# Memorandum

# Florida Department of Environmental Protection

To:

Trina Vielhauer, Bureau of Air Regulation

Through:

Al Linero, Special Projects Section

From:

David L. Read, Special Projects Section

Date:

December 9, 2009

Subject:

Draft Minor Source Air Construction Permit

Project No. 0950137-028-AC

Orlando Utilities Commission (OUC), Stanton Energy Center

Temporary Test of Coal Additives

Attached for your review is a draft minor air construction permit package, which authorizes a temporary test using additives in the coal-fueled Units 1 and 2 at the OUC Stanton Energy Center. This authorization is for a test of no more than 90 days duration to determine whether a particular coal additive strategy reduces  $NO_X$  emissions from Units 1 and 2.

This test burn will also allow operational issues when using the additive to be assessed. If successful, OUC will submit another application along with the test report to permanently use the additives in Units 1 and 2.

The attached Technical Evaluation and Preliminary Determination provides a description of the project and the rationale for permit issuance. I recommend your approval of the attached draft permit package.

Attachments

TLV/al/dlr



# Florida Department of Environmental Protection

Bob Martinez Center 2600 Blairstone Road Tallahassee, Florida 32399-2400 Charlie Crist Governor Jeff Kottkamp Lt. Governor Michael W. Sole Secretary

Mr. Jan C. Aspuru, Vice President of Power Generation Orlando Utilities Commission (OUC) Post Office Box 3193 Orlando, Florida 32802

Re: Project No. 0950137-028-AC OUC, Stanton Energy Center

Temporary Short-Term Test of Chem-Mod™ Solution

Dear Mr. Aspuru:

On November 24, 2009, you submitted an application requesting a temporary short-term (90 days) test of the Chem-Mod<sup>TM</sup> Solution fuel additives in Units 1 and 2 at the Curtis H. Stanton Energy Center. The facility is located in Orange County at 5100 South Alafaya Trail in Orlando, Florida. Enclosed are the following documents: the Written Notice of Intent to Issue Air Permit; the Public Notice of Intent to Issue Air Permit; the Technical Evaluation and Preliminary Determination; and the Draft Permit with Appendices. The Public Notice of Intent to Issue Air Permit is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project. If you have any questions, please contact the project engineer, David L. Read, at 850/414-7268.

Sincerely,

Trina Vielhauer, Chief

Bureau of Air Regulation

Zund Vicham 19/09

**Enclosures** 

TLV/al/dlr

#### WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

In the Matter of an Application for Air Permit by:

Orlando Utilities Commission (OUC) Post Office Box 3193 Orlando, Florida 32802

Authorized Representative:

Mr. Jan C. Aspuru, Vice President of Power Generation

Project No. 0950137-028-AC
Minor Air Construction Permit
Stanton Energy Center Units 1 and 2
Test Burn of Chem-Mod<sup>TM</sup> Fuel Additive
Orange County, Florida

**Facility Location**: OUC operates an existing power plant called the Curtis H. Stanton Energy Center (Stanton), which is located in Orange County at 5100 South Alafaya Trail in Orlando, Florida.

**Project**: The applicant requests to test a two part chemical coal additive called Chem-Mod<sup>™</sup> Solution in the coal-fueled Stanton Units 1 and 2 for 90 days to determine whether it reduces nitrogen oxides (NO<sub>X</sub>) emissions. This test will also allow operational issues when using the additive to be assessed. Details of the test and potential emissions from the project are provided in the application and the enclosed Technical Evaluation and Preliminary Determination.

**Permitting Authority**: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

**Project File**: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

**Public Notice:** Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

#### WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of the 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

**Petitions**: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the attached Public Notice or within 14 days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

#### WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

Mediation: Mediation is not available in this proceeding.

Executed in Tallahassee, Florida.

Trina Vielhauer, Chief Bureau of Air Regulation

#### **CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this Written Notice of Intent to Issue Air Permit package (including the Written Notice of Intent to Issue Air Permit, the Public Notice of Intent to Issue Air Permit, the Technical Evaluation and Preliminary Determination and the Draft Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on 10/10/07 to the persons listed below.

Jan C. Aspuru, OUC: <a href="mailto:jaspuru@ouc.com">jaspuru@ouc.com</a>
Denise Stalls, OUC: <a href="mailto:dstalls@ouc.com">dstalls@ouc.com</a>

Scott Osbourn, P.E., Golder Associates: Scott Osbourn@golder.com

Caroline Shine, DEP CD: <u>caroline.shine@dep.state.fl.us</u>
Lori Cunniff, Orange County EPD: <u>lori.cunniff@ocfl.net</u>
Jodi Dittel, Orange County EPD: <u>iodi.dittell@ocfl.net</u>

Vickie Gibson, DEP BAR Reading File: victoria.gibson@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

#### PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Florida Department of Environmental Protection
Division of Air Resource Management, Bureau of Air Regulation
Draft Minor Air Construction Permit
Project No. 0950137-028-AC
Orlando Utilities Commission, Stanton Energy Center
Orange County, Florida

**Applicant:** The applicant for this project is the Orlando Utilities Commission (OUC). The applicant's authorized representative and mailing address are: Mr. Jan C. Aspuru, Vice President of Power Generation, Orlando Utilities Commission, Post Office Box 3193, Orlando, Florida 32802.

**Facility Location**: OUC operates an existing power plant called the Curtis H. Stanton Energy Center (Stanton), which is located in Orange County at 5100 South Alafaya Trail in Orlando, Florida.

