential to emit 250 TPY or more of any pollutant regulated under 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 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 significant emission rates.

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, Federal Administrative Code (F.A.C.)]. 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, and
- Additional impact analyses.

Unit 1 is a part of the Stanton Energy Center (SEC) complex, which is a major facility under FDEP Rules. The proposed modification to the mist eliminator vanes and fixed grid wash system would constitute a physical change. Because there is a physical change, the project could be a modification as defined in the FDEP Rules in 62-210.200 and under the PSD rules in 62-212.400 F.A.C. PSD review would be required for the project if there were a significant net increase in emissions.

Determining the amount of the change, if any, in the facility's 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/year comparison. The demonstration will be based on continuous emission monitoring systems (CEMs) for SO_2 , NO_x and

CO and compliance tests for PM and VOCs. This is similar, as previously authorized by FDEP, for the Unit 1 burner replacement project (Permit No. 0950137-009-AC).

The annual emission report, referenced above, has been submitted 3 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 physical changes did not result in emissions increases of these pollutants. This demonstration was submitted to the Florida Department of Environmental Protection (FDEP).

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.

OUC proposes to meet the requirements of 40 CFR 52.21(b)(21)(v) based on the definition of "representative actual annual emissions" in 40 CFR 52.21(b)(33). As discussed above, the SEC is a base load facility. Tables A-1 through A-5 present the annual emissions (NO_x, CO, SO_2, PM, PM_{10} and VOCs) and the heat input reported in the Annual Operating Report (AOR) for the period 2005 through 2009. These tables also present the capacity factors for Unit 1 for these years. These data demonstrate the consistent operation of Unit 1. During the period 2005 through 2009, the capacity factor based on heat input ranged from 81 percent in 2008 to 86 percent in 2007, except for the unusual year of 2005, which is a capacity factor high of 97 percent. The average capacity factors for the years 2005, 2006, 2007, 2008 and 2009 were 97, 83, 86, 81 and 84 percent, respectively. The average two-year capacity factors based

on heat input were 90, 85, 84 and 83 percent for the periods 2005-2006, 2006-2007, 2007-2008 and 2008-2009, respectively. The average 5-year capacity factor was 86 percent.

It should be noted that the capacity factors are determined by the annual heat input as measured by the CEMs, required under the EPA 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.

Table A-6 presents the annual average emissions 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 EPA policy for steam generating units under the provisions in 40 CFR 52.21 (b)(3)(vi)a and (b)(21)(v). The highest two consecutive two years for emissions are proposed as the basis for future comparisons.

4.0 FINDINGS AND CONCLUSION

SEC Unit 1 is normally operated as a baseload unit, but, as is evident from Table A-6, for any given year operation can vary slightly due to electric demand and operational variability due to outages and maintenance. Unit 1 is a part of the SEC complex, which is a major facility under FDEP Rules. The proposed upgrade to the mist eliminator vanes and fixed grid wash system would constitute a physical change. This upgrade is only to the mist eliminator part of the FGD system, so there is not expected to be any significant impact on emissions. Because there is a physical change, the project could be a modification as defined in the FDEP Rules in 62-210.200 and under the PSD rules in 62-212.400 F.A.C. PSD review would be required for the project if there were a significant net increase in emissions.

Determining the amount of the change, if any, in the facility's 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/year comparison. The demonstration will be based on continuous emission monitoring systems (CEMs) for SO_2 , NO_x and CO and compliance tests for PM and VOCs. This is similar, as previously authorized by FDEP, to the Unit 1 burner replacement project (Permit No. 0950137-009-AC).

The annual emission report, referenced above, has been submitted for Unit 1, 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 physical changes did not result in emissions increases of these pollutants. This demonstration was submitted to the Florida Department of Environmental Protection (FDEP). OUC proposes to continue to submit these annual reports for a 5 year period (post-modification) to demonstrate that a significant emission increase has not occurred as a result of the proposed project.

APPENDIX A
EMISSIONS SUMMARY AND ANALYSIS

TABLE A-1

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

Air Pollutant	Emission Unit 1 (TPY)	Operating Rate	
		Heat Input (mmBtu/hr)	Capacity Factor (%)
CO*	1,304	36,475,115	97
NO_x	7,343		
PM	73		
PM_{10}	73		
SO_2	6,059		
VOC	18		

* The CO CEMs were certified on 1/21/09. Estimates use 2005 heat input and 2009 annual average of 0.071 lb/mmBtu.

TABLE A-2

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

Air Pollutant	Emission Unit 1 (TPY)	Operating Rate	
		Heat Input (mmBtu/hr)	Capacity Factor (%)
CO*	1,117	31,233,371	83
NO_x	6,125		
PM	141		
PM_{10}	141		
SO_2	5,486		
VOC	16		

* The CO CEMs were certified on 1/21/09. Estimates use 2006 heat input and 2009 annual average of 0.071 lb/mmBtu.

TABLE A-3

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

Air Pollutant	Emission Unit 1 (TPY)	Operating Rate	
		Heat Input (mmBtu/hr)	Capacity Factor (%)
CO	1,152	32,228,342	86
NO_x	5,995		
PM	64		
PM_{10}	64		
SO_2	4,611		
VOC	16		

* The CO CEMs were certified on 1/21/09. Estimates use 2007 heat input and 2009 annual average of 0.071 lb/mmBtu.

TABLE A-4

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

Air Pollutant	Emission Unit 1 (TPY)	Operating Rate	
		Heat Input (mmBtu/hr)	Capacity Factor (%)
CO	1,082	30,267,692	81
NO_x	5,866		
PM	121		
PM_{10}	121		
SO_2	3,933		
VOC	15		

* The CO CEMs were certified on 1/21/09. Estimates use 2008 heat input and 2009 annual average of 0.071 lb/mmBtu.

TABLE A-5

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

Air Pollutant	Emission Unit 1 (TPY)	Operating Rate	
		Heat Input (mmBtu/hr)	Capacity Factor (%)
CO	1,121	31,366,416	84
NO_x	4,779		
PM	47		
PM_{10}	47		
SO_2	2,415		
VOC	16		

* The CO CEMs were certified on 1/21/09. Estimates use 2009 heat input and 2009 annual average of 0.071 lb/mmBtu.

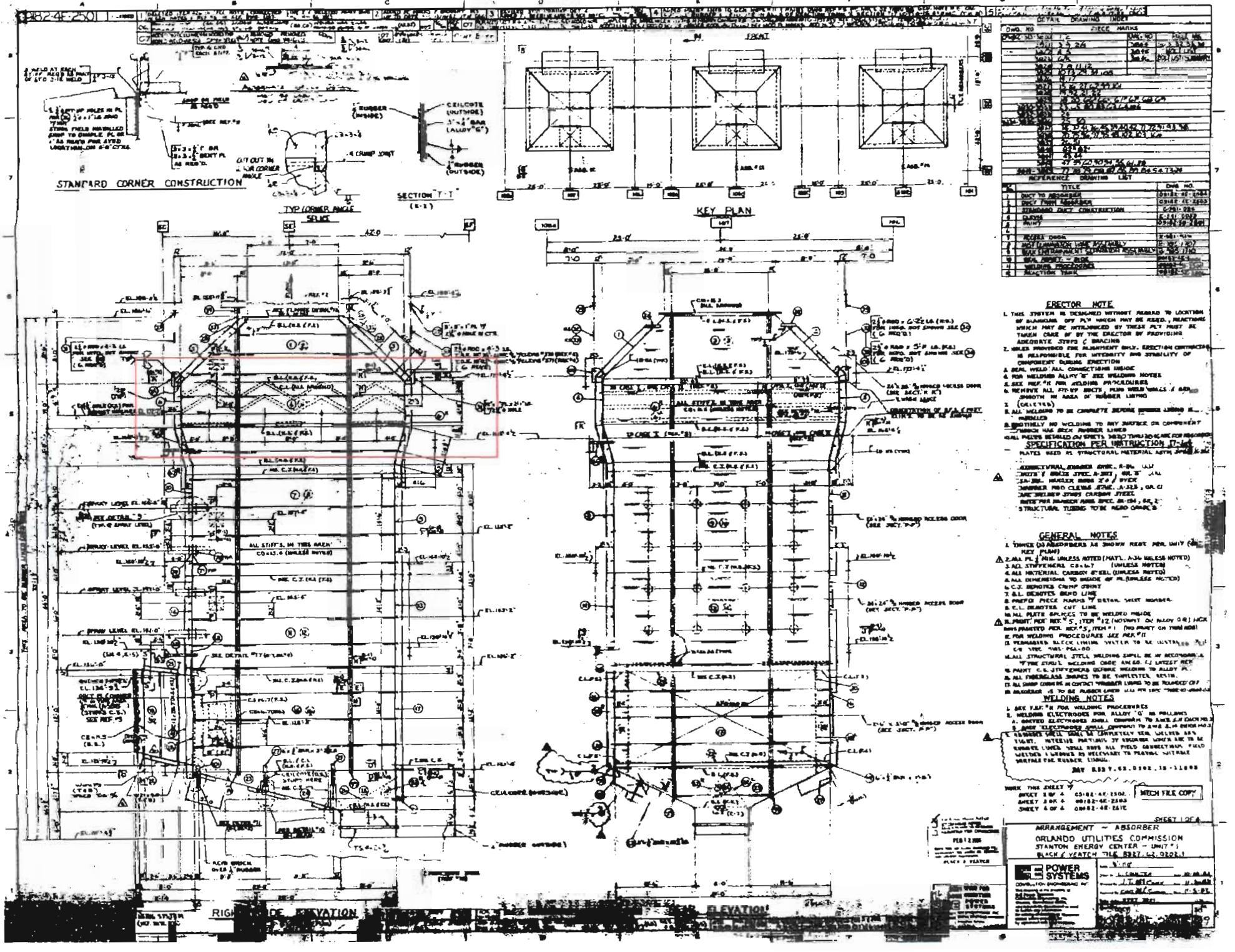
TABLE A-6

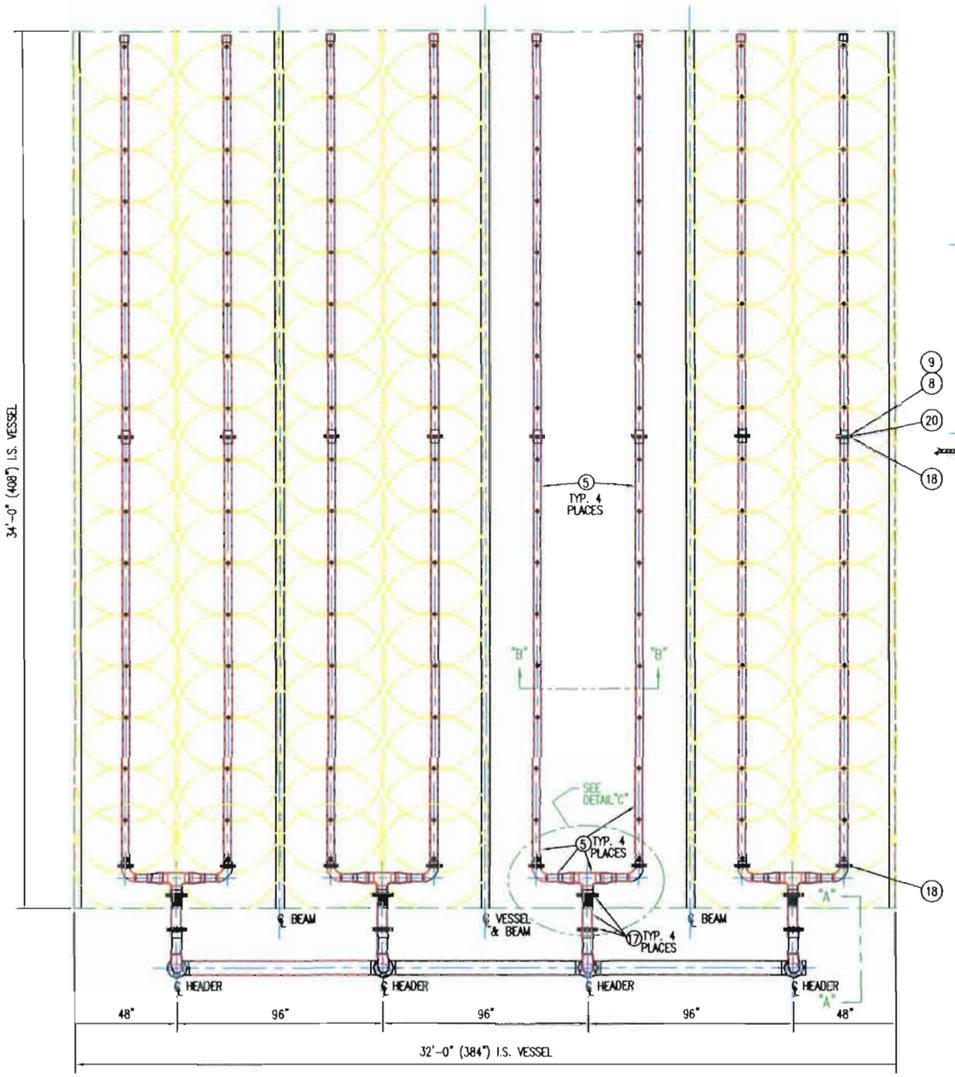
EMISSION ANALYSIS
Stanton Energy Center - ID No. 0950137

Air Pollutant	Total 2005 Emissions	Total 2006 Emissions	Total 2007 Emissions	Total 2008 Emissions	Total 2009 Emissions	Highest 2-yr Average	CY
CO	1,304	1,117	1,152	1,082	1,121	1,211	2005-2006
NO_x	7,343	6,125	5,995	5,866	4,779	6,734	2005-2006
PM	73	141	64	121	47	107	2005-2006
PM_{10}	73	141	64	121	47	107	2005-2006
SO_2	6,059	5,486	4,611	3,933	2,415	5,773	2005-2006
VOC	18	16	16	15	16	17	2005-2006

