



CALPINE CORPORATION

717 TEXAS AVENUE, SUITE 1000
HOUSTON, TX 77002

May 28, 2010

Federal Express Number:
7987 0523 2456

Jonathan Holtom; P.E.
Administrator—Title V
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399
850- 921-9531

RECEIVED

JUN 01 2010

**BUREAU OF
AIR REGULATION**

**RE: Request for Permit Modification
Santa Rosa Energy Center
Facility ID: 1130168**

Dear Mr. Holtom:

*1130168-009-AC / PSD-FL-253B
1130168-010-AV*

The Santa Rosa Energy Center, located in Santa Rosa County, consists of one natural gas-fired combined cycle combustion turbine with an unfired heat recovery steam generator, a wet mechanical draft cooling tower, and a small natural gas preheater. On May 20th, 2010 a permit modification request was sent to Jeff Koerner, FDEP Administrator of New Source Review. Per subsequent discussions with Bobby Bull, FDEP New Source Review Section, the Facility is requesting the concurrent processing of a Title V and Air Construction Permit modification. A description of the proposed modification and a copy of the initial request is provided in Appendix A.

Thank you for taking the time to review these requested modifications. Please contact Heidi M. Whidden at (713) 570-4829 or hwhidden@calpine.com if you have further questions, concerns, or require additional information.

Sincerely,
Calpine Operating Services Company, Inc.

Jason M. Goodwin, P.E.
Director - Environmental, Health & Safety
East Region Operations
On behalf of Santa Rosa Energy Center, LLC

CC: Bobby Bull; Florida DEP—Tallahassee (email)
Heidi Whidden; Calpine (email)
Dana McNally; Calpine (email)
Jeff Harmon; Calpine (email)
File:



Department of Environmental Protection

RECEIVED

JUN 01 2010

BUREAU OF AIR REGULATION

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: Santa Rosa Energy Center, LLC	
2. Site Name: Santa Rosa Energy Center	
3. Facility Identification Number: 1130168	
4. Facility Location... Street Address or Other Locator: 5001 Sterling Way City: Pace County: Santa Rosa Zip Code: 32571	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Heidi M. Whidden	
2. Application Contact Mailing Address... Organization/Firm: Calpine Corporation Street Address: C/O EHS Department; 717 Texas Avenue Suite 1000 City: Houston State: TX Zip Code: 77002	
3. Application Contact Telephone Numbers... Telephone: (713) 570 - 4829 ext. Fax: () - Please Email	
4. Application Contact E-mail Address: hwhidden@calpine.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s):	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

- 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

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
001	One nominal 167 megawatt gas combined-cycle combustion turbine-electrical generator with heat recovery steam generator	NA	NA
003	Un regulated emissions unit/activities—Wet Mechanical Draft Cooling Tower	NA	NA

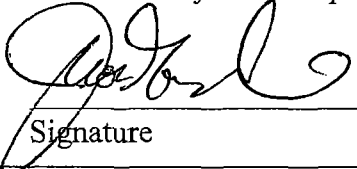
Application Processing Fee

Check one: Attached - Amount: \$ _____ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

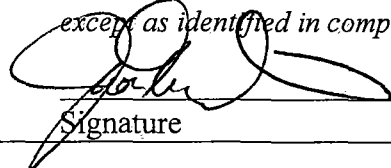
Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name : Jason M. Goodwin; Director—Environmental, Health & Safety
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Calpine Corporation Street Address: 717 Texas Ave. Suite 1000 City: Houston State: TX Zip Code: 77002
3. Owner/Authorized Representative Telephone Numbers... Telephone: (713) 570 - 4795 ext. Fax: () - Please Email
4. Owner/Authorized Representative E-mail Address: jgoodwin@calpine.com
5. Owner/Authorized Representative Statement: <i>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.</i>  _____ Signature 5/27/10 _____ 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: Jason M. Goodwin
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> 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. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input checked="" type="checkbox"/> The designated representative at an Acid Rain source or CAIR source.—Alternate
3. Application Responsible Official Mailing Address... Organization/Firm: Calpine Corporation Street Address: 717 Texas Ave. Suite 1000 City: Houston State: TX Zip Code: 77002
4. Application Responsible Official Telephone Numbers... Telephone: (713) 570 - 4795 ext. Fax: () - Please Email
5. Application Responsible Official E-mail Address: jgoodwin@calpine.com
6. Application Responsible Official Certification: <i>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.</i>  Signature Date: 5/27/10