**Project**: The applicant requests to test a two part chemical coal additive called Chem-Mod<sup>™</sup> Solution in the coal-fueled Stanton Units 1 and 2 for 90 days to determine whether it reduces nitrogen oxides (NO<sub>X</sub>) emissions. Data will also be collected on sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), particulate matter (PM/PM<sub>10</sub>), and visible emissions (opacity). This test will also allow operational issues when using the additive to be assessed. If the tests are successful, OUC plans to submit another application supported by the test report to use the Chem-Mod<sup>™</sup> Solution on a permanent basis. The application and additional information can be accessed at the web link given further below.

The Department anticipates the following effects on emissions from Units 1 and 2 during the test of the coal additive:

- NO<sub>x</sub> emissions should be less than or equal to present levels;
- SO<sub>2</sub> emissions should be approximately equal to present levels;
- CO and opacity should be approximately equal to present levels; and,
- PM/PM<sub>10</sub> emissions will increase slightly due to the additional equipment required by the test. However, according to OUC, PM/PM<sub>10</sub> emissions may be reduced due to improved combustion.

This project is subject to the general preconstruction review requirements in Rule 62-212.300, Florida Administrative Code (F.A.C.) and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Permitting Authority responsible for making a permit determination for this project is the Bureau of Air Regulation in the Department of Environmental Protection's Division of Air Resource Management. The Permitting Authority's physical address is: 111 South Magnelia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

**Project File**: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the physical address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application and information submitted by the applicant (exclusive of confidential records under Section 403.111, F.S.). Interested persons may contact the Permitting Authority's project engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available on the following web link:

www.dep.state.fl.us/Air/emission/construction/ouc-stanton\_Inbofa.htm

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air construction permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of this Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of the 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of when and how the petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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Mediation: Mediation is not available for this proceeding.

# TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Orlando Utilities Commission
Curtis H. Stanton Energy Center Units 1 & 2

# Temporary Operational Trial to use Coal Additive

**Orange County** 

DEP File No. 0950137-028-AC



Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Special Projects Section

December 9, 2009

#### 1. GENERAL PROJECT INFORMATION

#### **Air Pollution Regulations**

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

#### **Facility Description and Location**

The Orlando Utilities Commission (OUC) operates the Curtis H. Stanton Energy Center (OUC Stanton), which is categorized under Standard Industrial Classification Code No. 4911, Electrical Services. OUC Stanton is located in Orange County at 5100 South Alafaya Trail. The UTM coordinates of the existing facility are 483.6 km East and 3151.1 North. The location of the OUC Stanton Energy Center is shown in Figure 1.





Figure 1 - OUC Stanton Location.

Figure 2 - OUC Stanton Units 1 and 2.

This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

#### **Facility Regulatory Categories**

- The facility is a potential major source of hazardous air pollutants (HAP).
- The facility operates existing units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

#### TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility is subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, Florida Administrative Code (F.A.C.).
- The facility operates units subject to the Standards of Performance for New Stationary Sources (NSPS) pursuant to 40 CFR Part 60.
- The facility was originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

# **Project Description**

OUC Stanton consists of two bottom fired, fossil fuel steam electrical generating units (Stanton 1 and 2) and two combined cycle units. Stanton 1 and 2 (shown in Figure 2 above) began operation in 1987 and 1996 respectively and each is rated at 468 megawatts (MW). Coal is the primary fuel used in Stanton 1 and 2.

OUC and Chem-Mod LLC, an environmental services company based in Stow, Ohio, are exploring the use of additives to reduce emissions. The concept is to inject two additives described as MerSorb and S-Sorb on the coal feed belt before combustion. The approach is marketed as the "The Chem-Mod<sup>TM</sup> Solution".

According to the material safety data sheet (MSDS), S-Sorb (specifically the S-Sorb III formulation) is made from materials mined from the earth and is processed using energy provided by fuels. It is a mineral composite primarily consisting of: calcium compounds such as gypsum, lime and calcium carbonate (CaO, CaSO<sub>4</sub>, CaCO<sub>3</sub>); calcium silicates; and iron (Fe) and aluminum (Al) compounds. The mineral contains trace amounts of naturally occurring compounds such as: free crystalline silica (SiO<sub>2</sub>), potassium and sodium compounds (Na and K); heavy metals including cadmium (Cd), chromium (Cr), nickel (Ni) and lead (Pb); and organic compounds. The second additive, MerSorb, is a halide salt solution, consisting of approximately 50 percent calcium bromide (CaBr) and 50 percent water.

According to Chem-Mod LLC literature, the following can be achieved by their dual additive injection system:

- Reduction of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>X</sub>);
- Reduction of heavy metals such mercury (Hg) and arsenic (As);
- Reduction of chlorides;
- Increased furnace efficiency through reduced slagging of the coal-fired plant's boiler tubes; and
- Generation of fly ash that can be sold as a bulk ingredient in the production of concrete as a partial replacement to Portland cement.

The table on the following page is a summary of tests conducted by Chem-Mod LLC and its partners at other locations and the claimed reductions of Hg, sulfur (presumably as SO<sub>2</sub> and sulfuric acid mist) and NO<sub>x</sub>. The tests were conducted on boilers rated between 30 to 190 MW, with stoker, cyclone or tangential-fired configurations, firing Powder River Basin (PRB) coal and Northern Appalachian coals.