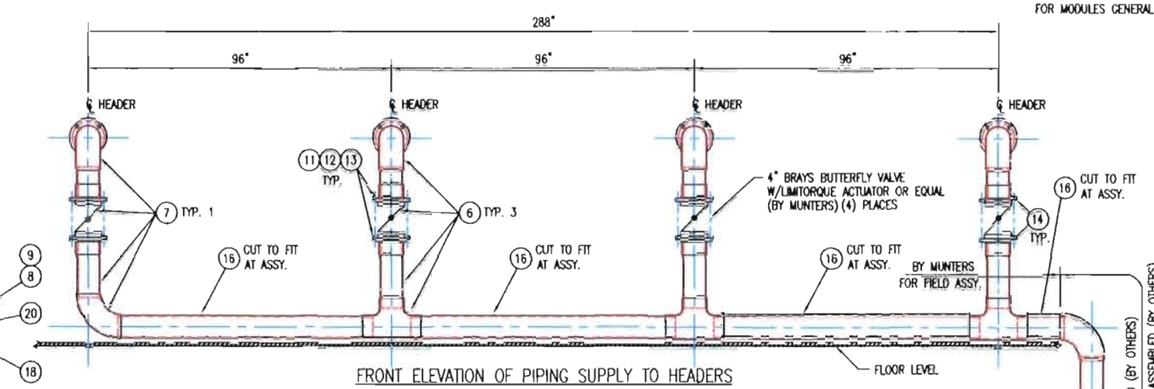
Heat Input	36,475,115	31,233,371	32,228,342	30,267,692	31,366,416	33,854,243	2005-2006
(%)	97	83	86	81	84	90	2005-2006

APPENDIX B
EQUIPMENT SPECIFICATIONS

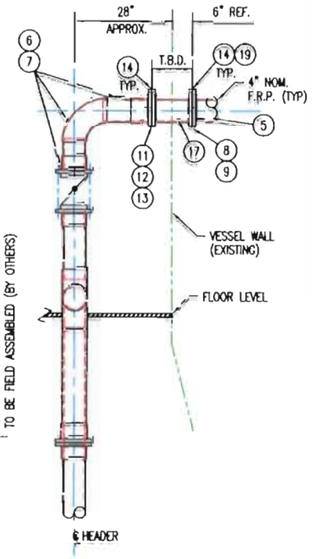




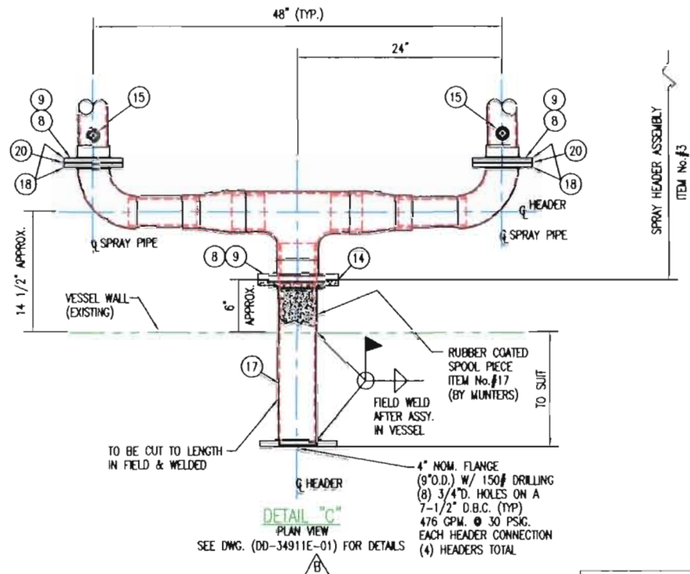
PLAN VIEW WASH HEADERS



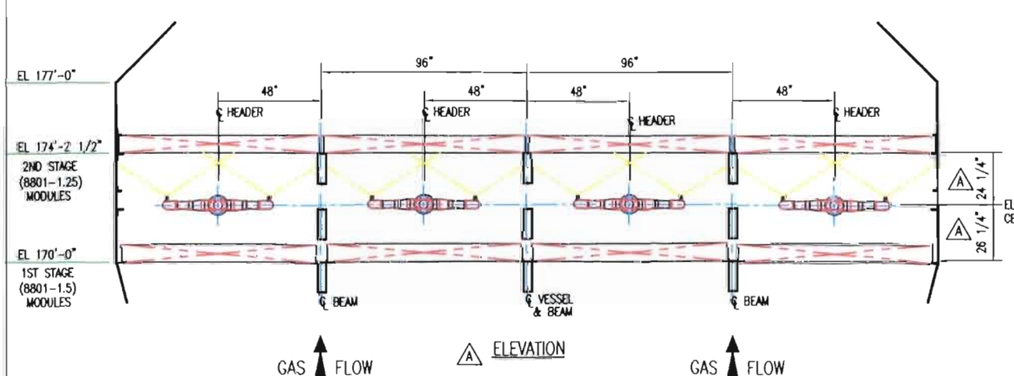
FRONT ELEVATION OF PIPING SUPPLY TO HEADERS

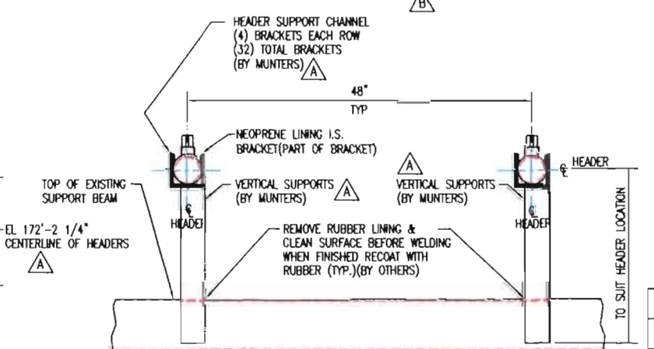


SECTION "A"-"A"



DETAIL "C"
PLAN VIEW
SEE DWG. (DD-34911E-01) FOR DETAILS





SECTION "B"-"B"
INTERMEDIATE WASH SYSTEM SUPPORT BRACKETS

NOTES
1. SEE D-34911-01 FOR MODULE ASSEMBLY & FOR ADDITIONAL NOTES
2. ALL OTHER EQUIPMENT TO BE SHIPPED AS COMPONENTS.
3. ALL PARTS TO BE MARKED FOR FIELD ASSEMBLY.
4. ALL SUPPORTS TO BE SUPPLIED BY OTHERS.

REFERENCE:
FOR MODULES GENERAL ARRANGEMENT SEE MUNTERS DRAWING D-34911-01

CERTIFIED
FOR CONSTRUCTION
DATE: 5/22/2009
BY
David L Carter

SYM.	REVISION	BY	DATE
B	REVISED B.O.M. AND UPDATED DRAWING	DC EG	5/22 2009
A	REVISED PER CUSTOMER MARKED PRINT	SJ DC	6/17 2008

ORLANDO UTILITIES COMMISSION
MIST ELIMINATOR & SPRAY WASH SYSTEM
STATION - STANTON 1
B & W CONTRACT NUMBER - 444-0024
B & W PROJECT No. - 223N
B & W PURCHASE ORDER NUMBER - BAX109393

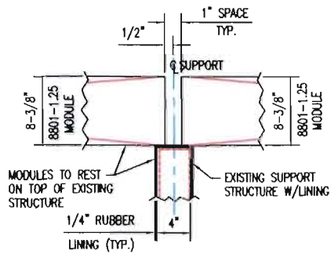
	ITEM NO.	PART NO.	PART NAME / DESCRIPTION	MATL.	REQ.
A	20	THIS DRAWING	GASKET - FULL FACE 3"NOM. (150#)	NEOP.	16
A	19	THIS DRAWING	FLAT FACE FLANGE 4"NOM. (150#)	FRP	4
A	18	THIS DRAWING	FLAT FACE FLANGE 3"NOM. (150#)	FRP	32
B	17	DD-34911F-01	SPOOL PIECE ASSEMBLY (RUBBER COATED)	C.S	4
	16	THIS DRAWING	4" NOM. FRP PIPE	FRP	28'
A	15	THIS DRAWING	NOZZLE (90°) 1"NOM. (14 G.P.M. @ 30 P.S.I.)	PP	136
A	14	THIS DRAWING	GASKET - FULL FACE 4" NOM. FLANGE	NEOP.	16
	13	THIS DRAWING	FLAT WASHER 5/8"	304SS	192
	12	THIS DRAWING	NUT 5/8"-11	304SS	192
	11	THIS DRAWING	STUD 5/8"-11x5" LG. FULL THD.	304SS	96
	10				
	9	THIS DRAWING	NUT 5/8"-11	FRP	192
	8	THIS DRAWING	STUD 5/8"-11x5" LG. FULL THD.	FRP	96
B	7	DD-34911E-05	VALVE ASSEMBLY W/ELBOW	FRP	1
B	6	DD-34911E-04	VALVE ASSEMBLY W/TEE	FRP	3
B	5	DD-34911E-01	SPRAY HEADER ASSEMBLY	FRP	4

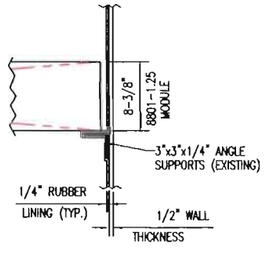
BILL OF MATERIAL

DRAWN BY SJ	SCALE 3/8"=1"	THE MUNTERS CORPORATION 210 6th STREET S.E. 33907 P.O. BOX 9428 FT. MYERS FLORIDA 33911 PHONE (239) 936-1555 FAX (239) 278-1316	
CHECKED BY DC	DATE 5/16/08		
APPROVED BY DLC	FOR B&W ORLANDO UTILITIES G709-34911 (42968)		

TITLE
GENERAL ARRANGEMENT: FIXED GRID WASH SYSTEM W/8801-1.25 & 1.5 MODULES IN A 32'-0"x34'-0" I.S. VESSEL

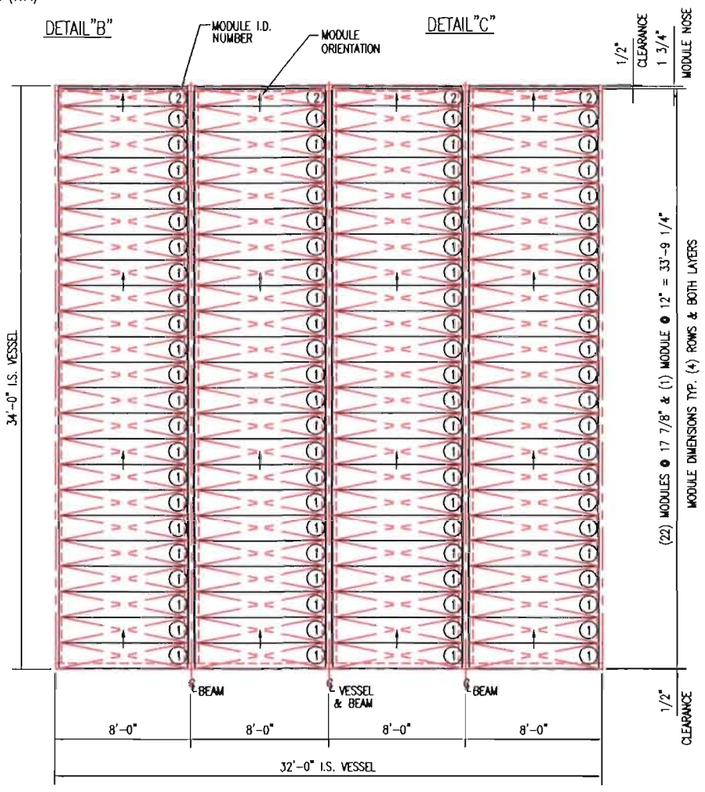
DRAWING NUMBER	SHEET OF	REV.
D-34911-02		B



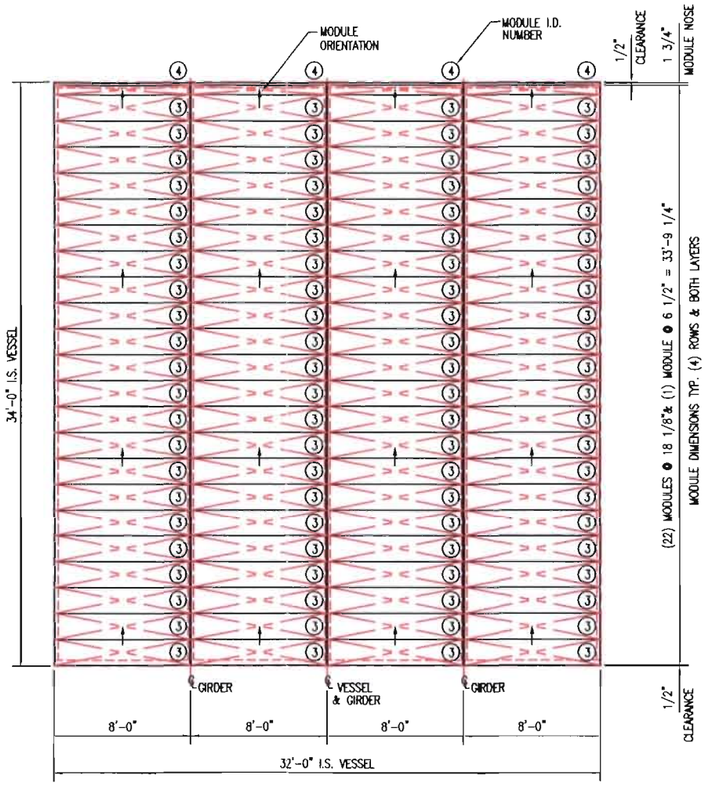


DETAIL "B"

