



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

August 29, 2008

Electronically Sent – Received Receipt Requested.

Mr. Rudy Sanchez, Plant General Manager (rudy_sanchez@fpl.com)
Port Everglades Plant
8100 Eisenhower Boulevard
Fort Lauderdale, Florida 33316

Re: DEP File No. 0110036-007-AV
Title V Air Operation Permit Renewal
Request for Additional Information

Dear Mr. Sanchez:

The Florida Department of Environmental Protection has reviewed your application for a renewal of the Title V Air Operation Permit for the Port Everglades Plant. However, we must deem your application *incomplete*, because we need further information relative to the Compliance Assurance Monitoring (CAM) Plan for the electrostatic precipitators (ESP), specifically:

- Please provide the electrical power input values corresponding to the particulate matter emissions data reported on page 9 of the submission.
- Please structure the elements of the CAM plan along the lines of the Department recommended format (see attached sample CAM Plan for an ESP).

When we receive this information, we will continue processing your application. If you have any questions, please contact Project Engineer Tom Cascio at 850-921-9526. Rule 62-4.050(3), F.A.C., requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Permit applicants are advised that Rule 62-4.055(1), F.A.C., requires applicants to respond to requests for information within 90 days, unless the applicant has requested in writing, and has been granted, additional time within 90 days.

Sincerely,

Jonathan K. Holtom, P.E., CPM
Acting Program Administrator
Title V Section

Cc: Mr. Kennard Kosky, Golder Associates: kkosky@golder.com
Ms. Daniela Banu, Broward County: dbanu@co.broward.fl.us
Ms. Katy Forney, EPA Region 4: forney.kathleen@epa.gov

Georgia-Pacific Corporation Hawthorne Plywood Plant
CAM Plan for Electro-Static Precipitator for Particulate Matter Control
AIRS ID 1070015: Project Number 004

I. Background

A. Emissions Unit

Description: Waste-wood Fired Boiler
Manufacturer: Zurn
Capacity: 224 MMBtu/hour
Facility: Hawthorne Plywood Plant
223 Gordon Chapel Road
Hawthorne, Florida 32640

B. Applicable Regulation, Emissions Limit, and Monitoring Requirements

Regulation: Permit 1070015-001-AV
Emissions limit: 0.10 lb/MMBtu (PM)
22.4 pounds per hour
98.11 tons per year

C. Control Technology

Description: Electro-static Precipitator (ESP)
Manufacturer: PPC Industries 3-cell, model 2OR-1330-3712S
Capacity: 99,100 ACFM

II. Monitoring Approach

Parameters to Monitor: Performance of the ESP will be measured by the secondary kilovolts and secondary milliamps for each cell of the ESP. The readings from each TR set will be recorded once each day to determine the power to each cell of the ESP.

$$P_t = V_1 I_1 + V_2 I_2$$

Where:

P_t = Total ESP power (watts)
 V_1 = Secondary voltage (kV), ESP field 1
 I_1 = Secondary current (ma), ESP field 1
 V_2 = Secondary voltage (kV), ESP field 2
 I_2 = Secondary current (ma), ESP field 2