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Jason M. Goodwin Registration Number: 70992
2. Professional Engineer Mailing Address... Organization/Firm: Calpine Corporation Street Address: 717 Texas Avenue, Suite 1000 City: Houston State: TX Zip Code: 77002
3. Professional Engineer Telephone Numbers... Telephone: (713) 570 - 4795 ext. Fax: () - Please Email
4. Professional Engineer E-mail Address: jgoodwin@calpine.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <p>(1) <i>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</i></p> <p>(2) <i>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.</i></p> <p>(3) <i>If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, 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.</i></p> <p>(4) <i>If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, 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 <input type="checkbox"/>, 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.</i></p> <p>(5) <i>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 <input type="checkbox"/>, 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.</i></p>
<p>Signature:  (seal)</p> <p>Date: <u>5/27/10</u></p>

* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 16 East (km) 488974 North (km) 3381.526		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 30° 33' 58.3" Longitude (DD/MM/SS) 87° 06' 54.1"	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4931
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Jeff Harmon – Plant Engineer
2. Facility Contact Mailing Address... Organization/Firm: Calpine Corporation Street Address: 5001 Sterling Way City: Pace State: FL Zip Code: 32571
3. Facility Contact Telephone Numbers: Telephone: (850) 995 - 2135 ext. Fax: () - Please Email
4. Facility Contact E-mail Address: harmonje@calpine.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: Dana McNally – General Manager
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Calpine Corporation Street Address: 5001 Sterling Way City: Pace State: FL Zip Code: 32571
3. Facility Primary Responsible Official Telephone Numbers... Telephone: (850) 995 - 2125 ext. Fax: () - Please Email
4. Facility Primary Responsible Official E-mail Address: Dana.McNally@calpine.com

FACILITY INFORMATION

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. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	
<p>The Santa Rosa Energy Center Combustion Turbine (EU001) is subject to New Source Performance Standard (NSPS) Subpart GG, Standards or Performance for Stationary Gas Turbines.</p>	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

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

FACILITY INFORMATION

B. EMISSIONS CAPS

Not Applicable

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:

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION

Not Applicable

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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____
2.	Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____
3.	Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____

Additional Requirements for Air Construction Permit Applications

1.	Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility)
2.	Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input checked="" type="checkbox"/> Attached, Document ID: Attachment A
3.	Rule Applicability Analysis: <input type="checkbox"/> Attached, Document ID: _____
4.	List of Exempt Emissions Units: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)
5.	Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
6.	Air Quality Analysis (Rule 62-212.400(7), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
7.	Source Impact Analysis (Rule 62-212.400(5), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
8.	Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9.	Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10.	Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)
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Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities: (Required for initial/renewal applications only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan: (Required for all initial/revision/renewal applications) <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment B</u> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Equipment/Activities Onsite but Not Required to be Individually Listed <input checked="" type="checkbox"/> Not Applicable
5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
6. Requested Changes to Current Title V Air Operation Permit: <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment A</u> <input type="checkbox"/> Not Applicable

FACILITY INFORMATION

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: 9/5/07
 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: 5/7/08
 Not Applicable (not a CAIR source)

Additional Requirements Comment

EMISSIONS UNIT INFORMATION

Section [] of []

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [] of []

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Combined Cycle Combustion Turbine

3. Emissions Unit Identification Number: 001

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A	NA	NA	49

8. Federal Program Applicability: (Check all that apply)

Acid Rain Unit

CAIR Unit

9. Package Unit:

Manufacturer: General Electric Model Number: GE7FA

10. Generator Nameplate Rating: 167 MW (Nominal)

11. Emissions Unit Comment:

EMISSIONS UNIT INFORMATION

Section [] of []

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description: Dry Low NOx Burners
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Appendix A
Description of Proposed Modification
Initial Letter Submittal Describing Modification

Appendix B
Compliance Report and Plan

Attachment B
Compliance Report and Plan

Each emission unit is in compliance with the applicable requirements and will continue to comply. This modification is intended to clarify permit conditions and ensure ongoing compliance.