The Department has not reviewed the results and neither agrees with nor disputes the claims. Clearly the same level of performance would not be expected at OUC Stanton because the units already have wet scrubbers, low  $NO_X$  burners (LNB), overfire air (OFA) and selective catalytic reduction (SCR) for further  $NO_X$  reduction on Unit 2. This equipment already accomplishes significant reductions in  $SO_2$ ,  $NO_X$  and Hg. To achieve similar performance, it would be necessary at the very least to turn down the operation of some of the existing add-on control equipment.

#### TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility is subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, Florida Administrative Code (F.A.C.).
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#### **Project Description**

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OUC and Chem-Mod LLC, an environmental services company based in Stow, Ohio, are exploring the use of additives to reduce emissions. The concept is to inject two additives described as MerSorb and S-Sorb on the coal feed belt before combustion. The approach is marketed as the "The Chem-Mod<sup>TM</sup> Solution".

According to the material safety data sheet (MSDS), S-Sorb (specifically the S-Sorb III formulation) is made from materials mined from the earth and is processed using energy provided by fuels. It is a mineral composite primarily consisting of: calcium compounds such as gypsum, lime and calcium carbonate (CaO, CaSO<sub>4</sub>, CaCO<sub>3</sub>); calcium silicates; and iron (Fe) and aluminum (Al) compounds. The mineral contains trace amounts of naturally occurring compounds such as: free crystalline silica (SiO<sub>2</sub>), potassium and sodium compounds (Na and K); heavy metals including cadmium (Cd), chromium (Cr), nickel (Ni) and lead (Pb); and organic compounds. The second additive, MerSorb, is a halide salt solution, consisting of approximately 50 percent calcium bromide (CaBr) and 50 percent water.

According to Chem-Mod LLC literature, the following can be achieved by their dual additive injection system:

- Reduction of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>X</sub>);
- Reduction of heavy metals such mercury (Hg) and arsenic (As);
- Reduction of chlorides;
- Increased furnace efficiency through reduced slagging of the coal-fired plant's boiler tubes; and
- Generation of fly ash that can be sold as a bulk ingredient in the production of concrete as a partial replacement to Portland cement.

The table on the following page is a summary of tests conducted by Chem-Mod LLC and its partners at other locations and the claimed reductions of Hg, sulfur (presumably as SO<sub>2</sub> and sulfuric acid mist) and NO<sub>X</sub>. The tests were conducted on boilers rated between 30 to 190 MW, with stoker, cyclone or tangential-fired configurations, firing Powder River Basin (PRB) coal and Northern Appalachian coals.

The Department has not reviewed the results and neither agrees with nor disputes the claims. Clearly the same level of performance would not be expected at OUC Stanton because the units already have wet scrubbers, low NO<sub>X</sub> burners (LNB), overfire air (OFA) and selective catalytic reduction (SCR) for further NO<sub>X</sub> reduction on Unit 2. This equipment already accomplishes significant reductions in SO<sub>2</sub>, NO<sub>X</sub> and Hg. To achieve similar performance, it would be necessary at the very least to turn down the operation of some of the existing add-on control equipment.

#### TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

<b>Testing Site</b>	Timing Of Tests	Mercury (%)	Sulfur (%)	NO <sub>X</sub> (%)
Commercial Test # 1	October 2005	98	40	21
Commercial Test # 2	November 2005	90	75	10
Commercial Test # 3	December 2005	86	48	18
Commercial Test # 4	August 2006	87	68	31
Commercial Test # 5	October 2006	98	65	13

The main purpose of the present tests is to demonstrate nitrogen oxides  $(NO_X)$  removal by The Chem-Mod<sup>TM</sup> Solution at OUC Stanton Units 1 and 2. The tests will also be conducted to evaluate the effects on unit performance, slagging and fly ash loss on ignition (LOI).

The general manner by which the additives would be introduced at a permanent installation can be seen at the following link:

#### http://www.chem-mod.com/chemmodsolution animation.html

For the OUC Stanton tests, the following temporary operations and equipment are required:

- Truck transportation of additives to site;
- Solid S-Sorb storage silo with vent baghouse and pneumatic blower;
- S-Sorb day silo with rotary air lock;
- Three screw conveyers;
- 950 ton per hour (TPH) coal mixer;
- Liquid MerSorb storage tank;
- Liquid MerSorb day tank with feed pump; and
- A 500 kilowatt (kW) electrical generator to provide power to the test system.

Use of sorbents is a common practice for a variety of reasons at coal-fueled plants. One example is the Gainesville Regional Utilities (GRU) Deerhaven Generation Station where pebble lime is used to reduce arsenic in the furnace exhaust to protect the selective catalytic reduction (SCR) system. The lime injection system is visible below. The system is equipped with its own bin filter and vacuum system to minimize dust emissions.

Department staff visited the GRU site on December 3, 2009 and no visible emissions were noticed from the arrangement shown in Figure 3.

A flow diagram of the test system setup planned at OUC Stanton is shown on the following page.



Figure 3 - Sorbent Injection System at GRU.