<p>I. Indicator</p> <p>Measurement Approach</p>	<p>Power in Watts</p> <p>The secondary voltage and secondary milliamps for each TR set will be read from the meters in place on the ESP. Parameters to Monitor: Performance of the ESP will be measured by the secondary kilovolts and secondary milliamps for each cell of the ESP. The readings from each TR set will be recorded once each day to determine the power to each cell of the ESP.</p> $P_1 = V_1 I_1 + V_2 I_2$ <p>P_1 = Total ESP power (watts)</p> <p>V_1 = Secondary voltage (kV), ESP field 1</p> <p>I_1 = Secondary current (ma), ESP field 1</p> <p>V_2 = Secondary voltage (kV), ESP field 2</p> <p>I_2 = Secondary current (ma), ESP field 2</p>
<p>II. Indicator Range</p>	<p>Any two consecutive determinations of the ESP power level, that are less than ninety (90) percent of the average value established during the test; = 51,800 watts.</p>
<p>III. Performance Criteria</p> <p>A. Data Representativeness</p> <p>B. Verification of Operational Status</p> <p>C. QA/QC Practices and Criteria</p> <p>D. Monitoring Frequency</p> <p>Data Collection Procedures</p> <p>Averaging period</p>	<p>The data for the kilovolt and milliamp readings were taken during the Boiler stack test taken on May 7, 2003. Data has been collected daily from April 21, 2003 through July. The data during normal operations is similar to the data taken during the test.</p> <p>Results of stack test on May 7, 2003 are attached.</p> <p>Calibrate the voltmeter and ammeter at least annually.</p> <p>The power will be calculated from secondary kilovolt and milliamp readings to be taken at least once per day. The reading will consist of averaging 4 readings approximately 15 minutes apart, over a one hour period</p> <p>The secondary kilovolt and milliamp readings will be taken manually from the voltmeter and ammeter. The values for each cell will be multiplied and then added together to determine the</p> <p>Four readings approximately 15 minutes apart over a one-hour</p>

MONITORING APPROACH JUSTIFICATION

I. Background

The emissions unit (EU) consists of the boiler and related appurtenances in the steam production area. The process consists of fuel feeders, a grate, steam tubes, fire box, heat exchangers, and duct work. The boiler operates continuously when the plant is in normal operation. Wood waste is spread on the grate, where it burns to heat water in the tubes. Exhaust gases pass across an economizer then through a multi-clone, after which they pass through the ESP. The boiler is pressurized by a forced-draft fan, which pushes the exhaust gases through the system.

A voltmeter and ammeter for secondary kilovolts and secondary milliamps are currently on the ESP for each TR set of the ESP.

II. Rationale for Selection of Performance Indicators

The most reliable and practical parameters for the plant personnel to monitor are the secondary kilovolts and secondary milliamps to calculate the Power. Power is an indicator of the ESP's performance. To comply with the applicable emission limit a minimum power level must be maintained. The power will drop when a malfunction occurs which causes less particulate to be charged and collected and hence an indicator of problems that require attention.

III. Rationale for Selection of Indicator Ranges

The indicator ranges of less than 90% of the average power was based on the variability of the Power values during the test taken on May 7, 2003. That value will be $P_t = 51,810$ watts. If two consecutive days of readings fall below this indicator value, then the possibility of problems with the ESP will be investigated to determine whether there is an issue. The issue will be reviewed and documented. An excursion has been defined as two consecutive days of readings below the indicator value to account for fluctuations in the operations.

CAM condition to be added to each emissions unit subsection that has an emissions unit subject to CAM.

Compliance Assurance Monitoring.

A.##. This/these emissions unit(s) is/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.]

APPENDIX CAM

Compliance Assurance Monitoring Requirements

Compliance Assurance Monitoring Requirements

Pursuant to Rule 62-213.440(1)(b)1.a., F.A.C., the CAM plans that are included in this appendix contain the monitoring requirements necessary to satisfy 40 CFR 64. Conditions 1. – 17. are generic conditions applicable to all emissions units that are subject to the CAM requirements. Specific requirements related to each emissions unit are contained in the attached tables, as submitted by the applicant and approved by the Department.

40 CFR 64.6 Approval of Monitoring.

1. The attached CAM plan(s), as submitted by the applicant, is/are approved for the purposes of satisfying the requirements of 40 CFR 64.3.

[40 CFR 64.6(a)]

2. The attached CAM plan(s) include the following information:

(i) The indicator(s) to be monitored (such as temperature, pressure drop, emissions, or similar parameter);

(ii) The means or device to be used to measure the indicator(s) (such as temperature measurement device, visual observation, or CEMS); and

(iii) The performance requirements established to satisfy 40 CFR 64.3(b) or (d), as applicable.

[40 CFR 64.6(c)(1)]

3. The attached CAM plan(s) describe the means by which the owner or operator will define an exceedance of the permitted limits or an excursion from the stated indicator ranges and averaging periods for purposes of responding to (see **CAM Conditions 5. - 9.**) and reporting exceedances or excursions (see **CAM Conditions 10. - 14.**).