CALPINE CORPORATION

717 TEXAS AVENUE, SUITE 1000
HOUSTON, TX 77002

May 20, 2010

Federal Express Number:
7935 6091 8425

Jeff Koerner, P.E.
Administrator—New Source Review
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399
850-921-9536

**RE: Request for Permit Modification - Santa Rosa Energy Center
Pace, Santa Rosa County, Florida – Facility ID: 1130168**

Dear Mr. Koerner:

The Santa Rosa Energy Center (the Facility), located in Santa Rosa County, consists of one natural gas-fired combined cycle combustion turbine with an unfired heat recovery steam generator, a wet mechanical draft cooling tower, and a small natural gas preheater. The Facility is owned by Santa Rosa Energy Center, LLC and operated by Calpine Operating Services Company, Inc. (Calpine).

Minor amounts of operation occurred at the Facility prior to 2009. Since July 1, 2009 the Facility has experienced an increase in operation, which has motivated a request to revise several permit clarifications from the Florida Department of Environmental Protection (Florida DEP). On behalf of Santa Rosa Energy Center, LLC, Calpine is seeking to revise the Facility's PSD and/or Title V permits to include these clarifications.

After discussions with Bobby Bull of your office, it was decided to submit this request to the New Source Review Section and allow the Florida DEP to determine if a concurrent Title V revision is required. Please accept this letter as a formal request for minor modifications to the PSD and/or Title V permit as the Florida DEP sees fit. No increase in the permitted emission limits is being requested. The requested modifications include:

- Clarification of 24-hour block average calculation;
- Removal of 40 CFR Part 75 missing data substitution requirement for concentration emissions;
- Clarification of start-up and shut-down definitions; and
- CEMS QAQC Requirements

Note: No SCR or Duct Burners were installed at the Facility; therefore, Calpine has struck the non-applicable language. This equipment and associated conditions are not included in the current Title V Permit.

24-hour Block Average Calculation

PSD Permit Section III (21) Bullet 1 (equivalent to Condition A.11 Bullet 1 of the Title V Permit) provides the following requirement:

"The concentration of NOx in the stack exhaust gas, with the combustion turbine operating and the duct burner on shall not exceed 9.8 ppmvd at 15% O2(24-hr block average), and with the combustion turbine operating and the duct burner off shall not exceed 9 ppmvd at 15% O2 (24-hour block average). Emissions of NOx in the stack exhaust gas (at ISO condition,) with the combustion turbine operating shall not exceed 106 pounds per hour (lb/hr) with the duct burner on and 64.1 lb/hr with the duct burner off to be demonstrated by initial stack test. [40CFR60 Subpart GG, Subpart Da and Rule 62-212.400, F.A.C.]"

PSD Permit Section III (32) (equivalent to Condition A.20 of the Title V Permit) provides the following requirement:

"Continuous compliance with the NOx emission limits: Continuous compliance with the NOx emission limits shall be demonstrated with the CEM system based on the applicable averaging time of 24-hr block average (DLN) or a 3-hr average (if SCR is used). Based on CEMS data, a separate compliance determination is conducted at the end of each operating day (or 3-hr period when applicable) and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous operating day (or 3-hr period when applicable). Valid hourly emission rates shall not include periods of start up, shutdown, or malfunction unless prohibited by 62-210.700 F.A.C. A valid hourly emission rate shall be calculated for each hour in which at least two NOx concentrations are obtained at least 15 minutes apart. These excess emissions periods shall be reported as required in Condition 29. [Rules 62-4.070 F.A.C., 62-210.700, F.A.C., 40 CFR 75 and BACT]"

During previous discussions with Florida DEP's Northwest District Office there was confusion as to the term "24-hour block average". This confusion has been cleared up and confirmed with Florida DEP's Tallahassee Office to mean the average of data between midnight and midnight (see Appendix A). No rolling average is required.

Additional discussions during a 2005 NOV resolution meeting held at the Southwest District office with Chris Bradley, formerly of the Florida DEP, indicated that any data collected during operation in excess of the start-up, shutdown, and malfunction time limits is to be included in the 24-hour NOx compliance determination. Exceedance of the start-up, shutdown, and malfunction time limits does not represent a permit deviation, unless use of the data in the 24-hour NOx compliance determination results in an excess of the permit limit (9 ppmvd @ 15% O2).