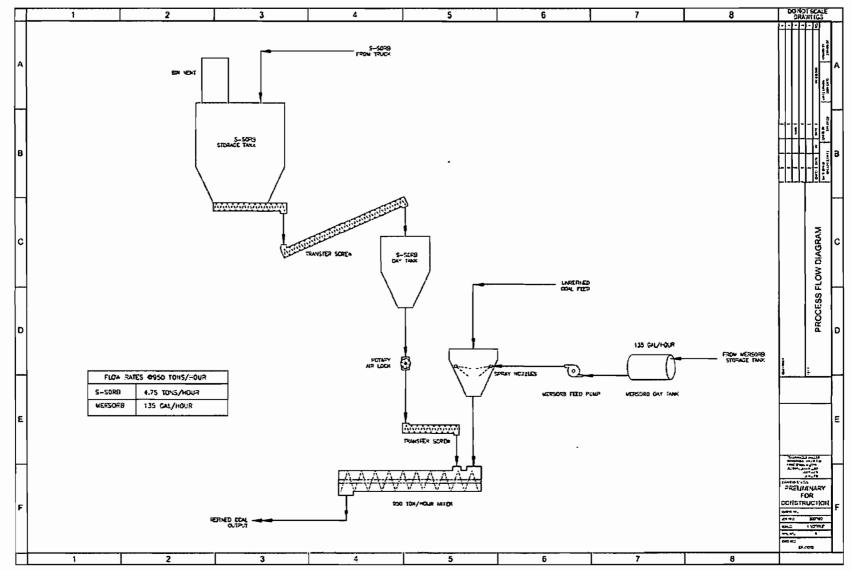


Figure 4 - Flow Diagram of the Chem-Mod<sup>TM</sup> Solution Test System Setup.

#### 2. PSD APPLICABILITY

#### General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 5 tons per year or more of lead;
- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, Portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO<sub>X</sub>); sulfur dioxide (SO<sub>2</sub>); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM<sub>10</sub>); volatile organic compounds (VOC); lead (Pb); fluorides (F); sulfuric acid mist (SAM); hydrogen sulfide (H<sub>2</sub>S); total reduced sulfur (TRS), including H<sub>2</sub>S; reduced sulfur compounds, including H<sub>2</sub>S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO<sub>2</sub> and hydrogen chloride (HCI); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 µg/m<sup>3</sup>, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

#### **PSD** Applicability for Project

According to the applicant:

- Hg emissions should be significantly reduced by as much as 40 percent from baseline levels;
- NO<sub>X</sub> emissions should be reduced as much as 20 percent from baseline levels;
- SO<sub>2</sub> emissions should be comparable to baseline levels;
- Carbon monoxide (CO), volatile organic compounds (VOC) emissions and visible emissions (opacity) should be comparable to baseline levels; and
- Particulate matter (PM/PM<sub>10</sub>) emissions will increase slightly due to the additional project equipment, but may be reduced overall due to the fuel additive causing an increase in combustion efficiency.

The Department agrees with the applicant's assertions with the exception of the claim regarding Hg. The reason is that Hg tests will not actually be conducted at OUC and the Units already achieve significant Hg reduction using the existing add-on controls. The following table summarizes potential emissions and PSD applicability for the test as if it were conducted continuously for an entire year (8,760 hours). However the request is only for 90 days (2,160 hours) of testing.

	Emissions for Temporary Trial			Simificant	Subject to
Poḷlutant	Test Equipment	Units 1 and 2 Combustion	Maximum Increase	Significant Emissions Rate	Subject to PSD?
СО	16.8 tons	Negligible Change	16.8 tons	100 tons/year	No
NO <sub>X</sub>	17.4 tons	Possible Reduction	17.4 tons	40 tons/year	No
PM	11.5 tons	Negligible Change	11.5 tons	25 tons/year	No
PM <sub>10</sub>	1.1 tons	Negligible Change	1.1 tons	15 tons/year	No
SO <sub>2</sub>	0.03 tons	Negligible Change	0.03 tons	40 tons/year	No
VOC	2.1 tons	Negligible Change	2.1 tons	40 tons/year	No
Hg	~0 pounds (lb)	Possible reduction	Possible reduction	200 lb/year	No

#### 3. DEPARTMENT REVIEW

#### **Emissions**

The use of the fuel (coal) additive Chem-Mod™ in OUC Units No. 1 and 2 will potentially result in emission decreases of NO<sub>x</sub>, while emissions of SO<sub>2</sub>, VOC and CO should remain relatively unchanged. PM emissions may increase slightly but not to significant levels. Mercury emissions may be reduced. In summary, except for possible fugitive PM emissions caused by the equipment required to apply the Chem-Mod™ additive to the coal during the test, pollutant emissions increases, if any, should be adequately controlled by the existing add-on controls during testing. Thus, the Department has reasonable assurance that no significant increase in any air pollutant will result from conducting this test.

#### 4. CONCLUSION

The requested trial will burn a small amount of Chem-Mod additive to determine if it is operationally feasible and will result in decreases in air pollutant emissions, if any. Further, the existing add-on pollutant control devices on OUC Units No. 1 and 2 are sufficient to ensure that any possible air pollutant emission increases from testing the fuel additive will be very low. The applicant will be required to comply with all existing valid permit conditions. See the draft permit for the specific conditions that will be enforced during this test.

# DRAFT PERMIT

#### **PERMITTEE**

Orlando Utilities Commission (OUC) P.O. Box 3193 Orlando, Florida 32802

Authorized Representative:

Mr. Jan C. Aspuru, Vice President of Power Generation

Air Permit No. 0950137-028-AC Permit Expires: June 30, 2010 Minor Air Construction Permit Stanton Energy Center

Temporary Short-Term Test Burn of Chem-Mod™ Fuel (Coal) Additive

#### **PROJECT**

Stanton Energy Genter (Stanton), which is OUC operates an existing power plant called the Curtis H categorized under Standard Industrial Classification (SIC) as No. 4911. The existing facility is located in Orange County at 5100 South Alafaya Trail in Orlando, Florida. The UTM coordinates are: Zone 17, 483.6 km East and 3151.1 km North.