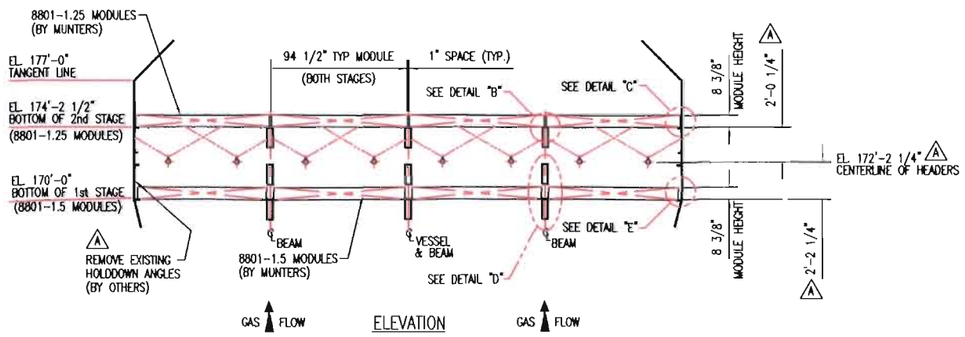
DETAIL "C"



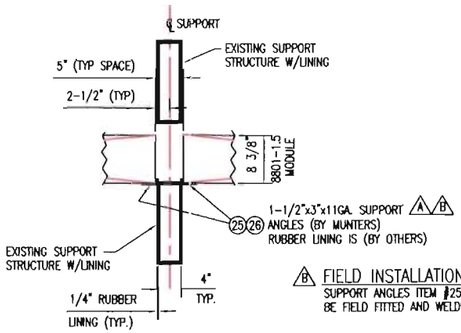
PLAN VIEW 1st STAGE 8801-1.5 MODULES
(SPRAY WASH NOT SHOWN FOR CLARITY)



PLAN VIEW 2nd STAGE 8801-1.25 MODULES
(SPRAY WASH NOT SHOWN FOR CLARITY)

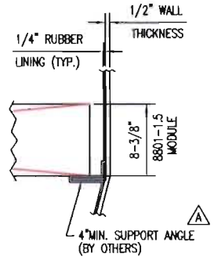


ELEVATION



DETAIL "D"

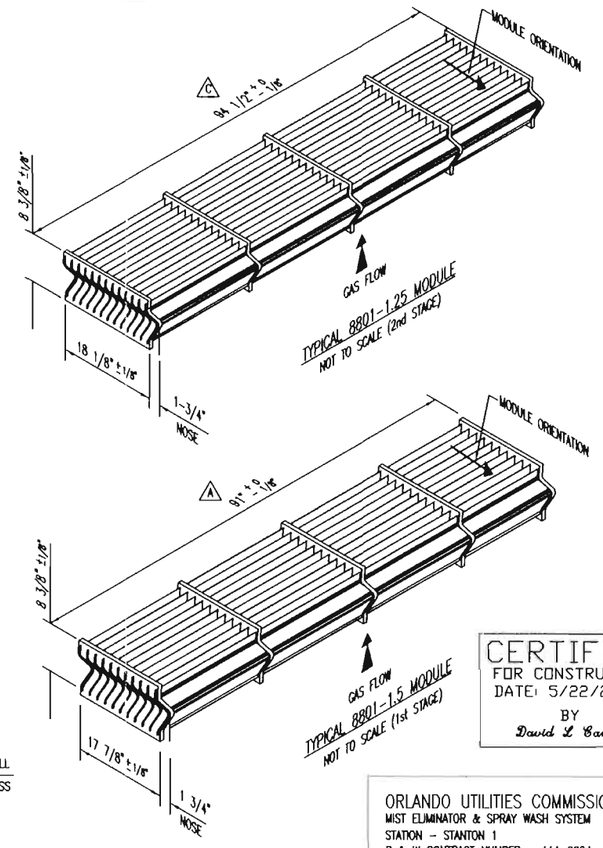
B FIELD INSTALLATION NOTE:
SUPPORT ANGLES ITEM #25 & #26 TO BE FIELD FITTED AND WELDED IN PLACE



DETAIL "E"

NOTES
1. MATERIAL: PROFILES - POLYSULFONE
SPACERS - PPGC
SPRAY WASH PIPING - FRP
SPRAY NOZZLES - PP
2. MUNTERS TO SUPPLY 8801-1.5 & 8801-1.25 MODULES, SPRAY WASH HEADERS & SPRAY NOZZLES ONLY.
3. ALL PARTS TO BE MARKED FOR FIELD ASSEMBLY.
4. WEIGHT APPROX.: FULL SIZE 8801-1.50 MODULES - 48 LBS. PER. MODULE
8801-1.25 MODULES - 44 LBS. PER. MODULE
5. SEE MUNTERS FORM EB-MVFME-0501 LATEST REV. FOR INSPECTION & MAINTENANCE INSTRUCTIONS.
6. LAYERS (STAGE 1 & 2) ARE TO BE LABELED/PACKAGED BY LAYER & TOWER.

REFERENCE:
FOR SPRAY WASH SYSTEM GENERAL ARRANGEMENT SEE MUNTERS DRAWING D-34911-02
A CUSTOMER DRAWING - 09182-4E-2501 Rev.07



CERTIFIED
FOR CONSTRUCTION
DATE: 5/22/2009
BY
David L Carter

ORLANDO UTILITIES COMMISSION
MIST ELIMINATOR & SPRAY WASH SYSTEM
STATION - STANTON 1
B & W CONTRACT NUMBER - 444-0024
B & W PROJECT No. - 223N
B & W PURCHASE ORDER NUMBER - BAX109393

ITEM NO.	PART NO.	PART NAME / DESCRIPTION	MATL.	REQ.
B 26	THIS DRAWING	SUPPORT ANGLE 1 1/2"x3"x11GA.x12'-0"	C.S.	6
B 25	THIS DRAWING	SUPPORT ANGLE 1 1/2"x3"x11G.x11'-0"LG.	C.S.	12
C 4	BD-34911D	MODULE (8801-1.25) 6-1/2"x94 1/2"	POLSUL	4
C 3	BD-34911C	MODULE (8801-1.25) 18-1/8"x94 1/2"	POLSUL	88
A 2	BD-34911B	MODULE (8801-1.5) 12"x91"	POLSUL	4
A 1	BD-34911	MODULE (8801-1.5) 17-7/8"x91"	POLSUL	88

BILL OF MATERIAL

SYM.	REVISION	BY	DATE
C	REVISED 2nd STAGE MODULE SIZE UPDATED DRAWING & B.O.M.	DC EG	5/22 2009
B	REVISED PER CUSTOMER MARKED PRINT AND EMAIL DATED 7/7/2008	DC ER	7/10 2008
A	REVISED PER CUSTOMER MARKED PRINT	SJ DC	6/17 2008

DRAWN BY	SJ
CHECKED BY	DC
APPROVED BY	DLC
SCALE	N.T.S.
DATE	5/13/08
FOR	B&W ORLANDO UTILITIES G709-34911 (42968)

THE MUNTERS CORPORATION
310 6th STREET S.E. 33907
P.O. BOX 9428
FT. MYERS FLORIDA 33911
PHONE (239) 936-1555
FAX (239) 278-1316

TITLE
GENERAL ARRANGEMENT: 8801-1.5 & 8801-1.25 MODULES IN 32'-0"Wx34'-0"LG VESSEL (2 STAGE)

DRAWING NUMBER	SHEET OF	REV.
D-34911-01		C

ACAD D34911-RevC

APPENDIX C
HAP SUPPORTING DATA

A.10. Carbon Monoxide. Emissions of CO from Unit 1 shall not exceed 0.18 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required continuous emissions monitoring system (CO-CEMS). Carbon monoxide (CO) emissions from Unit No. 2 shall not exceed 0.15 lb/million Btu heat input on a 30-operating day rolling average as demonstrated by the required CO-CEMS. Based upon a heat input of 4286 million Btu/hr, CO emissions shall not exceed 643 lb/hr (2,816 TPY). [PSD-FL-084; 0950137-015-AC, Specific Condition 9.]

A.11. Volatile Organic Compounds. Volatile Organic Compounds (VOC) emissions from Unit No. 2 shall not exceed 0.015 lb/million Btu heat input. Based upon a heat input of 4,286 million Btu/hr, VOC emissions shall not exceed 64 lb/hr (282 TPY). [PSD-FL-084]

A.12. Sulfuric Acid Mist. Sulfuric acid mist (H_2SO_4) emissions from Unit No. 2 shall not exceed 0.033 lb/million Btu heat input. Based upon a heat input of 4,286 million Btu/hr, H_2SO_4 emissions shall not exceed 140 lb/hr (613 TPY). [PPS PA 81-14/SA1]

~~**A.13.** Beryllium. Beryllium (Be) emissions from Unit No. 2 shall not exceed 5.2×10^{-6} lb./million Btu heat input. Based upon a heat input of 4286 million Btu/hr, Be emissions shall not exceed 0.022 lb./hr (0.1 TPY). [PPS PA 81-14/SA1]~~

~~**A.14.** Mercury. Mercury (Hg) emissions from Unit No. 2 shall not exceed 1.1×10^{-5} lb/million Btu heat input. Based upon a heat input of 4,286 million Btu/hr, Hg emissions shall not exceed 0.046 lb/hr (0.2 TPY). [PPS PA 81-14/SA1]~~

~~**A.15.** Lead. Lead (Pb) emissions from Unit No. 2 shall not exceed 1.5×10^{-4} lb/million Btu heat input. Based upon a heat input of 4,286 million Btu/hr, Pb emissions shall not exceed 0.64 lb/hr (2.8 TPY). [PPS PA 81-14/SA1]~~

~~**A.16.** Fluorides. Fluorides (Fl) emissions from Unit No. 2 shall not exceed 4.2×10^{-4} lb/million Btu heat input. Based upon a heat input of 4,286 million Btu/hr, Fl emissions shall not exceed 1.8 lb/hr (7.9 TPY). [PPS PA 81-14/SA1]~~

Excess Emissions

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

A.17. Excess Emissions Allowed. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

A.18. Excess Emissions Allowed. Excess emissions resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized. [Rule 62-210.700(2), F.A.C.]

A.19. Excess Emissions Prohibited. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

A.20. CAM Plan. These emissions units are subject to the Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C. [40 CFR 64; Rules 62-204.800 and 62-213.440(1)(b)1.a., F.A.C.]

Method	Description of Method and Comments
or 6C	
7, 7A, 7C, 7D or 7E	Determination of Nitrogen Oxides Emissions from Stationary Sources
8	Determination of Sulfuric Acid Mist Emissions
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Note: The method shall be based on a continuous sampling train.}
12	Determination of Lead Emissions
13A, 13B	Determination of Fluoride Emissions
17	Determination of In-Stack Particulate Matter (PM) Emissions
18	Determination of VOC Emissions
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25, 25A, 25B	Method for Determining Gaseous Organic Concentrations (Flame Ionization)
101A	Determination of Hg Emissions
104	Determination of Be Emissions
108	Determination of Hg Emissions

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [62-297.401, F.A.C.; PPS PA 81-14/SA1; PSD-FL-084; and 40 CFR 60.49Da]

A.29. ~~**A.26.**~~ Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

A.30. ~~**A.27.**~~ Annual Compliance Tests Required. During each federal fiscal year (October 1st to September 30th), each EU shall be tested to demonstrate compliance with the emissions standards for particulate matter, NO_x, SO_2 and visible emissions. [Rule 62-297.310(7), F.A.C.; and PPS PA 81-14/SA1]

A.31. ~~**A.28.**~~ Compliance Tests Prior To Renewal. Compliance tests shall be performed for both Unit 1 and Unit 2 for particulate matter, NO_x, SO_2, visible emissions and carbon monoxide once every 5 years. Compliance tests shall be performed for Unit 2 for volatile organic compounds and sulfuric acid mist, ~~mercury, beryllium, lead and fluoride~~ once every 5 years. The tests shall occur prior to obtaining a renewed operating permit to demonstrate compliance with the emission limits in Specific Conditions **A.5. – A.16.** [Rules 62-210.300(2)(a) and 62-297.310(7)(a), F.A.C.]

Work Order No. 03405-004-001

Unit 2 Compliance Testing at the Orlando Utilities Commission, Curtis H. Stanton Energy Center

Black & Veatch

August 1996

Prepared For

BLACK & VEATCH

8400 Ward Parkway Street

Kansas City, Missouri 64114

Michael White

Approved for Transmittal

September 1996

Prepared By

ROY F. WESTON, INC.

1635 Pumphrey Ave.

Auburn, Alabama 36830-4303

27 September 1996

TABLE OF CONTENTS

LIST OF TABLES

SECTION 1
INTRODUCTION

Roy F. Weston, Inc. (WESTON®) was retained by Black & Veatch (B&V) to conduct emission testing on Unit 2 at the Curtis H. Stanton Energy Center in Orlando, Florida. Table 1-1 lists the parameters tested. The purpose of the testing was to demonstrate compliance with Florida Department of Environmental Protection (FDEP) permit limitations.

TABLE 1-1
STACK EMISSION COMPLIANCE TESTING[a]

Particulate Matter (PM)
Particulate Matter Less than 10 Microns (PM_{10})
Opacity
Carbon Monoxide (CO)
Sulfur Dioxide (SO_2)
Fluorides (F^-)
Sulfuric Acid Mist (H_2SO_4)
Volatile Organic Compounds (VOC)
Lead (Pb)
Beryllium (Be)
Mercury (Hg)
Nitrogen Oxides (NO_x)

[a]All testing performed at 450 mw.

WESTON performed the emission testing during 5-9 August 1996 with a project team comprised of the following individuals.

Name	Project Role
Michael Steele	Program Manager
Joe Oven	Project Manager
David Elam	Technical Advisor/ Quality Assurance

Name	Project Role
Jeff Burdette	Technical Advisor/ Quality Assurance
Barry Jackson	Technical Advisor/ Quality Assurance
Michael White	Technical Director
Greg Sims	Data Quality Control
Doug Lincoln	Test Team Leader
Chuck Dewey	Test Team Member
Rick Irvin	Test Team Member
Jim Wallis	Test Team Member

Mr. Tom Ringwelski of B&V coordinated the testing with Orlando Utilities Commission (OUC) operations and served as WESTON's technical contact throughout the effort. Mr. Gary Kuberski of FDEP was present during testing.