Calpine requests the Florida DEP provide clarification to this permit condition and suggests the following additional language be added to PSD Permit Section III (32)):

“... Based on CEMS data, a separate compliance determination is conducted at the end of each operating day (midnight). The compliance determination shall be the arithmetic average of all valid hourly emission rates from the previous operating day collected from midnight to midnight. Valid hourly emission rates shall not include periods of startup, shutdown, or malfunction, which are excused under Condition 27, unless prohibited by Rule 62-210.700 F.A.C. A valid hourly emission rate shall be calculated for each hour in which at least two NOx concentrations are obtained at least 15 minutes apart. These excess emissions periods shall be reported as required in Condition 29.”

Missing Data Substitution

PSD Permit Section III (21) Bullet 4 (equivalent to Condition A.11 Bullet 4 of the Title V Permit) provides the following requirement:

“When NOx monitoring data are not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate any specified averaging time.”

40 CFR Part 75 Missing Data Procedures are applicable only to calculations of NOx on a lb/mmBtu emission rate basis. Calculation of NOx on a concentration basis is not addressed by this regulation. In addition, Subpart GG (concentration based) specifies that Part 75 monitoring procedures are acceptable, with the exception of missing data. Missing data is to be excluded from the data averages and reported as monitor downtime.

During 2006 permit discussions concerning the Osprey Energy Center (105221-009-AV), Florida DEP recognized the inappropriateness of using Part 75 missing data substitution on concentration averages. The final permit modification filed March 10, 2006, modified Osprey Energy Center's previous like permit condition to read:

“When NOx monitoring data is not available, substitution for missing data shall be handled as required by Title IV(40 CFR 75) to calculate any specified averaging time. Part 75 missing data, start up and shut down emissions as defined in Condition 30 of this permit will not be included in the daily ppmvd averages.”

The Facility is only limited to NOx on a daily ppmvd average basis. Since there is no applicable lb/mmBtu limit that would be addressed by Part 75's missing data substitution provisions, Calpine requests this condition be deleted from the Facility's permits.

Start-up and Shut-down Definitions

PSD Permit Section III (27) (equivalent to Condition A.15 of the Title V Permit) provides the following requirement:

“Excess emissions resulting from start-up, shut-down, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period except during either “cold start-up” to or shutdowns from, cogeneration plant operation. During cold start-up to combined cycle operation up to four hours of excess emissions are allowed. During shutdowns from combined-cycle operation, up to three hours of excess emissions are allowed. Cold start-up is defined as startup to combined-cycle operation following a complete shutdown lasting at least 48-hours.”

As confirmed in Appendix A, previous conversations with the Florida DEP has confirmed that the start-up, shut-down, and malfunction exclusions apply daily and not on a rolling 24-hour period. If the exclusions were applied on a rolling 24-hour period, a unit would not be allowed to start up at 6:00 am on Day 1 and then restart at 4:00 am on Day 2. Use of a rolling exclusion was never the intent of the permit application and would cause significant operational impacts. In addition the Florida DEP has previously confirmed (see Appendix B) that the Facility may exclude startup, shutdown, and malfunction data on a minute basis.

Additional conversations with the Florida DEP (see Appendix C) have clarified the definition of cold startup to allow for operation at less than stable load in the 48-hour “no-operation” window. The “cold start” 4-hour exclusion is intended to allow for the Facility to come up to temperature and run properly. In the event the Facility starts under cold start conditions and trips prior to the lowest stable load, the Facility has not been properly heated to allow for a next day start-up under the “hot” start allocation of 2-hours. GE defines the lowest stable load normal operation as Mode 6.

Furthermore, this Condition uses cogeneration plant operation and combined-cycle operation interchangeably. In fact, the term “combined-cycle” describes the fundamental design of the facility, and “cogeneration” describes a mode of operation in which the Facility produces electric power as well as thermal energy in the form of process steam. Because these terms are not mutually exclusive, Calpine is requesting that the permit condition be revised accordingly.

Calpine requests the Florida DEP provide clarification to this permit condition and suggests the following additional language be added to PSD Permit Section III (27):

“... Excess emissions occurrences shall in no case exceed two hours (120 minutes) in any operating day except during either “cold start-up” to or shutdowns from, cogeneration and/or combined-cycle operation. During cold start-up to cogeneration and/or combined cycle operation up to four hours (240 minutes) of excess emissions

are allowed in any operating day. During shutdowns from cogeneration and/or combined-cycle operation, up to three hours (180 minutes) of excess emissions are allowed in any operating day. Cold start-up is defined as startup to cogeneration and/or combined-cycle operation following flame out of the combustion turbine with no Mode 6 operation in the interim for a minimum of 48-hours (2880 minutes). An operating day is defined as a day (midnight to midnight) that includes operation."