This is the final air construction permit, which authorizes a test of a two part fuel chemical additive called Chem-Mod<sup>TM</sup> Solution at Stanton Units No. 1 and 2. This authorization is only for a test lasting no more than ninety (90) days in duration to determine whether this fuel additive reduces emissions of nitrogen oxides (NO<sub>X</sub>) from Units No. 1 and 2. This test will also allow operational issues when using the fuel additive to be assessed. This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

# STATEMENT OF BASIS

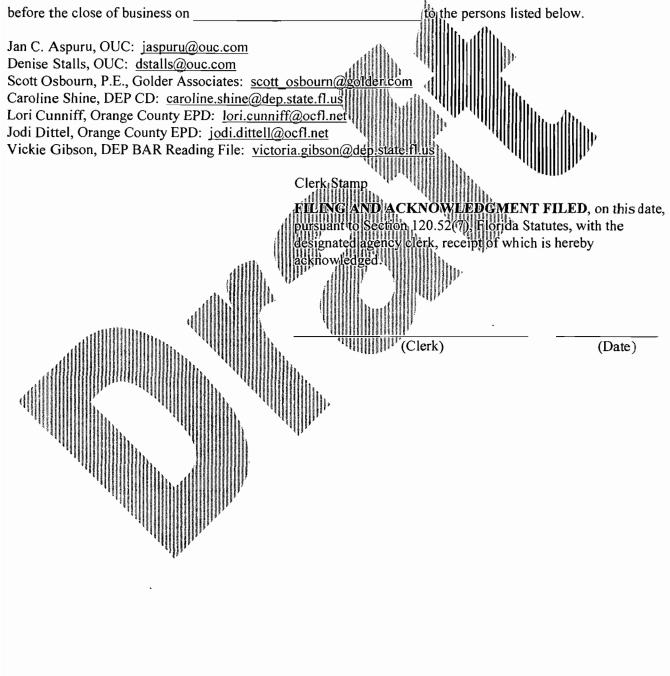
This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.) If the permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. If his project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #85,13900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida	
(DRAFT)	
Joseph Kahn, Director	(Date)
Division of Air Resource Management	. ,

#### CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested



#### **FACILITY DESCRIPTION**

The existing Stanton Energy Center (Stanton) consists of two 468 megawatts (MW) coal-fuel units (Units No. 1 and 2) and one 640 MW natural gas-fired combined cycle (NGCC) unit (Unit A). There are storage and handling facilities for solid fuels, fly ash, limestone, gypsum, slag, and bottom ash. A recently permitted nominal 300 MW NGCC unit (Unit B) should be operational by the year 2012.

#### PROPOSED PROJECT

This project involves the test burning of a fuel additive in Units No. 1 and 2 at the Stanton. The fuel additive, referred to as the Chem-Mod<sup>TM</sup> Solution, is a dual injection sorbent system in which two chemicals are injected on the coal feed belt, before the coal combustion process, to reduce the resulting combustion emissions. The two additives are referred to as MerSorb and S-Sorb. The proposed test requires additional material handling system for the additives, as well as a diesel generator to supply electrical power to the new systems.

#### **FACILITY REGULATORY CLASSIFICATION**

- The facility is a potential major source of hazardous air pollutants (HAP)
- The facility operates existing units subject to the Acid Rain provisions of Title IV of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter, 213, F.A.C.
- The facility is a major stationary source (Prevention of Significant Deterioration (PSD) major source) in accordance with Rule 62-212.400, F.A.C.
- The facility is subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, Florida Administrative Code (F.A.C.)
- The facility operates units subject to the Standards of Performance for New Stationary Sources (NSPS) pursuant to 40 CFR Part 60.
- The facility operates units that were certified under the Florida Power Plant Siting Act, 403.501-518, F.S.

#### **FACILITY DESCRIPTION**

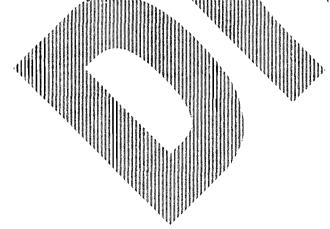
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- The facility operates units that were certified under the Florida Power Plant Siting Act, 403.501-518, F.S.



#### SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

- Permitting Authority: All documents related to PSD applications for permits to construct or modify emissions units shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400.
   All documents related to applications for permits to construct minor sources of air pollution or to operate the facility shall be submitted to the Air Resources Section of the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, FL 32803-3767.
- 2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Central District Office. The mailing address and phone number of the Central District Office are: Department of Environmental Protection Central District Office, 3319 Maguire Boulevard, Suite 232, Orlando Florida 32803-3767. Telephone: (407)894-7555. Fax: (407)897-5963.
- 3. <u>Appendices</u>: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions), and Appendix C (Common Conditions).
- 4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal state, or local permitting or regulations.
- 5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
- 6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
   7. Unconfined Emissions of Particulate Matter: No person shall cause, let, permit, suffer or allow the emissions
- 7. Which fined Emissions of Particulate Matter, No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials, construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter. Reasonable precautions include the following: (a) Paying and maintenance of roads, parking areas and yards; b) Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing; c) Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities; d) Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne; e) Landscaping or planting of vegetation; f) Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter; g) Confining abrasive blasting where possible; and, h.) Enclosure or covering of conveyor systems. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

  [Rule 62-296.320(4)(c), F.A.C.]