This report is organized into three sections and supporting appendices. Section 2 summarizes the test program results. Section 3 references the sampling and analytical procedures used to perform the test program. Supporting data are provided in the appendices.

SECTION 2
RESULTS AND DISCUSSION

Table 2-1 compares the results of emission testing to FDEP permit limitations. Tables 2-2 through 2-8 summarize the test results. All run times in tables and on field data reflect daylight savings time. The results for each source are below the applicable standard for the source. Some differences between the calculated results shown in the appendices and the reported results in the summary tables are due to rounding the results for presentation. If one or more values are less than the detection limit, a value of 50 percent of the detection limit was used for those particular value(s) in calculating the mean.

TABLE 2-1
SUMMARY OF EMISSION TEST RESULTS

	Mean Test Value	Permit Limit
Particulate Matter/Particulate Matter < 10µm		
lb/hr	25.1	85.7
lb/MMBtu	0.01	0.02
Opacity		
%	0.0	20
Carbon Monoxide		
lb/hr	260	643
lb/MMBtu	0.13	0.15
Sulfur Dioxide		
lb/MMBtu	0.15	0.25[a]
Fluorides as Hydrogen Fluoride		
lb/hr	0.25	1.8
x 10^{-4} lb/MMBtu	0.63	4.2
Sulfuric Acid Mist		
lb/hr	51	140
lb/MMBtu	0.012	0.033
Volatile Organic Compounds as Carbon		
lb/hr	0.6	64
lb/MMBtu	<0.001[b]	0.015
Lead		
lb/hr	<0.01[b]	0.64
x 10^{-4} lb/MMBtu	<0.1[b]	1.5
Beryllium		
lb/hr	<0.001[b]	0.022
x 10^{-6} lb/MMBtu	0.04	5.2
Mercury		
lb/hr	0.007	0.046
x 10^{-5} lb/MMBtu	0.17	1.1
Nitrogen Oxides		
lb/MMBtu	0.164	0.17[a]

[a]30-day rolling average.

[b]These values have been rounded for reporting purposes.

TABLE 2-2
PARTICULATE MATTER AND OPACITY EMISSION DATA - STACK

	Run 1	Run 2	Run 3	Mean
Date	8/6/96	8/6/96	8/6/96	---
Time Began	1046	1350	1710	---
Time Ended	1310	1639	1930	---
Stack Gas Data				
Temperature, °F	125	124	125	125
Velocity, ft/sec	61	63	63	63
Moisture, %	13	13	13	13
CO_2 Concentration, %	12.4	12.3	12.3	12.4
O_2 Concentration, %	6.2	6.3	6.4	6.3
VFR, x 10^5 dscfm	4.4	4.6	4.6	4.6
F-factor, scf/MMBtu	9780	9780	9780	9780
Particulate Matter[a]				
Isokinetic Sampling Rate, %	105	95	100	100
Concentration, gr/ft^3	0.007	0.006	0.006	0.006
Emission Rate, lb/hr	27.5	25.0	22.9	25.1
Permit Limit, lb/hr	---	---	---	85.7
Emission Factor, lb/MMBtu	0.01	0.01	0.01	0.01
Permit Limit, lb/MMBtu	---	---	---	0.02
Visible Emissions[b]				
Opacity, %	0.0	0.0	0.0	0.0
Permit Limits, %	---	---	---	20

[a]PM includes PM < 10µm
[b]Opacity run times were as follows: 1145 - 1245; 1525 - 1625; 1721 - 1821.

TABLE 2-3
CARBON MONOXIDE AND SULFUR DIOXIDE EMISSION DATA - STACK

	Run 2[a]	Run 3	Run 4	Mean
Date	8/6/96	8/6/96	8/6/96	----
Time Began	1204	1351	1529	----
Time Ended	1304	1451	1629	----
Stack Gas Data				
Temperature, °F	125	124	124	124
Velocity, ft/sec	61	63	63	62
Moisture, %	13	13	13	13
CO_2 Concentration, %	12.4	12.3	12.3	12.3
O_2 Concentration, %	6.2	6.3	6.3	6.3
VFR, x 10^5 dscfm	4.4	4.6	4.6	4.5
F-factor, scf/MMBtu	9780	9780	9780	9780
Carbon Monoxide				
Concentration, ppm	154	117	124	132
Emission Rate, lb/hr	298	235	248	260
Permit Limit, lb/hr	----	----	----	643
Emission Factor, lb/MMBtu	0.16	0.12	0.12	0.13
Permit Limit, lb/MMBtu	----	----	----	0.15
Sulfur Dioxide				
Concentration, ppm	66	64	70	66
Emission Rate, lb/hr	291	294	321	302
Emission Factor, lb/MMBtu	0.15	0.15	0.16	0.15
Permit Limit, lb/MMBtu[b]	----	----	----	0.25

[a]Run 1 was voided due to pulverizer brought into service.
[b]30-day rolling average.

TABLE 2-4
FLUORIDE EMISSION DATA - STACK

	Run 1	Run 2	Run 3	Mean
Date	8/7/96	8/7/96	8/8/96	----
Time Began	1123	1358	0840	----
Time Ended	1339	1612	1055	----
Stack Gas Data				
Temperature, °F	126	125	127	126
Velocity, ft/sec	64	64	61	63
Moisture, %	14	13	13	13
CO_2 Concentration, %	12.2	12.2	12.3	12.2
O_2 Concentration, %	6.7	6.5	6.4	6.5
VFR, x 10^5 dscfm	9.8	10	9.4	9.7
F-factor, scf/MMBtu	9780	9780	9780	9780
Fluorides as Hydrogen Fluoride				
Isokinetic Sampling Rate, %	100	99	103	101
Concentration, ppm	<0.2	<0.2	<0.2	0.1
Emission Rate, lb/hr	<0.5	<0.5	<0.5	0.25
Permit Limit, lb/hr	----	----	----	1.8
Emission Factor, x 10^{-4} lb/MMBtu	<1.3	<1.3	<1.2	0.63
Permit Limit, x 10^{-4} lb/MMBtu	----	----	----	4.2

TABLE 2-5
SULFURIC ACID MIST EMISSION DATA - STACK

	Run 1	Run 2	Run 3	Mean
Date	8/7/96	8/7/96	8/7/96	----
Time Began	0915	1248	1536	----
Time Ended	1134	1503	1740	----
Stack Gas Data				
Temperature, °F	126	123	123	124
Velocity, ft/sec	64	63	62	63
Moisture, %	14	13	13	13
CO_2 Concentration, %	12.1	12.2	12.2	12.2
O_2 Concentration, %	6.6	6.6	6.5	6.6
VFR, x 10^5 dscfm	9.9	9.9	9.7	9.8
F-factor, scf/MMBtu	9780	9780	9780	9780
Sulfuric Acid Mist				
Isokinetic Sampling Rate, %	103	101	101	102
Concentration, mg/dscm	10	9.9	21	14
Emission Rate, lb/hr	39	36	78	51
Permit Limit, lb/hr	----	----	----	140
Emission Factor, lb/MMBtu	0.009	0.009	0.019	0.012
Permit Limit, lb/MMBtu	----	----	----	0.033

TABLE 2-6
VOLATILE ORGANIC COMPOUNDS
EMISSION DATA - STACK

	Run 1	Run 2	Run 3	Mean
Date	8/7/96	8/7/96	8/7/96	----
Time Began	1216	1335	1501	----
Time Ended	1316	1435	1601	----
Stack Gas Data				
Temperature, °F	126	125	123	125
Velocity, ft/sec	64	64	62	63
Moisture, %	14	13	13	13
CO_2 Concentration, %	12.2	12.2	12.2	12.2
O_2 Concentration, %	6.7	6.5	6.5	6.5
VFR, x 10^5 dscfm	9.8	10	9.7	9.8
F-factor, scf/MMBtu	9780	9780	9780	9780
VOC as Carbon				
Isokinetic Sampling Rate, %	100	99	101	100
Concentration, ppm	0.3	0.3	0.3	0.3
Emission Rate, lb/hr	0.6	0.6	0.6	0.6
Permit Limit, lb/hr	----	----	----	64
Emission Rate, lb/MMBtu	0.0002	0.0002	0.0002	0.0002
Permit Limit, lb/MMBtu	----	----	----	0.015

TABLE 2-7
LEAD, BERYLLIUM, AND MERCURY EMISSION DATA - STACK

	Run 1	Run 2	Run 3	Mean
Date	8/8/96	8/8/96	8/8/96	----
Time Began	0842	1110	1335	----
Time Ended	1057	1325	1641	----
Stack Gas Data				
Temperature, °F	127	124	122	124
Velocity, ft/sec	61	60	60	61
Moisture, %	14	13	12	13
CO_2 Concentration, %	12.3	12.4	12.4	12.4
O_2 Concentration, %	6.4	6.4	6.4	6.4
Isokinetic Sampling Rate, %	97	95	95	96
VFR, x 10^5 dscfm	9.4	9.4	9.5	9.4
F-factor, scf/MMBtu	9780	9780	9780	9780
Lead				
Concentration, µg/dscm	<0.19	<0.19	0.25	0.15
Emission Rate, lb/hr	<0.001	<0.001	0.001	0.00067
Permit Limit, lb/hr	----	----	----	0.64
Emission Factor, x 10^{-4} lb/MMBtu	<0.002	<0.002	0.002	0.0013
Permit Limit, x 10^{-4} lb/MMBtu	----	----	----	1.5
Beryllium				
Concentration, µg/dscm	<0.09	<0.10	<0.09	0.047
Emission Rate, lb/hr	<0.0003	<0.0003	<0.0003	0.00015
Permit Limit, lb/hr	----	----	----	0.022
Emission Factor, x 10^{-6} lb/MMBtu	<0.08	<0.08	<0.08	0.040
Permit Limit, x 10^{-6} lb/MMBtu	----	----	----	5.2
Mercury[a]				
Concentration, µg/dscm	3.1	<2.4	<2.5	1.8
Emission Rate, lb/hr	0.011	<0.009	<0.009	0.0067
Permit Limit, lb/hr	----	----	----	0.046
Emission Factor, x 10^{-5} lb/MMBtu	0.3	<0.2	<0.2	0.17
Permit Limit, x 10^{-5} lb/MMBtu	----	----	----	1.1

[a]Mercury levels were found only in Run 1. The reported value for Run 1 was not confirmed by the subsequent sample runs. The associated field and lab data were reviewed and no cause for the variation was indicated in the sampling, analytical procedures, or data handling procedures.

TABLE 2-8
NITROGEN OXIDES EMISSION DATA - STACK

	Run 2[a]	Run 3	Run 4	Mean
Date	8/8/96	8/8/96	8/8/96	----
Time Began	1045	1204	1322	----
Time Ended	1145	1304	1422	----
Stack Gas Data				
Temperature, °F	126	124	122	124
Velocity, ft/sec	60	60	60	60
Moisture, %	14	13	12	13
CO_2 Concentration, %	12.4	12.4	12.4	12.4
O_2 Concentration, %	6.4	6.4	6.4	6.4
VFR, x 10^5 dscfm	9.4	9.4	9.5	9.4
F-factor, scf/MMBtu	9780	9780	9780	9780
Nitrogen Oxides				
Isokinetic Sampling Rate, %	96	95	95	95
Concentration, ppm	99	99	100	99
Emission Rate, lb/hr	663	663	683	670
Emission Factor, lb/MMBtu	0.164	0.163	0.166	0.164
Permit Limit, lb/MMBtu[b]	----	----	----	0.17

[a]Run 1 was void to ammonia alarm set off. Ammonia injection was stopped for a five minute period while the system was reset.

[b]30-day rolling average.

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Wednesday, April 07, 2010 11:13 AM
To: 'forney.kathleen@epa.gov'; Shine, Caroline; 'lori.cunniff@ocfl.net'
Cc: Bull, Robert; Walker, Elizabeth (AIR)
Subject: OUC - Stanton Energy Center (0950137-032-AC)

A new **Permit Application** has been received at FL Department of Environmental Protection Div. of Air Resource Management and is currently under review.

Link to Permit Application Documents:

http://arm-permit2k.dep.state.fl.us/psd/0950137/00004A10.pdf

ARMS PA Project ID:	0950137-032-AC
Facility Name:	Orlando Utilities Commission – Stanton Energy Center
Florida County:	Orange
Project Description:	HEAT INPUT ALLOWABLE CHANGE
Permit Application Processor:	Robert Bull
Processor Phone:	(850) 921-7744
Processor Email Address:	Robert.Bull@dep.state.fl.us
Received in-house:	4/2/10

Please direct any questions regarding this permit application to the permit application processor. If you have any problems accessing these documents please let me know.

Thanks,

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
Department of Environmental Protection
850/921-9506
sylvia.livingston@dep.state.fl.us

Tracking:

Walker, Elizabeth (AIR)

From: Bull, Robert
Sent: Wednesday, April 14, 2010 2:53 PM
To: Walker, Elizabeth (AIR); Koerner, Jeff
Cc: sosbourn@golder.com
Subject: RE: Air Application for SEC Scrubber Mod and HAP Revisions

Elizabeth,

I spoke with Scott Osbourn earlier today and indicated to him this project will be included into project -032 since the projects were submitted within a few weeks of each other. The clock will restart for the project. Please let me know if you have any questions. Thanks

---

From: Walker, Elizabeth (AIR)
Sent: Wednesday, April 14, 2010 12:53 PM
To: Koerner, Jeff; Bull, Robert
Subject: RE: Air Application for SEC Scrubber Mod and HAP Revisions

This came in today. Shall I still have it scanned under 0950137-032-AC and do we restart the completeness review clock?