[40 CFR 64.6(c)(2)]

4. The permittee is required to conduct the monitoring specified in the attached CAM plan(s) and shall fulfill the obligations specified in the conditions below (see **CAM Conditions 5. - 17.**).

[40 CFR 64.6(c)(3)]

40 CFR 64.7 Operation of Approved Monitoring.

5. Commencement of operation. The owner or operator shall conduct the monitoring required under this appendix upon the effective date of this Title V permit.

[40 CFR 64.7(a)]

6. Proper maintenance. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

[40 CFR 64.7(b)]

7. Continued operation. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable.

The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

[40 CFR 64.7(c)]

8. Response to excursions or exceedances.

- a. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions, if allowed by this permit). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- b. Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

[40 CFR 64.7(d)(1) & (2)]

9. Documentation of need for improved monitoring. If the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the permitting authority and, if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[40 CFR 64.7(e)]

40 CFR 64.8 Quality Improvement Plan (QIP) Requirements.

10. Based on the results of a determination made under **CAM Condition 8.a.**, above, the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with **CAM Condition 4.**, an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, may require the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.

[40 CFR 64.8(a)]

11. Elements of a QIP:

- a. The owner or operator shall maintain a written QIP, if required, and have it available for inspection.

- b. The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:
 - (i) Improved preventive maintenance practices.
 - (ii) Process operation changes.
 - (iii) Appropriate improvements to control methods.
 - (iv) Other steps appropriate to correct control performance.
 - (v) More frequent or improved monitoring (only in conjunction with one or more steps under **CAM Condition 11.b(i)** through **(iv)**, above).

[40 CFR 64.8(b)]

- 12. If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the permitting authority if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

[40 CFR 64.8(c)]

- 13. Following implementation of a QIP, upon any subsequent determination pursuant to **CAM Condition 8.b.**, the permitting authority may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:

- a. Failed to address the cause of the control device performance problems; or
- b. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

[40 CFR 64.8(d)]

- 14. Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

[40 CFR 64.8(e)]

40 CFR 64.9 Reporting And Recordkeeping Requirements.

- 15. General reporting requirements.

- a. On and after the date specified in **CAM Condition 5.** by which the owner or operator must use monitoring that meets the requirements of this appendix, the owner or operator shall submit monitoring reports semi-annually to the permitting authority in accordance with Rule 62-213.440(1)(b)3.a., F.A.C.
- b. A report for monitoring under this part shall include, at a minimum, the information required under Rule 62-213.440(1)(b)3.a., F.A.C., and the following information, as applicable:
 - (i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
 - (ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
 - (iii) A description of the actions taken to implement a QIP during the reporting period as specified in **CAM Conditions 10.** through **14.** Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 CFR 64.9(a)]

16. General recordkeeping requirements.

- a. The owner or operator shall comply with the recordkeeping requirements specified in Rule 62-213.440(1)(b)2., F.A.C. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to **CAM Conditions 10.** through **14.** and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).
- b. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 CFR 64.9(b)]

40 CFR 64.10 Savings Provisions.

17. It should be noted that nothing in this appendix shall:

- a. Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this appendix shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate authority under the Act, including monitoring in permits issued pursuant to title I of the Act. The purpose of this part is to require, as part of the issuance of a permit under Title V of the Act, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of this part.
- b. Restrict or abrogate the authority of the Administrator or the permitting authority to impose additional or more stringent monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable.
- c. Restrict or abrogate the authority of the Administrator or permitting authority to take any enforcement action under the Act for any violation of an applicable requirement or of any person to take action under section 304 of the Act.