- 8. Objectionable Odors Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
  - [Rule 62-296.320(2), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

{Permitting Note: An objectionable odor is defined in Rule 62-210,200(Definitions), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.}

- 9. General Visible Emissions (VE) Standard:
  - No person shall cause, let, permit, suffer or allow to be discharge he atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity)
  - Notwithstanding subparagraph 62-296.320(4)(b) ILFAC wher or operator of an emissions unit subject to the general visible emission standard may request the Department to establish a higher visible emissions standard for that emissions unit. The owner or operator may request that a visible emissions standard be established at that level at which the emissions unit will be able, as indicated by compliance tests, to meet the opacity standard at all times during which the emissions unit is meeting the applicable particulate matter standard. The Description of the opacity standard at all times during which the emissions unit is meeting the applicable particulate matter standard. The Department shall establish such a standard, through the permitting process, if it finds that:
    - The emissions unit was in compliance with the applicable particulate emission standard while a (i.) compliance test was being conducted but failed to comply with the general visible emissions standard during the test
    - The emissions unit and associated air pollution control equipment were operated and maintained (ii.)
    - in a manner to minimize the opacity emissions during the compliance test; and The emissions unit and associated air pollution control equipment were incapable of being adjusted or operated in such a manner as to meet the opacity standard. (iii.)
      - of uncombined water is the only reason for failure to meet visible emission this rule, such failure shall not be a violation of this rule.
      - A.G. General Visible Emissions Standard] 96.320(4)(

#### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

#### A. Coal-Fuel Fired Units No. 1 and 2

This section of the permit addresses the following emissions unit.

EU ID No.	Emission Unit Description	
001	Coal-Fuel Fired Unit No. 1	
002	Coal-Fuel Fired Unit No. 2	

#### COMPLIANCE WITH EXISTING PERMIT CONDITIONS

1. Existing Permits: This permit supplements all existing valid permits. The permittee shall continue to comply with all applicable conditions from valid air construction and Title Vioperation permits. [Application No. 0950137-028-AC and Rule 62-4.070(3)] [AA.C.]

# TEMPORARY EQUIPMENT

- 2. Electrical Generator: The permittee is authorized to temporarily install and operate a Caterpillar™ or similar 500 kilowatt (kW) diesel electrical generator. The generator must meet all applicable requirements of NSPS 40 CFR 60, Subpart IIII for Stationary Compression Ignition Internal Combustion Engines and NESHAP 40 CFR 62 for Stationary CFR 63 for Stationary Reciprocating Internal Combustion Engines (RICE)
- [Application No. 0950137-028-AC; Rule 62-210.200(PTE), F.A.C., and Rule 62-4.070(3), F.A.C.]

  3. Chem-Mod<sup>TM</sup> Solution Processing Systems: The permittee is authorized to temporarily install the delivery, conveyance, storage and spray systems associated with applying the Chem-Mod<sup>TM</sup> Solution fuel additive to the coal on the coal feed belts prior to the combustion processes in Units No. 1 and 2. These Chem-Mod<sup>TM</sup> processing systems must meet the reasonable requirements to minimize funconfined emissions of particulate matter (PM) and the VE standards specified in Conditions 7 and 9 of Section II of this permit, respectively.

  - This equipment consists of the following:

     For the Mërsorb component of the Chem-Mod<sup>TM</sup> Solution fuel additive: a storage tank filled by tanker trucks; a day storage tank, a feed pump and application spray nozzles;

     For the S-Sorb component of the Chem-Mod<sup>TM</sup> Solution fuel additive: a storage silo with a bin filter filled by tanker trucks; three (3) transfer screws and a day storage silo; and,

     To mix the coal once the Chem-Mod<sup>TM</sup> Solution fuel additive has been applied, a 950 ton per hour (TPH)

[Application No. 0950137-028-AC; Rule 62-210.200(PTE), F.A.C., and Rule 62-4.070(3), F.A.C.]

- PERFORMANCE RESTRICTIONS

  4. Chem-Mod™ Solution Fuel Additive: For Units No. 1 and 2, the permittee is temporarily authorized to apply the fuel additive Chem. Mod™ Solution to the currently authorized coal blends (bituminous coal). The maximum application rate for the fuel additive is 7.65 TPH. [Application No. 0950] 37-028-AC and Rule 62-210.200(PTE), F.A.C.]
- 5. Fuel Additive Application: The fuel additive shall only be applied to coal that will be fired in Units No. 1 or No. 2. The Compliance Authority shall be given at least thirty (30) days notice before the application of the coal additive begins and notified immediately after its final application. [Application No. 0950137-028-AC and Rule 62-4.070(3), F.A.C.]
- 6. Test Duration: The permittee shall complete the test within ninety (90) successive calendar days of when the fuel additive is initially applied to the coal. [Application No. 0950137-028-AC; Rule 62-210.200(PTE), F.A.C. and Rule 62-4.070(3), F.A.C.]

#### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

#### A. Coal-Fuel Fired Units No. 1 and 2

7. Restricted Fuel Additive Application: Unless written permission is given by the Department, no more than 16,000 tons of the additive shall be applied to the coal used in Units No. 1 and 2 during the test period. [Rule 62-4.070(3), F.A.C. and Rule 62-210.200(PTE), F.A.C.]