Elizabeth Walker
Bureau of Air Regulation
Division of Air Resource Management (DARM)
(850)921-9505

Walker, Elizabeth (AIR)

From: Koerner, Jeff
Sent: Wednesday, April 14, 2010 8:38 AM
To: Bull, Robert
Cc: Linero, Alvaro; Walker, Elizabeth (AIR)
Subject: FW: Air Application for SEC Scrubber Mod and HAP Revisions
Attachments: Stanton Scrubber Mod and HAP Revision.pdf

Take a look at this. Call Scott Osborne and let him know we are combining this project with Project No. 0950137-032-AC for a requested increase in the maximum heat input rate.

Thanks!

Jeff

From: Linero, Alvaro
Sent: Tuesday, April 13, 2010 3:36 PM
To: Koerner, Jeff
Cc: Walker, Elizabeth (AIR)
Subject: Air Application for SEC Scrubber Mod and HAP Revisions

Jeff.

For you to assign.

I assume we'll see a hard copy.

Maybe within heat input?

Maybe no permit for the vane changes?

Al.

From: Osbourn, Scott [mailto:Scott_Osbourn@golder.com]
Sent: Tuesday, April 13, 2010 2:55 PM
To: Linero, Alvaro
Subject: Air Application for SEC Scrubber Mod and HAP Revisions

This attached application is for a minor source air construction permit for a modification of the Unit 1 Flue Gas Desulfurization (FGD) system. Specifically, the Unit 1 FGD system will be modified with an upgrade to the mist eliminator vanes and fixed grid wash system. This upgrade is only to the mist eliminator part of the FGD system. There may be a slight improvement in acid gas control, but no significant impact on emissions is expected. This application also serves to correct a misstatement in the current Title V (TV) operating permit. Previous permits have been unclear as to whether the Stanton Energy Center (SEC) is a major source of hazardous air pollutants (HAPs). Some previous construction and operation permits have either stated that this facility is not a major source of HAPs or that the facility is a "potential" major source of HAPs. Based on a review of data in the annual operating reports (AORs), it's clear that at least one HAP (HCl) exceeds the applicable 10 ton per year (TPY) threshold that would qualify this facility for major source HAP status. Finally, during the recent TV renewal (Permit No. 0950137-029-AV), the Department added a requirement for recurring (every 5 years) compliance testing for emissions of mercury, beryllium, lead and fluorides

from Unit 2. This application serves to request that these limits, as well as the associated testing requirements, be removed from the permit.

Scott Osbourn (P.E.) | Associate and Senior Consultant | **Golder Associates Inc.**
5100 West Lemon Street, Suite 208, Tampa, Florida, USA 33609
T: +1 (813) 287-1717 | **D:** +1 (813) 769-5304 | **F:** +1 (813) 287-1716 | **C:** +1 (727) 278-3358 | **E:** Scott_Osbourn@golder.com | **www.golder.com**

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Wednesday, December 01, 2010 3:14 PM
To: 'dstalls@ouc.com'
Cc: 'dbaez@ouc.com'; 'sosbourn@golder.com'; 'forney.kathleen@epamail.epa.gov'; 'abrams.heather@epamail.epa.gov'; 'oquendo.ana@epa.gov'; 'Jodi.Dittell@ocfl.net'; Shine, Caroline; Gibson, Victoria; Bull, Robert; Koerner, Jeff; Walker, Elizabeth (AIR)
Subject: Orlando Utilities Commission - Stanton Energy Center; 0950137-032-AC - Revised Draft
Attachments: 0950137-032-AC_Signatures.pdf

Dear Sir/ Madam:

Attached is the official **Notice of Intent to Issue** for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send".

Note: We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0950137.032.AC.R_pdf.zip

Owner/Company Name: ORLANDO UTILITIES COMMISSION
Facility Name: STANTON ENERGY CENTER
Project Number: 0950137-032-AC
Permit Status: REV DRAFT
Permit Activity: CONSTRUCTION
Facility County: ORANGE
Processor: Robert Bull

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Access these documents by clicking on the link provided above, or search for other project documents using the "*Air Permit Documents Search*" website at http://www.dep.state.fl.us/air/emission/apds/default.asp.

Permit project documents are addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-9506
sylvia.livingston@dep.state.fl.us

Livingston, Sylvia

From: Stalls, Denise M. [DStalls@ouc.com]
Sent: Wednesday, December 01, 2010 3:28 PM
To: Livingston, Sylvia
Subject: RE: Orlando Utilities Commission - Stanton Energy Center; 0950137-032-AC - Revised Draft

Received, thanks

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Wednesday, December 01, 2010 3:14 PM
To: Stalls, Denise M.
Cc: Baez, David R.; sosbourn@golder.com; forney.kathleen@epamail.epa.gov; abrams.heather@epamail.epa.gov; oquendo.ana@epa.gov; Jodi.Dittell@ocfl.net; Shine, Caroline; Gibson, Victoria; Bull, Robert; Koerner, Jeff; Walker, Elizabeth (AIR)
Subject: Orlando Utilities Commission - Stanton Energy Center; 0950137-032-AC - Revised Draft

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Owner/Company Name: ORLANDO UTILITIES COMMISSION
Facility Name: STANTON ENERGY CENTER
Project Number: 0950137-032-AC
Permit Status: REV DRAFT
Permit Activity: CONSTRUCTION
Facility County: ORANGE
Processor: Robert Bull

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Permit project documents are addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation

Livingston, Sylvia

From: Baez, David R. [DBaez@ouc.com]
Sent: Wednesday, December 01, 2010 3:58 PM
To: Livingston, Sylvia
Subject: RE: Orlando Utilities Commission - Stanton Energy Center; 0950137-032-AC - Revised Draft

received, thank you

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Wednesday, December 01, 2010 3:14 PM
To: Stalls, Denise M.
Cc: Baez, David R.; sosbourn@golder.com; forney.kathleen@epamail.epa.gov; abrams.heather@epamail.epa.gov; oquendo.ana@epa.gov; Jodi.Dittell@ocfl.net; Shine, Caroline; Gibson, Victoria; Bull, Robert; Koerner, Jeff; Walker, Elizabeth (AIR)
Subject: Orlando Utilities Commission - Stanton Energy Center; 0950137-032-AC - Revised Draft

Dear Sir/ Madam:

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Note: We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

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Owner/Company Name: ORLANDO UTILITIES COMMISSION
Facility Name: STANTON ENERGY CENTER
Project Number: 0950137-032-AC
Permit Status: REV DRAFT
Permit Activity: CONSTRUCTION
Facility County: ORANGE
Processor: Robert Bull

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Permit project documents are addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation

Sylvia Livingston

September 24, 2010 103-89500

Robert Bull, P.E.
New Source Review Section
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400

RE: PROJECT NO. 0950137-032-AC
REQUEST FOR ADDITIONAL INFORMATION (RAI)
STANTON ENERGY CENTER, UNITS 1 AND 2
HEAT INPUT INCREASE AND PERMIT MODIFICATIONS

Dear Mr. Bull:

On April 2, 2010, the Department received OUC's request for a heat input increase for Units 1 and 2, as well as other permit condition revisions. Initial construction was authorized under Site Certification PA81-14 and PSD-FL-084. On April 28, 2010, OUC received a request for additional information (RAI) in order to continue processing this request. On July 26, 2010 and, subsequently, on August 25, 2010, OUC requested an extension of time in which to respond to this RAI and the Department granted an extension to August 26, 2010 and to September 25, 2010, respectively. The Department's comments are addressed below in the order in which they were received. Where appropriate, any assumptions, calculations and reference materials that are used or reflected in the responses are provided.

1. The original heat input limit for Unit 1 was 4,136 mmBtu/hr as part of the original site certification under PA81-14. This limit was increased to 4,286 mmBtu/hr under PSD-FL-084 as well as the limit for Unit 2 was set at 4,286 mmBtu/hr. Both units have been operating under these conditions since 1996. Based upon hourly acid rain data (calendar years 2005-2007), both units demonstrate the ability to operate at 468 MW and within the 4,286 mmBtu/hr limit. However, this information also shows the units operating above the heat input limit and the ability of the units to operate at the higher values. Provide an explanation for the numerous heat input rate excursions when the facility has demonstrated the ability to operate at maximum generating capacity and within the permitted maximum heat input rates. Are there operational changes which could alleviate some of the issues such as coal storage or drying?*

**Calendar years 2005 through 2007 were chosen since they represented the timeframes for the highest two-year averages in Table A-6.*

Response: The Department is correct that the Acid Rain heat input data show the ability of both units to operate at greater than 450 MW and within the 4,286 mmBtu/hr heat input limit, as well as the ability to operate above the heat input limit and generate approximately the same MW output. In fact, attached are several figures that graphically depict this relationship (Figures 1 and 2, representing Units 1 and 2, respectively).

It is important to note that these units have always been capable of operating (and have consistently operated) at levels which are higher than the short-term heat input level (mmBtu/hr) which is noted in the permit, but which does not include a measurement method or averaging period. Nothing has really changed physically or operationally with either unit. Rather, the proposed correction (increase) to the

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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 (i.e., it specifies the method of measurement and the averaging time). 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. Accordingly, since future operation of these units will not be significantly different from historical operation as a result of this permitting action, the reported annual emissions, post-correction, will not be significantly different from historical emissions.

However, in spite of the units' recognized ability to operate at heat input levels above 4,286 mmBtu/hr, the Department's above-referenced anomaly merits explanation. Specifically, the Department points out the perceived ability of both units to operate at 468 MW and within the 4,286 mmBtu/hr heat input level, as well as the ability to operate above that level and generate approximately the same MW output. Generally, the explanation for the variation in reported heat input, for what appears to be the same MW output, can be summarized into the following categories:

- Fuel quality (e.g., Btu content, hardness, mill fineness, etc.);
- Moisture (in or on the coal, plus heat of evaporation loss);
- Boiler air (total excess air, plus dry gas loss); and
- Power plant operational procedures that dictate a required MW output, although the heat input may be variable

Consequently, there are several key variables outside of OUC's control, such as increased moisture impacts due to the weather and the granular nature of the coal retaining more moisture, which have a negative impact on boiler efficiency. The variable nature of Stanton Energy Center's delivered coal includes not just its granular nature, but the carbon content, heating value, ash, sulfur, etc. Even traditional mines have much more variability these days.

Steam sootblowing is variable and dependent on the fuel characteristics. Due to ash and moisture characteristics, there has also been a need for more frequent steam sootblowing with the current coal situation compared to the past. Sootblowing is designed to remove combustion deposits from the boiler tubes to optimize the heat transfer; however, the more frequent the sootblowing, the less steam is available to the steam cycle that is used to produce electricity. Therefore, more heat input may be required to make up the difference in the required MW output.

The moisture issue is very real and attempts were made to correlate rainfall events with heat input excursions. However, the rainfall occurrence doesn't exactly translate into timeframes when the exposed coal would be fired, so the causal link is difficult to demonstrate.

Some of the impacts are also related to typical wear and tear on equipment, which occurs between maintenance cycles. OUC takes a conservative approach to maintenance cycles (i.e., better than the industry standards) for reliability purposes. Equipment mechanically deteriorates from normal wear in various ways. Fluid wear on pump impellers and steam path wear on turbine blades are examples. This wear can be corrected by weld repairs and parts replacement. Other impacts to heat rate include wear of turbine internal seals and clearances between overhauls. Frequent maintenance occurs on coal mills to maintain proper coal fineness, along with burner and controls tuning, air preheater cleaning, and boiler chemical cleaning. Recent projects to replace Unit 1 cooling tower nozzles for restoring condenser vacuum, or the repair of HP FW heater internal plates to regain efficiency from past internal bypass flow represent less frequent system maintenance. As these components undergo normal wear and tear, the

overall unit efficiency and heat rate (Btu required for each kW-hour produced) will become less than optimal until the next planned maintenance cycle. This can obviously have an effect on the observed heat input (mmBtu/hr) per MW produced and can vary cyclically over time. OUC is very proud of its maintenance program and steam unit operating performance, as depicted in the attached Figure 3– Equivalent Forced Outage Rate and Figure 4- Equivalent Availability Factor. Both of these figures demonstrate that SEC Units 1 and 2 perform significantly better than average industry benchmarks for these parameters.

2. The units have shown the ability to operate at heat input values higher than the permitted values. Please provide any modifications to each unit which may have assisted in the units to perform at the higher heat input values. Please provide representative data documenting operation at elevated heat input rates from 1996 from 2004.

Response: OUC has reviewed a listing all of the capital projects conducted for Units 1 and 2 since 1996. A summary of the major projects is provided in Tables 1 and 2 (for Units 1 and 2, respectively) of this response package. It is our opinion that none of the projects undertaken has the ability, or the intent, to increase the units' firing rate above its original design capability. In fact, as described in the previous response above, many of these activities are undertaken to improve generation reliability and to regain lost operating efficiencies as part of each unit's planned maintenance cycle.

Regarding the documentation of elevated heat input rates over time, OUC initially reviewed Acid Rain heat input data from 2004 through 2009. At the Department's request, OUC has also gone back and assessed the data from 1997 (the first year in which CEMS data were available for these units). The data plots (see Figures 5 and 6) illustrate that these units have always had the capability to operate at these higher heat input levels. It is important to note that the heat input rate provisions included in the initial permits did not specify a method for monitoring and reporting heat input. Specifically, CEMS-measured heat input was generally acknowledged to be biased high at that time and there was no averaging period specified.

3. Please calculate baseline actual emissions and projected actual emissions as defined in Rules 62-212.300(1)(e) and 62-210.370(2), F.A.C. to determine actual emissions from the project. The application calculations showed the CO emission calculations would be greater than the significant emissions rates. Please provide a BACT Analysis for CO and any other pollutants which exceed the significant emission rates. A project which triggers the significant emission rates and is subject to the PSD review requires a $7,500 check submittal along with the response to this RAI. Please provide all assumptions, calculations and reference materials that are used for these values analysis.