CEMS QAQC Requirements

PSD Permit Section III (44) (equivalent to Condition A.33 of the Title V Permit) provides the following requirement:

"Continuous Monitoring System Reports. The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62- 297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) or 40 CFR Part 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40 CFR 75. The monitoring plan, consisting of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62. [1130168-001-AC, Specific Condition 44.]"

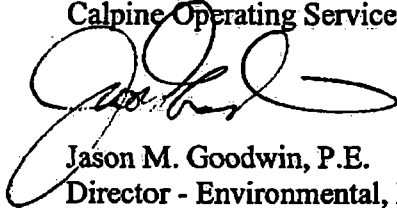
As confirmed through an email with Florida DEP (see Appendix D) and by multiple EPA determinations, a CEMS subject to both Part 60 and Part 75 requirements can satisfy both regulations by complying with Part 75 procedures. Per Errin Pichard, Florida DEP, the inclusion of Rule 62-297.520 is unnecessarily misleading. Calpine requests the citation be removed from the requirement and suggests the following language:

"Continuous Monitoring System Reports. The monitoring devices shall comply with certification requirements of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5), or 40 CFR Part 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40 CFR 75, as applicable. The monitoring plan, consisting of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62. [1130168-001-AC, Specific Condition 44.]"

Request for Permit Modification
Santa Rosa Energy Center
Facility ID: 1130168
Page 6 of 6

Thank you for taking the time to review these requested modifications. Please contact Heidi M. Whidden at (713) 570-4829 or hwhidden@calpine.com if you have further questions, concerns, or require additional information.

Sincerely,
Calpine Operating Services Company, Inc.



Jason M. Goodwin, P.E.
Director - Environmental, Health & Safety
East Region Operations
On behalf of Santa Rosa Energy Center, LLC

C: Bobby Bull; Florida DEP—Tallahassee (email)
Heidi Whidden; Calpine (email)
Dana McNally; Calpine (email)
Jeff Harmon; Calpine (email)
File: R:\Operations - East\Santa Rosa (SR)\Air\Applications & Correspondence

Appendix A

**Email Correspondence between Bruce Thomas, FDEP, and
Heidi Whidden, Calpine Operating Services Company, Inc.**

From: Jeffrey Harmon
To: Heidi Whidden
Subject: FW: Santa Rosa Energy Center Start-up Clarification
Date: Wednesday, May 05, 2010 2:53:07 PM

Jeff Harmon - Plant Engineer
Santa Rosa Energy Center Hog Bayou Energy Center
5001 Starling Way 1009 Paper Mill Road
Pace, FL 32571 Mobile, AL 36610
Office: (850) 985-2135 (251) 287-8331
Fax: (850) 985-2150 (251) 230-1083

From: Heidi Whidden
Sent: Tuesday, May 26, 2009 2:36 PM
To: Mary Anne Willhouse; Jeffrey Harmon; Dana McNally; Cade Hay
Subject: FW: Santa Rosa Energy Center Start-up Clarification

Here is the full conversation and final determination for the files. Thanks!

From: Thomas, Bruce X. [mailto:Bruce.X.Thomas@dep.state.fl.us]
Sent: Tuesday, May 26, 2009 3:34 PM
To: Heidi Whidden
Subject: RE: Santa Rosa Energy Center Start-up Clarification

That is correct.

From: Heidi Whidden [mailto:Heidi.Whidden@calpine.com]
Sent: Tuesday, May 26, 2009 3:32 PM
To: Thomas, Bruce X.
Cc: Jeffrey Harmon; Mary Anne Willhouse
Subject: RE: Santa Rosa Energy Center Start-up Clarification

Bruce,

To follow-up on our verbal conversation a few minutes ago... The set 24-hour period is midnight to midnight.