#### TEST SCHEDULE

8. Compliance Authority Test Schedule Notification: Thirty (30) days prior to the application of the fuel additive, the permittee shall provide to the Compliance Authority in writing a test schedule. At a minimum the schedule shall include the test dates for each trial burn, the amount of the additive to be applied to the coal for each planned trail burn, the planned duration of each trail burn and the air emission tests that will be conducted during each trail burn (stack test or Continuous Emission Monitor (CEM) data). Any trial burn that results in the exceedance of emission limits specified in any valid air construction and Title V operation permits (see Condition 1 of this subsection) shall cease operation as soon as possible, but in no circumstances shall more than 4 hours pass before operations cease. [Rule 62-4.070(3), F.A.C. and Rule 62-210.200(PTE), F.A.C.]

#### MONITORING REQUIREMENTS

- 9. Standard Baseline Emissions: Baseline emissions shall be determined by CEMS for NO<sub>X</sub>; (CO and SO<sub>2</sub> emission and a continuous opacity monitor (COM) for VE, when firing representative coal fuel blends at permitted capacity in each unit prior to using the fuel additive. For each unit that will fire coal with the coal additive, the permittee shall conduct EPA Method 5 PM emissions tests. Test results shall be reported in units of lb/mmBtu and lb/hour.

  [Application No. 0950137-028-AC; Rule 62-210,200(PTE), FIA.C. and Rule 62-4.070(3), F.A.C.]
   10. Baseline Ammonia Injection Rate: For Unit No. 2, the ammonia injection rate used in the selective catalytic reduction (SCR) system when baseline NO<sub>X</sub> emission are determined shall be recorded by a flow meter in gallons per hour (gal/hr). [Rule 62-2 lo.200(PTE)] FIA.C. and Rule 62-4.070(3), F.A.C.]
   11. Emissions with Coal Additive: Emissions shall be determined by the CEMS for NO<sub>X</sub>, CO and SO<sub>2</sub> emissions and for VE by COM when firing coal blends with the additive at the permitted eapacity for each unit. For each unit when lift fires coal with the additive; the permittee shall conduct EPA Method 5 PM emissions tests. Test results shall be reported in units of lb/mmBtu and lb/hour.

  [[Application No. 0950137.028-AC; Rule 62-2 lo 200(PTE), F.A.C. and Rule 62-4.070(3), F.A.C.]
   12. Anmonial Injection Rate with Coal Additive: For Unit No. 2, the ammonia injection rate used in the selective catalytic reduction (SCR) system when NO<sub>X</sub> emission are determined when coal with the additive is 9. Standard Baseline Emissions: Baseline emissions shall be determined by CEMS for NO<sub>x</sub> CO and SO<sub>2</sub>

- selective catalytic reduction (SCR) system when NO<sub>X</sub> emission are determined when coal with the additive is fired in the unit shall be recorded by a flow meter in gallons per hour (gal/hr).
- [Rule 62-210!200(PITE), F.A.C. and Rule 62-4.070(3), F.A.C.]

  13. Monitoring of Operations: For each trial test burn in each unit, the permittee shall conduct the following monitoring: the type: amount, and heat input of coal fired; flue gas oxygen levels and electrical outputs; the fuel additive injection rates and fuel additive concentrations; lost of ignition (LOI) of the fly ash in the PM control device; and continuously monitor and record NO<sub>x</sub>, CO and SO<sub>2</sub> and VE (opacity), with the existing CEMS and COM, and for Unit No.2 the ammonia injection rate into the SCR system in gal/hr. For comparison purposes, the permittee shall identify the current corresponding baseline monitoring values for bituminous coal firing or collect baseline data during the trial burn period. [Application No. 0950137-028-AC; Rule 62-210.200(PTE), F.A.C. and Rule 62-4.070(3), F.A.C.]

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

#### A. Coal-Fuel Fired Units No. 1 and 2

- 14. Notifications: The permittee shall provide the Compliance Authority with a written preliminary schedule for conducting any emissions tests (by letter, fax, or email). The preliminary schedule shall be updated as necessary. The permittee shall provide the Compliance Authority with at least 15 days advance notice (by phone, fax, or email) prior to conducting any emissions tests.
  [Application No. 0950137-028-AC; Rule 62-210.200(PTE), F.A.C. and Rule 62-4.070(3), F.A.C.]
- 15. Fly Ash Sampling Plan: OUC shall submit a fly ash sampling plan to the Bureau of Air Regulation prior to the commencement of testing. The sampling plan shall specify the manner by which fly ash samples will be collected to insure they correspond to specific rates of additive application. The samples collected shall be labeled with the date and the test conditions including the additive application rate and submitted to the Bureau of Air Regulation. [Rule 62-4.070(3), F.A.C.]