Response: Recent teleconferences with the Department have served to further clarify the intent and the approach to this requested permitting action. Initially, OUC's April 2, 2010 application treated this heat input correction as an implied operational change (i.e., a change in the method of heat input monitoring and reporting). Based on this approach, OUC evaluated this project as though it were a potential modification, calculating baseline actual emissions and projected actual emissions as defined in Rules 62-212.300(1)(e) and 62-210.370(2), F.A.C. to determine whether an actual emissions increase resulted from the "project".

However, the "project" for regulatory applicability purposes consists of the requested correction (increase) in the allowable heat input limit, even though no "real" actual heat input increase has occurred. In other words, these units have always been capable of operating (and have consistently operated) at the higher than allowable short-term heat input rates (mmBtu/hr) and nothing has really changed physically or operationally with either unit.

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 by this proposed permitting action. Specifically, as had been discussed in the previous responses, these units have demonstrated the ability to operate at the higher requested short-term heat input rates (4,715 mmBtu/hr) since 1997 (i.e., when CEM-measured heat input was first reported). In fact, the historical heat input values have been higher than the allowable limit that was included in OUC's April 2, 2010 request to increase the heat input level. The historical data, combined with recent heat input data from 2009-2010 (based on a 4-hour average), indicate a need for an allowable limit of 4,800 mmBtu/hr. This represents a revised request from the previously requested allowable heat input level. Specifically, as depicted in Figures 7 and 8, recent unbiased heat input data for close to a 2 year period (January 2009 through September 2010), indicates the need for an allowable limit of 4,800 mmBtu/hr to avoid de-rating of the units. Therefore, OUC would like to clarify that their request for a revised heat input limit should be set at 4,800 mmBtu/hr, rather than the previously requested value of 4,715 mmBtu/hr. These higher heat input values are consistently demonstrated in past years of operation and continue to be the case with the most recent 2 year operating history.

Further, based on previous discussions regarding capital projects associated with these units as early as 1997, nothing has fundamentally changed physically or operationally with either unit. It is our opinion that none of the projects undertaken has the ability, or the intent, to increase the units' firing rate above its original design capability. In fact, as described in the previous responses above, many of these activities are undertaken to improve generation reliability and to regain lost operating efficiencies as part of each unit's planned maintenance cycle. If anything, the installation of low-NO_x burners and FGD system upgrades have actually served to reduce emissions from historic levels.

Accordingly, since future operation of these units will not be significantly different from historical operation as a result of this permitting action, the reported annual emissions, post-correction, will not be significantly different from historical emissions. These are base load units and, although capacity factors will vary slightly from year-to-year, annual operating rates are fairly consistent, as summarized below.

Unit No.	Year	Annual Heat Input (MMBtu/hr)	Annual Capacity Factor (%)*
1	2003	31,842,481	85
1	2004	28,504,372	76
1	2005	36,475,115	97
1	2006	31,233,371	83
1	2007	32,228,342	86
1	2008	30,722,077	81
1	2009	31,462,117	84

Unit No.	Year	Annual Heat Input (MMBtu/hr)	Annual Capacity Factor (%)*
2	2003	29,984,462	80
2	2004	31,073,463	83
2	2005	32,905,551	88
2	2006	34,820,403	93
2	2007	31,456,921	84
2	2008	28,895,806	74
2	2009	28,070,274	75

OUC, therefore, requests a permit correction to an allowable heat input limit of 4,800 MMBtu/hr (four-hour average) for each unit and will continue to track and report emissions annually for five years to demonstrate that the past actual operation summarized above is representative of future operation. The future operation comparisons will be made to the emission baseline established and summarized below.

Air Pollutant	Highest 2-year Average	Highest 2-year Period
CO	4,402	2005-2006
NOx	9,509	2005-2006
PM	265	2006-2007
PM_{10}	265	2006-2007
SO_2	8,482	2005-2006
VOC	34	2005-2006

The above values are documented in the attached revised Tables A-1 through A-6. The 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 (which have accompanied the annual operating reports summarized above), have been submitted for Units 1 and 2 four 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. 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.

4. The application requests that limits and testing requirements for mercury, beryllium, lead, and fluorides be removed from Unit 2. The mercury testing and emission limit will remain in the permit since this is a coal fired unit and mercury is a pollutant of concern. Beryllium is no longer a regulated PSD pollutant and the emission limits will be removed from the permit. Fluoride was not a BACT pollutant. The fluoride emission limit will be removed from the permit provided the applicant reports fluoride content as part of its routine coal analysis. Lead is a BACT pollutant and the emission limit will remain in the permit. However, based on the results of the proposed compliance testing for lead, future lead compliance testing may be based upon the special testing requirements of 62-297.310, F.A.C.

Response: OUC will agree to report fluoride content as part of its routine coal analysis in exchange for removal of the fluoride emission limit in the permit. In addition, based on the Department's comment, OUC understands that lead emission testing will only be required in the future if the Department requires reasonable assurance of compliance with the limit.

Pursuant to Rule 62-4.050(3), F.A.C, responses to Department requests for additional information of an engineering nature are to be certified by a professional engineer registered in the state of Florida, as well as a certification statement by the authorized representative or responsible official. Therefore, please find these certifications attached to this response package.

It is our understanding that the Department will resume processing of our application upon receipt of this requested information. If you should have any questions, please do not hesitate to contact me at (813) 287-1717.

Sincerely,

GOLDER ASSOCIATES INC.

Scott Osbourn, P.E.
Associate and Senior Consultant

Attachments—Figures and Tables

cc: Jeff Koerner, FDEP
Garfield Blair, OUC
David Baez, OUC
Michael Cooke, Esq.

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 9/24/10
Date

(seal)

SCOTT OSBOURN LICENSE NO. 57557 STATE OF FLORIDA PROFESSIONAL ENGINEER

* Attach any exception to certification statement.