Thank you for your assistance!
Heidi

From: Thomas, Bruce X. [mailto:Bruce.X.Thomas@dep.state.fl.us]
Sent: Tuesday, May 26, 2009 3:27 PM
To: Heidi Whidden
Subject: RE: Santa Rosa Energy Center Start-up Calcification

Heidi,

I left you a message on your cell phone answering machine weeks ago. You are correct that the excursion limitations are based on a set 24 hour period. Sorry about the confusion. Bruce

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

From: Heidi Whidden [mailto:Heidi.Whidden@calpine.com]
Sent: Tuesday, May 26, 2009 3:20 PM
To: Thomas, Bruce X.
Subject: FW: Santa Rosa Energy Center Start-up Calcification

Bruce,

Has the Department has a chance to review this email?

Thanks!
Heidi

From: Heidi Whidden
Sent: Thursday, May 07, 2009 3:43 PM
To: Thomas, Bruce X.
Cc: Heidi Whidden; Mary Anne Willhouse; Jeffrey Harmon; Dana McNally
Subject: Santa Rosa Energy Center Start-up Calcification

Bruce,

The Santa Rosa Energy Center located in Pace, Florida is permitted as Facility 11030168. The Santa Rosa Energy Center is required to continuously monitor NOx with an onsite CEMS. No other pollutants are

directly analyzed and monitored with the CEMS. NOx is limited to 9 ppmvd at 15% O₂ on a 24-hour block average. Emissions excluded from the 24-hour NOx block average include up to 2-hours of non-cold start-up emissions (i.e. start-up under hot and warm conditions) and up to 4-hours of cold start-up emissions.

The CEMS has been programmed to track start-up exclusions from midnight to midnight. At midnight the start-up tracker is reset to zero and counting resumes. Under this tracking strategy a unit could start-up at 6 a.m. on Day 1 and then start-up at 4 a.m. on Day 2 (each receiving their own start-up allowance). Initial permitting activities surrounding start-up revolved around the concept that the start-up excursion limitations were based on a set, not on a rolling, 24-hour period. In addition, the facility believes it is an appropriate application due to the NOx limit being based on a block average.

A recent review of the start-up limitations in the permit for Santa Rosa Energy Center identified the word 'any' in the following permit requirement.

A.15 Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period except during either "cold start-up" to, or shutdowns from, cogeneration plant operation. During cold start-up to combined cycle operation, up to four hours of excess emissions are allowed. During shutdowns from combined-cycle operation, up to three hours of excess emissions are allowed. Cold start-up is defined as a startup to combined-cycle operation following a complete shutdown lasting at least 48 hours.

The permit language could appear to indicate that the start-up limitations are based on 24-hour rolling period. Under this tracking strategy a unit could start-up at 6 a.m. on Day 1 but not able to start-up at 4 a.m. on Day 2. Operation would have to cease till 6 a.m. on Day 2.

Santa Rosa requests that the Department provide clarification on this issue.

Thank you for your assistance,

Heidi M. Whidden

Manager--EHS

(713) 570-4829 (Office)

(813) 727-1299 (Cell)

Appendix B

**Email Correspondence between Errin Pichard, FDEP, and
Andrew Martin, Calpine Operating Services Company, Inc.**

Andrew Martin

From: Pichard, Errin [Errin.Pichard@dep.state.fl.us]
Sent: Thursday, January 17, 2008 2:42 PM
To: Andrew Martin
Cc: DeAngelo, Gregory
Subject: RE: Question regarding 2-hours of CEMS data

Andrew-

Since your CEMS collects and records data in one-minute averages, I would interpret "two hours" in this case to mean 120 minutes of data. In other words, if startup begins at 10:48 pm, it can last until 12:48 am.

I have copied Greg DeAngelo, our former Compliance guru in case he wants to weigh in.

Please let me know if you have further questions.

Errin Pichard, Administrator
Emissions Monitoring Section
Florida Department of Environmental Protection
850-821-9580

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

From: Andrew Martin [mailto:martina@calpine.com]
Sent: Thursday, January 17, 2008 2:34 PM
To: Pichard, Errin
Subject: Question regarding 2-hours of CEMS data

Errin:

As a follow up to our recent telephone conversation:
Is 2-hour of permitted startup exclusion the same as 120-minutes startup exclusion?

Regards,

Andrew Martin
Plant Engineer
Osprey Energy Center
(863) 551-4662
amartin@calpine.com

Appendix C

**Email Correspondence between Bruce Thomas, FDEP, and
Heidi Whidden, Calpine Operating Services Company, Inc.**

From: Thomas, Bruce X. [mailto:Bruce.X.Thomas@dep.state.fl.us]
Sent: Monday, April 21, 2008 10:20 AM
To: Heidi Whidden
Subject: RE: Osprey Energy Center Question

Heidi,

You are interpreting it correctly. Do you expect four hours of excess emissions tomorrow?