[40 CFR 64.10]

Georgia-Pacific Corporation Hawthorne Plywood Plant

Emissions Unit 001

**Waste Wood-fired Boiler
PM Emissions Controlled By Electro-static Precipitator (ESP)**

Monitoring Approach

TABLE 1: MONITORING APPROACH

EMISSION UNIT 001 – ESP	
	Indicator No. 1
I. Indicator Measurement Approach	<p>Power (in Watts)</p> <p>The secondary voltage and secondary milliamps for each TR set will be read from the meters in place on the ESP.</p> <p>Parameters to Monitor: Performance of the ESP will be measured by the secondary kilovolts and secondary milliamps for each cell of the ESP. The readings from each TR set will be recorded once each day to determine the power to each cell of the ESP.</p> $P_t = V_1I_1 + V_2I_2 + V_3I_3$ <p> P_t = Total ESP power (watts) V_1 = Secondary voltage (kV), ESP field 1 I_1 = Secondary current (ma), ESP field 1 V_2 = Secondary voltage (kV), ESP field 2 I_2 = Secondary current (ma), ESP field 2 V_3 = Secondary voltage (kV), ESP field 3 I_3 = Secondary current (ma), ESP field 3 </p>
II. Indicator Range	An excursion is defined as any daily determination of the ESP power level less than 50,000 watts. An excursion will trigger an investigation of the occurrence, corrective actions, and a reporting/documentation requirement.
III. Performance Criteria	
A. Data Representativeness	ESP secondary voltage and secondary current for fields 1, 2 and 3 are recorded manually at least once per day.
B. Verification of Operational Status	Not Applicable
C. QA/QC Practices and Criteria	The voltmeter and ammeter will be calibrated and maintained as required by the manufacturer, but no less than annually.
D. Monitoring Frequency	The power will be calculated from secondary kilovolt and milliamp readings to be taken at least once per day. The reading will consist of averaging 4 readings approximately 15 minutes apart, over a one hour period
E. Data Collection Procedures	The secondary kilovolt and milliamp readings will be taken manually from the voltmeter and ammeter. The values for each cell will be multiplied and then added together to determine the status.
F. Averaging Period	Four readings, approximately 15 minutes apart, over a one-hour period.

Walker, Elizabeth (AIR)

From: Rudy_Sanchez@fpl.com
Sent: Friday, August 29, 2008 3:25 PM
To: Walker, Elizabeth (AIR)
Subject: RAI - FPL-Port Everglades Plant/ 0110036-007-AV

Return Receipt

Your RAI - FPL-Port Everglades Plant/ 0110036-007-AV
document:
was Rudy Sanchez/PGD/FPL
received by:
at: 08/29/2008 03:25:10 PM

Walker, Elizabeth (AIR)

From: Walker, Elizabeth (AIR)
Sent: Friday, August 29, 2008 3:22 PM
To: 'rudy_sanchez@FPL.com'
Cc: 'kkosky@golder.com'; 'Banu, Daniela'; 'Forney.Kathleen@epamail.epa.gov'; Holtom, Jonathan; Cascio, Tom; Friday, Barbara
Subject: RAI - FPL-Port Everglades Plant/ 0110036-007-AV
Attachments: RAI-0110036-007-AV.pdf

Dear Sir/Madam:

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

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

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site:

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

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

Thank you,

Elizabeth Walker

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

Walker, Elizabeth (AIR)

From: Rudy_Sanchez@fpl.com
Sent: Friday, August 29, 2008 3:28 PM
To: Walker, Elizabeth (AIR)
Subject: Re: RAI - FPL-Port Everglades Plant/ 0110036-007-AV

I have received the document

Rudy Sanchez
Plant General Manager
Port Everglades Plant
Gas Turbine Power Park

Walker, Elizabeth (AIR)

From: Mail Delivery System [MAILER-DAEMON@sophos.golder.com]
Sent: Friday, August 29, 2008 3:22 PM
To: Walker, Elizabeth (AIR)
Subject: Successful Mail Delivery Report
Attachments: Delivery report; Message Headers

This is the mail system at host sophos.golder.com.

Your message was successfully delivered to the destination(s) listed below. If the message was delivered to mailbox you will receive no further notifications. Otherwise you may still receive notifications of mail delivery errors from other systems.

The mail system

<kkosky@golder.com>: delivery via 127.0.0.1[127.0.0.1]:10025: 250 OK, sent
48B84C60_21357_74_2 E4F6C119FADD