Figure 1. SEC Unit 1 4-Hr Average Output > 450 MW

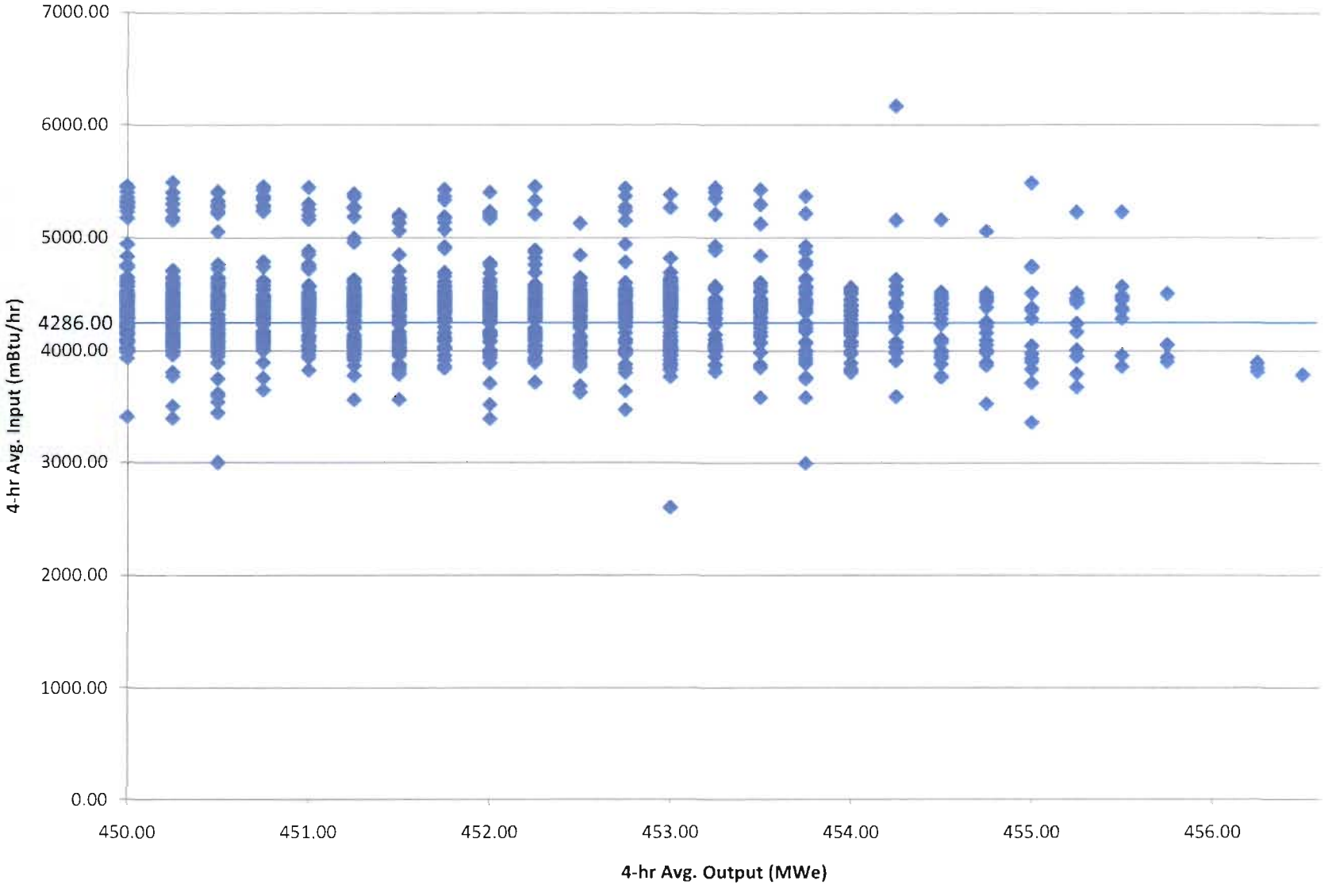

Figure 2. SEC Unit 2 4-Hr Average Output > 450 MW

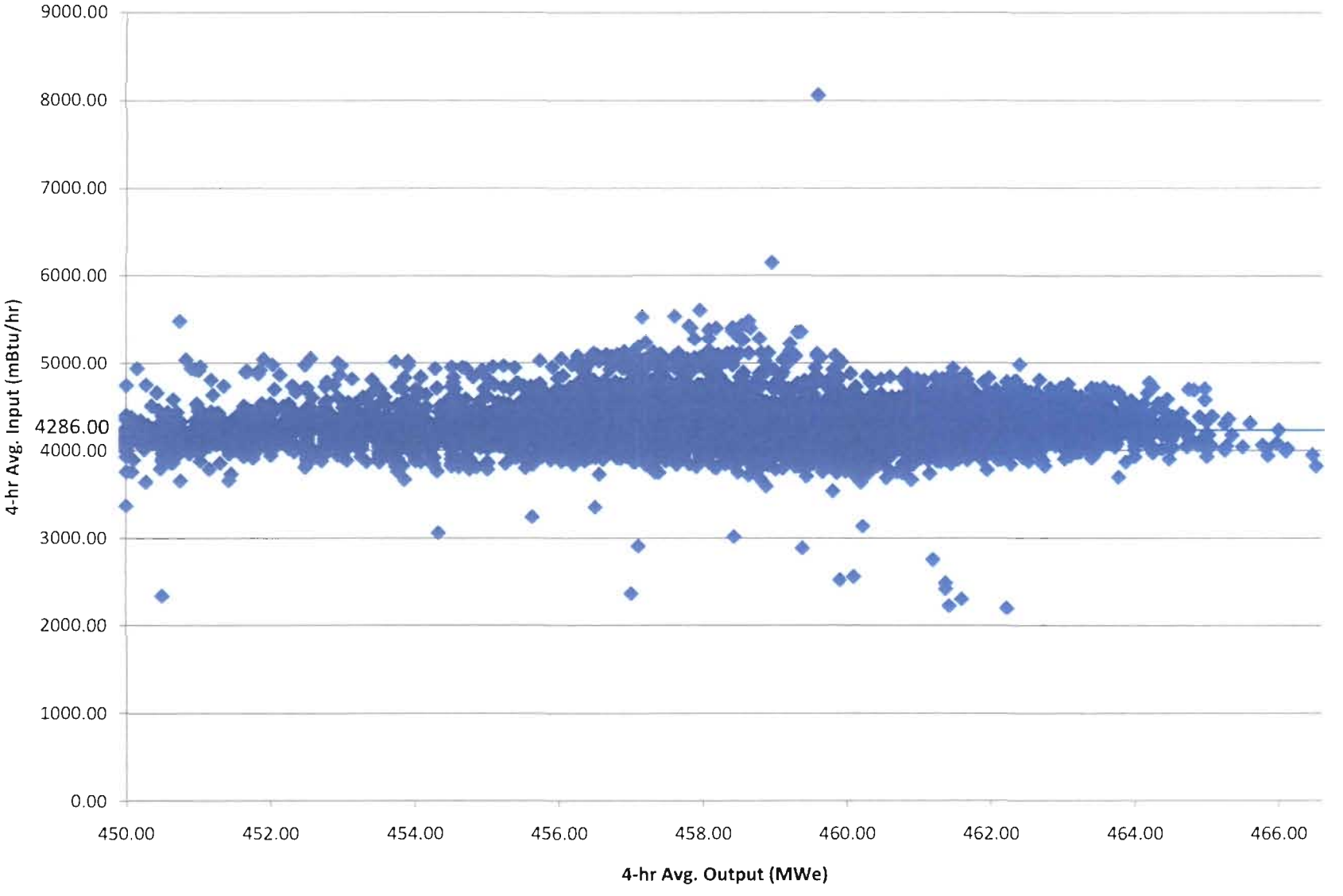

Figure 3. SEC Units 1 & 2

Running 12 Month Equivalent Forced Outage Rate

Figure 4. SEC Units 1 & 2

Running 12 Month Equivalent Availability Factor

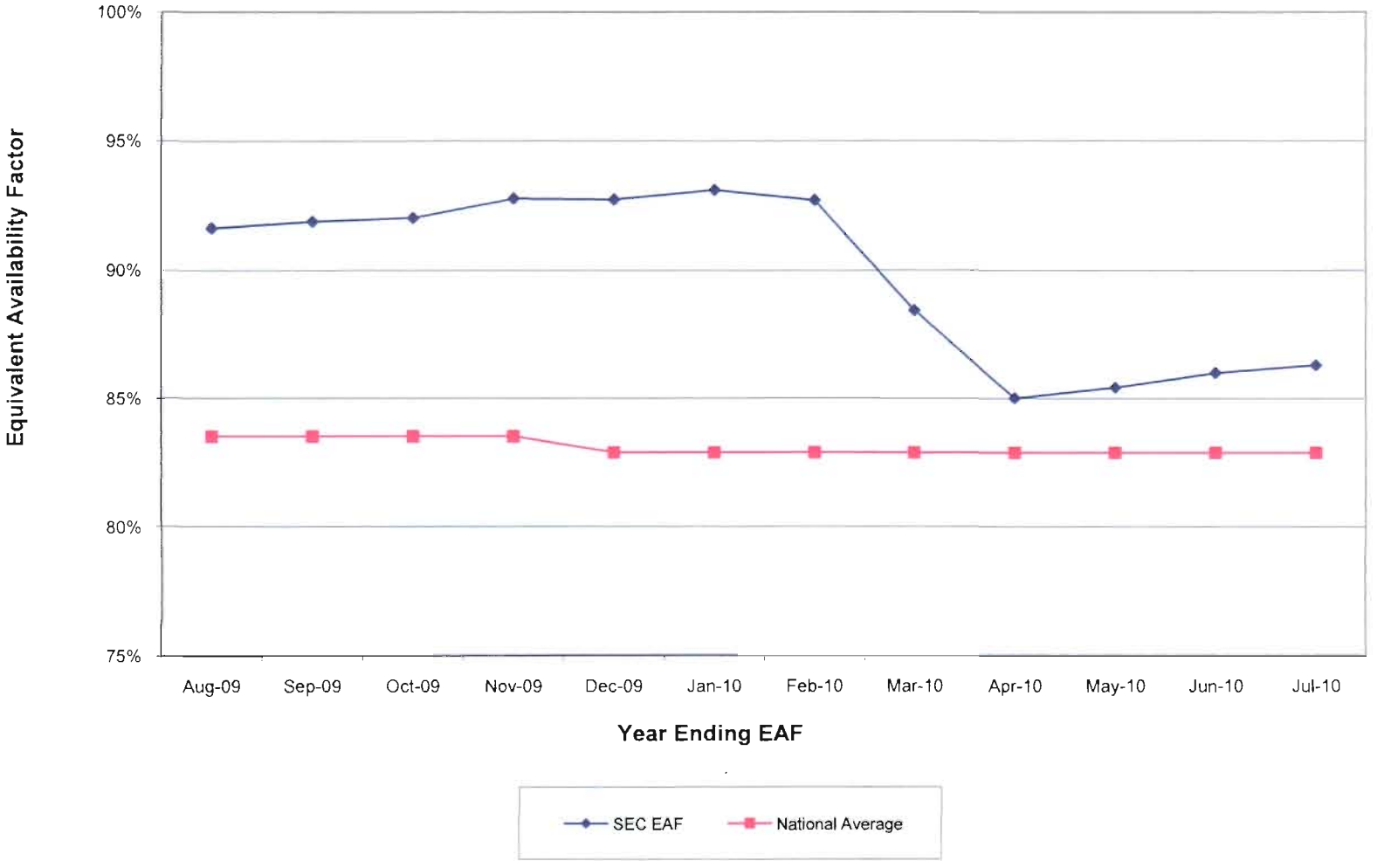

Figure 5. SEC Unit 1 4-Hr Average Input > 4,286 mBtu/hr
1997 Year

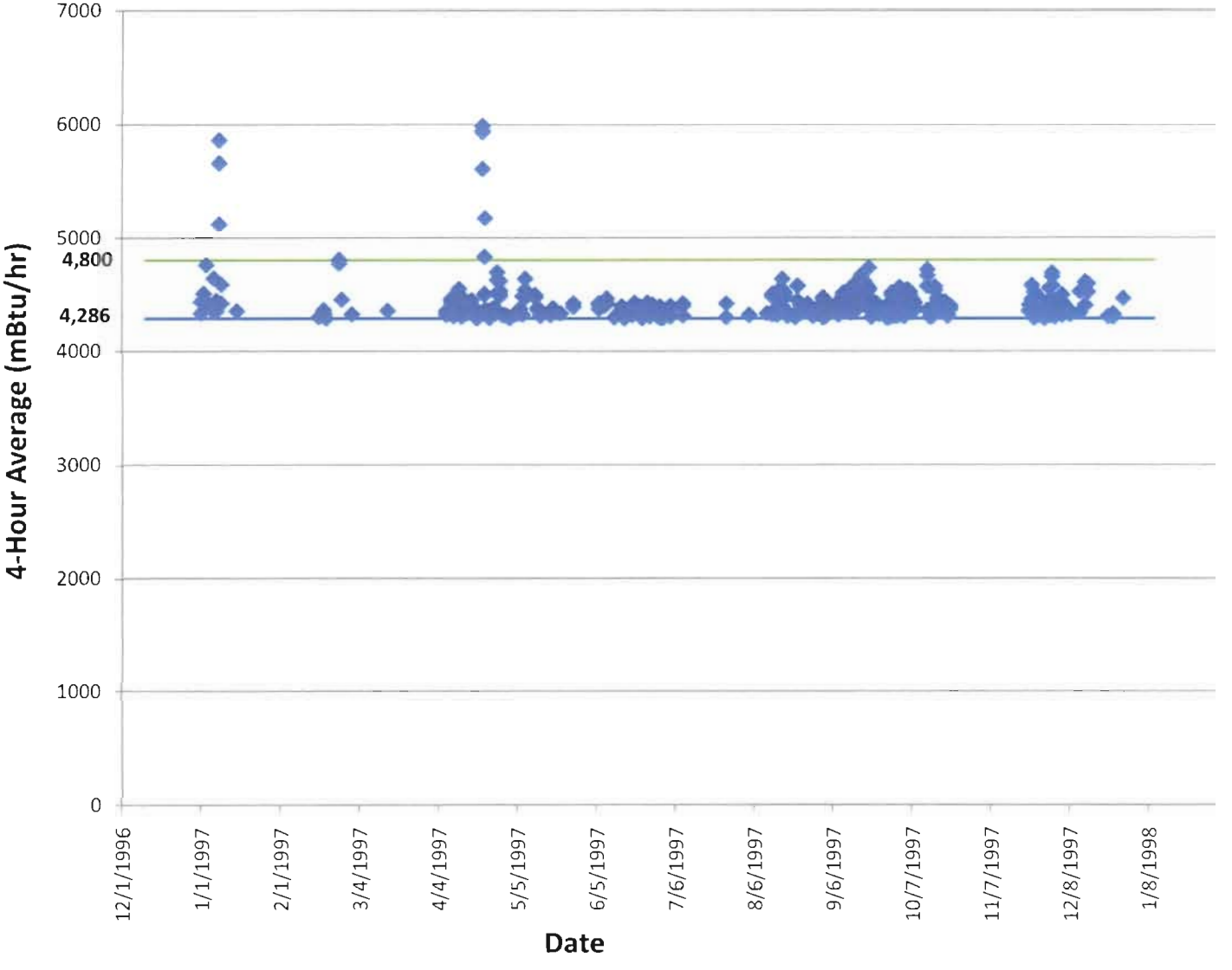

Figure 6. SEC Unit 2 4-Hr Average Input > 4,286 mBtu/hr
1997 Year

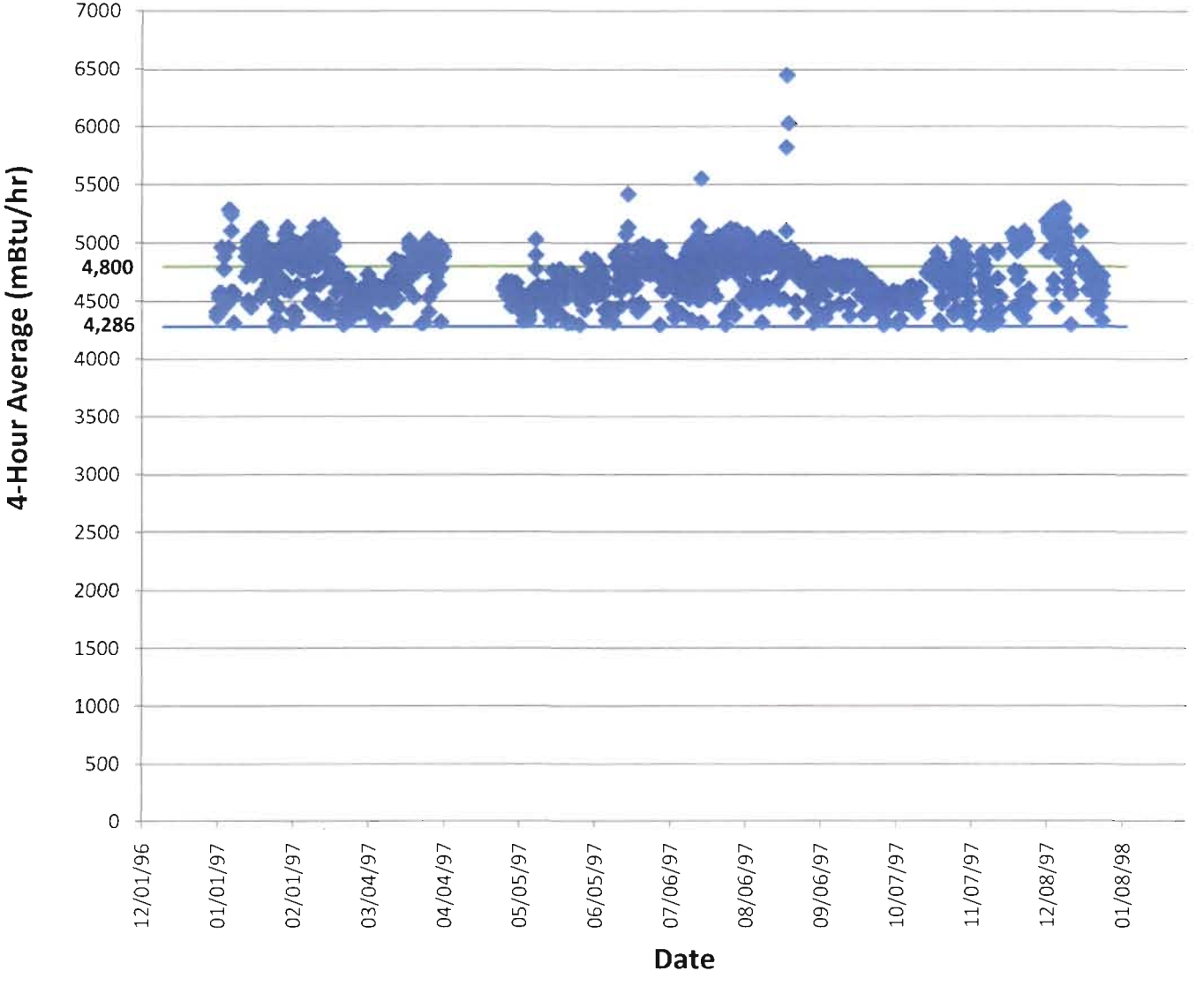

Figure 7. SEC Unit 1 CEMS 4-Hr Block Input > 4,715 Mbtu/Hr
January 1, 2009 - September 21, 2010

4-Hr Time Frame	4-hr Avg. Output (MWe)	4- hr Avg. Input (Mbtu/Hr)
12/19/09 8:00 - 12/19/2009 11:00	451.00	4,731.00
12/19/09 20:00 - 12/19/2009 23:00	449.75	4,732.53
1/12/10 8:00 - 1/12/2010 11:00	434.75	4,717.03
2/21/10 0:00 - 2/21/2010 3:00	444.00	4,764.05
2/21/10 4:00 - 2/21/2010 7:00	447.50	4,750.50
2/22/10 0:00 - 2/22/2010 3:00	443.50	4,724.85
2/22/10 4:00 - 2/22/2010 7:00	447.75	4,741.90
2/22/10 12:00 - 2/22/2010 15:00	444.50	4,751.38
2/22/10 16:00 - 2/22/2010 19:00	445.25	4,749.15
2/22/10 20:00 - 2/22/2010 23:00	446.50	4,751.90
2/23/10 0:00 - 2/23/2010 3:00	445.00	4,793.63
2/23/10 4:00 - 2/23/2010 7:00	446.75	4,760.88
2/23/10 8:00 - 2/23/2010 11:00	446.75	4,764.50
2/23/10 16:00 - 2/23/2010 19:00	443.50	4,753.90
2/23/10 20:00 - 2/23/2010 23:00	446.00	4,749.75
2/24/10 0:00 - 2/24/2010 3:00	446.75	4,820.93
2/24/10 4:00 - 2/24/2010 7:00	447.25	4,756.63
2/24/10 8:00 - 2/24/2010 11:00	447.00	4,750.73
2/24/10 12:00 - 2/24/2010 15:00	444.50	4,766.00
2/24/10 16:00 - 2/24/2010 19:00	445.25	4,800.55
2/24/10 20:00 - 2/24/2010 23:00	447.00	4,756.80
2/25/10 0:00 - 2/25/2010 3:00	444.50	4,786.00
2/25/10 4:00 - 2/25/2010 7:00	446.50	4,763.80
2/25/10 8:00 - 2/25/2010 11:00	445.75	4,723.20

Notes:
1. Heat input reflects unbiased values from July 1, 2008 through May 31, 2009.

Figure 8. SEC Unit 2 CEMS 4-Hr Input > 4,715 Mbtu/Hr
January 1, 2009 - September 21, 2010

4-Hr Time Frame	4-hr Avg. Output (MWe)	4-hr Avg. Input (Mbtu/Hr)
3/10/10 8:00 - 3/10/2010 11:00	452.50	4717.05
8/21/2010 4:00 - 8/21/2010 7:00	330.25	5473.03

Notes:
1. Heat input reflects unbiased values from July 1, 2008 through May 31, 2009.