Bruce Thomas, P.E.
Division of Air Resource Management
(850)-921-7744 or Bruce.X.Thomas@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 minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey. Thank you in advance for completing the survey.
From: Heidi Whidden [mailto:HWWhidden@calpine.com]
Sent: Monday, April 21, 2008 10:09 AM
To: Thomas, Bruce X.
Subject: Osprey Energy Center Question
Importance: High

Bruce,

Last week and through the weekend, the Osprey Energy Center conducted their annual outage. Today they ran the unit for 45 minutes with gas flowing and no load to insure there were no gas leaks. Tomorrow they will be available for full operation. The following is an excerpt from the Osprey Permit 1050221-014-AV:

C.12 Excess Emissions. Excess emissions resulting from startup, shutdown, or malprovid that best operational practices are adhered to and the duration of excess emis

Page Break

Excess emissions occurrences shall in no case exceed two hours in any 24-hour period start-up to, and shutdowns from, combined cycle plant operation. During cold start-up operation, up to four hours of excess emissions are allowed. During shutdowns from cold start-up to three hours of excess emissions are allowed. Cold start-up is defined as a startup operation following a complete shutdown lasting at least 48 hours. Operation below 31 otherwise be limited to 2 hours in any 24-hour period. [Rule 62-210.700(3), F.A.C. un

Calpine's understanding is that if:

1. A unit was fully shut down greater than 48-hours prior, and
2. The unit had not been brought up to stable load (defined as 60% load in permitting process) within the 48-hours prior,

Then the unit would be considered in cold start-up mode and provided the 4-hour allowance for the 24-hour period.

We request the agency provide their concurrence or provide further guidance.

Thank you for your continued assistance,
Heidi M. Whidden
713-570-4829

Appendix D

**Email Correspondence between Errin Pichard, FDEP, and
Heidi Whidden, Calpine Operating Services Company, Inc.**

From: Pichard, Erin
To: Heidi Whidden
cc: Bradburn, Rick
Subject: RE: Santa Rosa Energy Center
Date: Tuesday, March 17, 2009 11:59:12 AM

Heidi-

If a CEMS is subject to both Part 60 and Part 75 QA/QC requirements, it can satisfy both by complying with Part 75 procedures, which are generally more stringent than those in Part 60. EPA has issued a number of determinations to that effect.

The inclusion of the reference to 62-297.523 is unnecessarily misleading. We are not sure why that subsection is in the rule, as we adopt federal regulations by reference elsewhere in the department's rules. This subsection will almost certainly be deleted when 62-297 is revised.

Please let me know if you have other questions.
Erin

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

From: Heidi Whidden [mailto:HWhidden@calpine.com]
Sent: Tuesday, March 17, 2009 11:36 AM
To: Pichard, Erin
Subject: Santa Rosa Energy Center

Erin,

Calpine is conducting a Part 75 vs. Part 60 review as it pertains to daily calibrations. We believe our Auburnvale Energy Complex permit is clear as to which regulations FDEP wants us to use. However, we are requesting confirmation of our determination for the Santa Rosa Energy Center (SREC), ID 1130168. SREC is subject to Part 60 Subpart GG and Part 75. SREC has NOx and O2 CEMS monitors. SREC's Title V permit states the following:

A.33. Continuous Monitoring System Reports. The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of

each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) or 40 CFR Part 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40 CFR 75. The monitoring plan, consisting of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62. [1130168-001-AC, Specific Condition 44.]

Calpine believes the use of "or" prior to the reference to Part 75 in both the first and second sentence allows SREC to follow Part 75 QAQC requirements in lieu of Part 60. This follows because Subpart GG specifically states that analyzers following Part 75 QAQC requirements may be used to meet Part 60 limits. However, Rule 62-297.520 directly references Part 60 Appendix B and its associated Performance standards without referencing the Subpart.

Please provide the Department's determination as it relates to Santa Rosa's use of Part 75 for QAQC purposes in lieu of Part 60. If you would like to call to discuss, I may be contacted at (713) 570-4829.

Thank you for your continued assistance,

Heidi M. Whidden
Manager--EHS
(713) 570-4829 (Office)
(813) 727-1299 (Cell)