Table 1. SEC Unit 1 Capital Projects

Capital Projects	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Air Compressors Controls Replacement												√		
Auxiliary Electrical System Replacements												√	√	√
Boiler Tubes- SSH Outlet Tube Bank									√					
Bottom Ash Controls								√	√					
Bottom Ash Seal Strt Replacement									√					
Burner Elevation Replacement	Prior to new LowNOx burners									√				
Burner Perf Plate Maintenance														√
CEMS Upgrade - Analyzers and DAS									√					
Chimney Drainage System													√	√
Chimney Interior Liner														√
Chimney Interior Liner Band Replacement										√				
Chimney Repair						√								
Coal Conveyors													√	
Coal Conveyors - Gravity Take-up Modifications												√		
Comm Sys Upgrade - Sub 17 & SEC U1									√					
Concrete Pad Under Hoppers									√					
Condensate Polisher Controls										√				
Data Acquis & Coord Cntlr Sys						√								
Economizer Hopper Level Replacement										√				
Fire Protection System Replacement													√	
Fire Protection System Replacement - Turbine														√
Fly Ash Control Panel Replacement								√	√					
Hot End Sonic Horns									√					
Install PA Air Side Static Seals									√					
Low NOx Burner & OFA System CAIR												√	√	
Main Control Sys & Motor Control PLC's							√							
Mercury Monitoring System- CEMS											√	√	√	
Mist Eliminator Vanes Replacement														√
O2 Outlet Grid Expansion (8 probes)								√	√					
Ovation System Replacement - NERC Compliance														√
Ovation Turbine Controls Replacement							√	√	√					
Precip Controls Replacement									√					
Precip Hopper Level System Replacement					√									
Primary Superheat Tube Banks									√					
Pulverizer Rotating Throat Mods										√	√	√		
Reaction Tank Absorber Seals						√	√	√	√					
Re-Line Inlet Duct					√									
Replace Air Htr Hot End Baskets									√					
Replace Asbestos Arc Quenchers	√													
Replace Bushings on GSU/RATs 1 & 2		√	√											
Replace Chessel Indicators				√										
Replace Forney Operator Interface		√												
Replace Jordan Drives									√					
Replace Rubber Lining									√					
Scrubber - Forced Oxidation												√	√	
Scrubber Controls										√	√	√		
Scrubber Inlet Duct Re-Line (Mod B)											√			
Sludge Conditioning Controls										√				
Soot Blower Controls										√				
Sootblower Replacement Unit 1										√				
Spare Gearbox Input Shafts For MAG CPLGS									√					
Turbine Generator - Hydrogen Coolers														√
Turbine Lube Oil System								√						
Turbine Valves Upgrade														√
Turbine Vibration Monitoring Sys			√											
Unit 1 Interc. Valve and RHSV Modification			√											
Upgrade Additive Feed Piping								√						
Upgrade Bottom Ash Controls			√											
Upgrade CEM for Unit 1			√	√										
Replace Fly Ash Controls			√											
Replace Stack Feeders			√	√										
Replace UPS, Static Switchs, Reliable Pwr Units										√	√			
Vitec Vibration Detection System								√						
Voltage Regulator								√						

Notes

1. 1997-2002 capital values from excel file provided by OUC titled "CAP2002to2012Detailrev12.xls"
2. 2003 capital values from excel file provided by OUC titled "cap 10yr 2004 new and past detail1.xls"
3. 2004 and 2005 capital values from excel file provided by OUC titled "cap10yr2005sec.rp rev 16a.xls"
4. 2006 capital values from excel file provided by OUC titled "cap10yr2006sec.rp rev10.xls"
5. 2007 capital values from excel file provided by OUC titled "cap10yr2007sec.rp.stc.pwrmkt rev6.xls
6. 2008 capital values from excel file provided by OUC titled "cap10yr2008 sec.rp.stc.pwrmkt rev 13 final dwayne campbell.xls"
7. 2009 capital values from excel file provided by OUC titled "2009 adopt oper budg prbu cap - rev2.pdf"
8. 2010 capital values from excel file provided by OUC titled "cap10yr2010-04.24.09 from downtown.xls"

H:\PROJECTS\2010proj\10389500 OUC SEC Heat Input\Correspondence\RAI Response\[SEC Capital Proj List.xls]Unit_1

Table 2. SEC Unit 2 Capital Projects

CAPITAL PROJECTS	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Scrubber Outlet Duct Reweld				√										
Acid feed to cooling tower										√				
Air Compressors Controls Replacement												√		
Air Heater Baskets (Complete Set w/ enamel)					√	√								
Air Heater Mods- Basket removal/Circum Seal										√				
Air Htr Exp Joints											√			
Air Htr Sootblower/Platform Additions										√				
Air Preheat Coils Replacement													√	
Auxiliary Electrical System Replacements CAIR													√	√
BFPT Control System Replacement									√					
Biocide System for Cooling Tower								√						
Boiler - Waterwall Panels													√	√
Bottom Ash Seal Skirt Replacement								√						
Burner Management System Replacement									√					
Burner Perf Plate Replacement														√
CEMS Upgrade - Analyzers and DAS									√					
Door -PA Inlet Duct For Maint								√						
EPRI Ammonia Monitor				√										
FD Fan Rotor Spare						√								
Foxboro I/A Operator Work Stations									√					
Install PA Air Side Static Seals								√						
Low NOx Burners & OFA System CAIR												√		
Mercury Monitoring System- CEMS												√		
Scrubber Outlet Duct Wallpaper					√									
Mist Eliminator Replacement / M.E. Wash System				√										
Modify Electromatic Relief Valve			√											
New MBValve-5 Replacement					√									
NH3 Flow Skid											√			
O2 Outlet Grid Expansion									√					
Ovation System Replacement - NERC Compliance														√
Ovation Turbine Controls Replacement							√							
PA flow meters - venturi type										√				
Precip Controls Replacement									√					
Primary Superheat Tube Banks									√					
CO Monitors Replacement											√			
Pulverizer Rotating Throat Replacement												√		
Rubber Line Spray Headers										√	√			
SCR Catalyst			√		√	√					√			
Scrubber - Damper Seals Replacement													√	√
Scrubber - Forced Oxidation												√	√	
Scrubber Inlet Ducts Wallpaper											√			
Secondary Superheat Tubes												√		
Sootblower Controls									√					
Sootblower Replacements Unit 2										√				
Upgrade Additive Feed Piping									√					
Upgrade CEM for Units 1 & 2			√											
Replace MAG Flow Meters				√										
Visual Annunciator System Replacement									√					
Waterwall Tube Weld Overlays					√									

Notes:

1. 1997-2002 capital values from excel file provided by OUC titled "CAP2002to2012Detailrev12.xls"
2. 2003 capital values from excel file provided by OUC titled "cap 10yr 2004 new and past details.xls"
3. 2004 and 2005 capital values from excel file provided by OUC titled "cap10yr2005sec.irp rev 16a.xls"
4. 2006 capital values from excel file provided by OUC titled "cap10yr2006sec.irp rev10.xls"
5. 2007 capital values from excel file provided by OUC titled "cap10yr2007sec.irp.stc.pwrmktrev6.xls
6. 2008 capital values from excel file provided by OUC titled "cap10yr2008 sec.irp.stc.pwrmkt-rev 13 final dwayne campbell.xls"
7. 2009 capital values from excel file provided by OUC titled "2009 adopt oper budg prbu cap - rev2.pdf"
8. 2010 capital values from excel file provided by OUC titled "cap10yr2010-04.24.09 from downtown.xls"

H:\PROJECTS\2010proj\10389500 OUC SEC Heat Input\Correspondence\RAI Response\[SEC Capital Proj List.xls]Unit_2

REVISED 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 *	2,371	2,139	4,510
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	69,380,666
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 initial testing emission factor for Unit 2 (0.130 lb/mmBtu) a

Reviewed by:
Reviewed on:

REVISED 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 *	2,030	2,263	4,293
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	66,053,774
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 initial testing emission factor for Unit 2 (0.130 lb/mmBtu) a

Reviewed by:
Reviewed on:

REVISED 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 *	2,095	2,045	4,140
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	63,685,263
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 initial testing emission factor for Unit 2 (0.130 lb/mmBtu) a

REVISED 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 *	1,997	1,878	3,875
NO_x	5,866	2,271	8,137
PM	123	72	195
PM_{10}	123	72	195
SO_2	3,933	2,083	6,016
VOC	15	14	30

Heat Input ** (mmBtu/yr)	30,722,077	28,895,806	59,617,884
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 initial testing emission factor for Unit 2 (0.130 lb/mmBtu) ar

Reviewed by:
Reviewed on:

REVISED 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*	1,125	1,004	2,128
NO_x	4,779	2,302	7,081
PM	47	70	117
PM_{10}	47	70	117
SO_2	2,415	1,951	4,366
VOC	16	14	30

Heat Input ** (mmBtu/yr)	31,462,117	28,070,274	59,532,391
Capacity Factor (%)	84	75	80

* The CO CEMs were certified on Unit 1 on 1/21/09 and on Unit 2 on 10/21/08.

Reviewed by:
Reviewed on:

REVISED 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	4,510	4,293	4,140	3,875	2,128	4,402	2005-2006
NO_x	10,033	8,985	8,581	8,137	7,081	9,509	2005-2006
PM	155	245	285	195	117	265	2006-2007
PM_{10}	155	245	285	195	117	265	2006-2007
SO_2	8,838	8,125	6,468	6,016	4,366	8,482	2005-2006
VOC	35	33	32	30	30	34	2005-2006

Heat Input (mmBtu/yr)	69,380,666	66,053,774	63,685,263	59,617,884	59,532,391	67,717,220	2005-2006
Capacity Factor (%)	93	88	85	78	80	90	2005-2006

Reviewed by:
Reviewed on:

Golder Associates

Gibson, Victoria

From: Gibson, Victoria
Sent: Wednesday, October 06, 2010 10:35 AM
To: Rustin, Jeff; 'Kasper, John'; 'forney.kathleen@epa.gov'; 'dee_morse@nps.gov'; 'catherine_collins@fws.gov'
Cc: Bull, Robert; Walker, Elizabeth (AIR)
Subject: FW: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC

Follow Up Flag: Follow up
Flag Status: Flagged

Hi,

This is a copy of what I sent out yesterday, however the Received In House date is now corrected to 9/30/10. Please use this e-mail and delete the one from yesterday.

Thank you.

Vickie

Victoria Gibson, Administrative Secretary for
Trina Vielhauer, Chief, Bureau of Air Regulation
Division of Air Resource Management
victoria.gibson@dep.state.fl.us
850-921-9504 fax 850-921-9533

From: Gibson, Victoria
Sent: Tuesday, October 05, 2010 5:53 PM
To: Rustin, Jeff; 'Kasper, John'; 'forney.kathleen@epa.gov'; 'dee_morse@nps.gov'; 'catherine_collins@fws.gov'
Cc: Bull, Robert; Walker, Elizabeth (AIR)
Subject: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC

CORRESPONDENCE has been received at the FL Department of Environmental Protection Div. of Air Resource Management and is currently under review.

Link to Permit Application Documents:

http://arm-permit2k.dep.state.fl.us/psd/0950137/000052B1.pdf

ARMS PA Project ID:	0950137-032-AC
Facility Name:	Orlando Utilities Commission – Stanton Energy Center
Florida County:	Orange County
Project Description:	Units 1 & 2 Permit Modifications
Permit Application Processor:	Robert Bull
Processor Phone:	(850) 921-7744

Processor Email Address:	Robert.Bull@dep.state.fl.us
Received in-house:	9/30/10

Please direct any questions regarding this correspondence to the permit application processor. If you have any problems accessing these documents please let me know.

Thanks,

Vickie

Victoria Gibson, Administrative Secretary for
Trina Vielhauer, Chief, Bureau of Air Regulation
Division of Air Resource Management
victoria.gibson@dep.state.fl.us
850-921-9504 fax 850-921-9533

Gibson, Victoria

From: Microsoft Exchange
To: Rustin, Jeff
Sent: Wednesday, October 06, 2010 11:09 AM
Subject: Delivered: FW: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC

Your message has been delivered to the following recipients:

Rustin, Jeff

Subject: FW: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC

Sent by Microsoft Exchange Server 2007

Gibson, Victoria

From: Microsoft Exchange
To: 'Kasper, John'
Sent: Wednesday, October 06, 2010 11:09 AM
Subject: Relayed: FW: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC

Delivery to these recipients or distribution lists is complete, but delivery notification was not sent by the destination:

'Kasper, John'

Subject: FW: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC

Sent by Microsoft Exchange Server 2007

Gibson, Victoria

From: Mail Delivery System [MAILER-DAEMON@mseive02.rtp.epa.gov]
To: forney.kathleen@epa.gov
Sent: Wednesday, October 06, 2010 11:09 AM
Subject: Relayed: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC

Delivery to these recipients or distribution lists is complete, but delivery notification was not sent by the destination:

forney.kathleen@epa.gov

Subject: FW: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC

dee Morse

From: Dee_Morse@nps.gov
Sent: Wednesday, October 06, 2010 6:18 PM
To: Gibson, Victoria
Subject: FW: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC

Return Receipt

Your document:	FW: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC
was received by:	Dee Morse/DENVER/NPS
at:	10/06/2010 04:17:49 PM MDT

Gibson, Victoria

From: Catherine_Collins@fws.gov
Sent: Thursday, October 07, 2010 12:03 PM
To: Gibson, Victoria
Subject: FW: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC

Return Receipt

Your document: FW: Orlando Utilities Commission - Orlando Energy Center 0950137-032-AC
was received by: Catherine_Collins@fws.gov
at: 10/07/2010 10:03:08 AM