#### **RECORDS AND REPORTS**

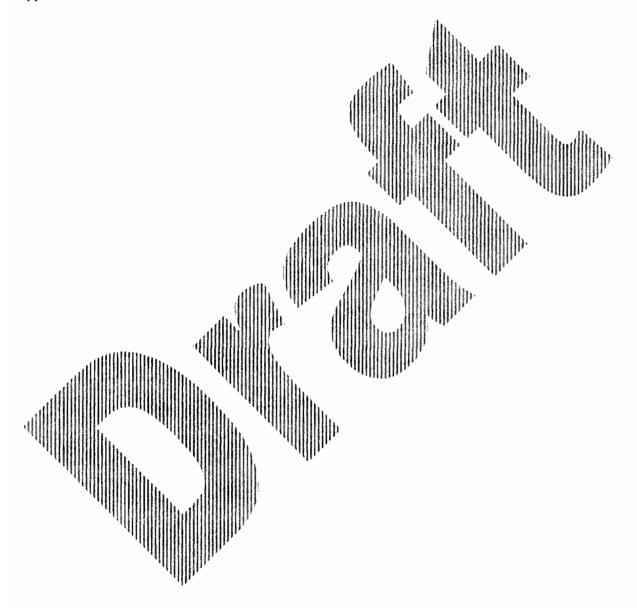
16. Test Report: Within 60 days of completing all test burns, the permittee shall submit a final report summarizing all test burns to the Bureau of Air Regulation and the Compliance Authority. The final report shall provide the following: the actual schedule and overall description of each trial test burn; any operational issues related to the coal additive; a comparison of baseline operation versus operation with the coal additive; an evaluation of equipment compatibility with coal additive; a summary and comparison of continuous emissions, VE (opacity) and ammonia monitoring data; a summary and comparison of the specified operational parameters; a summary and comparison of emissions test results; a comparison of continuously monitored emissions; a discussion of the impacts on LOI; and a discussion of emissions as described in Appendix C of 40 CFR 60. [Rules 62-4.070(3), 62-210.200(RITE) and 62-212.400, F.A.C.]



# Contents

Appendix A. Citation Formats and Glossary of Common Terms

Appendix B. General Conditions
Appendix C. Common Conditions



# Citation Formats and Glossary of Common Terms

#### CITATION FORMATS

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

#### **Old Permit Numbers**

Example: Permit No. AC50-123456 or Permit No. AO50-123456

Where: "AC" identifies the permit as an Air Construction Permit

"AO" identifies the permit as an Air Operation Permit

"123456" identifies the specific permit project number

#### **New Permit Numbers**

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: "099" represents the specific county ID number in which the project is located

"2222" represents the specific facility ID number for that

"001" identifies the specific permit project number

"AC" identifies the permit as an air construction permit

"AF" identifies the permit as a minor source federally enforceable state operation permi

"AO" identifies the permit as a minor source ain operation permit

"AV" identifies the permittage major Title Vain operation permit

# PSD Permit Number

Example: Permit No. PSD-FL-31

Where: PSD" means issued pursuant to the preconstruction review requirements of the Prevention of

Imeans that the permit was issued by the State of Florida

3 1777 Identifies the specific permit project number

# Florida Administrative Code (F.

Example: [Rule 62-213-205] F.M.C.

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

#### Code of Federal Regulations (CFR)

Example: [40 CRF 60.7]

Means: Title 40, Part 60, Section 7

# **GLOSSARY OF COMMON TERMS**

° F: degrees Fahrenheit acf: actual cubic feet

μg: microgram acfm: actual cubic feet per minute

AAQS: Ambient Air Quality Standard

#### Citation Formats and Glossary of Common Terms

ARMS: Air Resource Management System

(Department's database)

BACT: best available control technology

**bhp**: brake horsepower **Btu**: British thermal units

CAM: compliance assurance monitoring

CEMS: continuous emissions monitoring system

cfm: cubic feet per minute

CFR: Code of Federal Regulations

CAA: Clean Air Act

CMS: continuous monitoring system

CO: carbon monoxide CO<sub>2</sub>: carbon dioxide

COMS: continuous opacity monitoring system

DARM: Division of Air Resource Management,

**DEP**: Department of Environmental Protection

**Department**: Department of Environmental

Protection

dscf: dry standard cubic feet

dscfm: dry standard cubic feet per minute

EPA: Environmental Protection Agency

reducing particulate matter)

EU: emissions unit

FI: fluoride

F.A.C.: Florida Administrative Code

F.A.W.: Florida Administrative Weekl

F.D.: forced draft

F.S.: Florida Statut

FGD: flue gas desulfurization

FGR: flue gas recirculation

ft<sup>2</sup>: square feet ft<sup>3</sup>: cubic feet

gpm: gallons per minute

gr: grains

HAP: hazardous air pollutant

Hg: mercury

I.D.: induced draft

ID: identification

kPa: kilopascals

lb: pound

MACT: maximum achievable technology

MMBtu: million British thermal units

MSDS: material safety data sheets

MW: megawatt

NESHAP: National Emissions Standards for Hazardous

ir Pollutants

NSPS: New Source Performance Standards

**D&M**: operation and maintenance

 $\mathcal{J}_2$ : oxygen

Pb: lead

PM: particulate matter

PM<sub>10</sub>: particulate matter with a mean aerodynamic

diameter of 10 microns or less

ppmy: parts per million by volume

ppmvd: parts per million by volume, dry basis

QA: quality assurance
QC: quality control

**PSD**: prevention of significant deterioration

psi: pounds per square inch

PTE: potential to emit

RACT: reasonably available control technology

RATA: relative accuracy test audit

RBLC: EPA's RACT/BACT/LAER Clearinghouse

**SAM**: sulfuric acid mist **scf**: standard cubic feet

scfm: standard cubic feet per minute

SIC: standard industrial classification code

SIP: State Implementation Plan

SNCR: selective non-catalytic reduction (control system

used for reducing emissions of nitrogen oxides)

SO<sub>2</sub>: sulfur dioxide TPD: tons/day TPH: tons per hour

TPY: tons per year

TRS: total reduced sulfur

UTM: Universal Transverse Mercator coordinate system

VE: visible emissions

**VOC**: volatile organic compounds

#### SECTION 4. APPENDIX B (DRAFT)

#### **General Conditions**

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

- 1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- 2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- 3. As provided in subsections 403.987(6) and 403.722(5) F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.
- 4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title!
- 5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction of operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- 6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- 7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

  - Have access to and copy any records that must be kept under conditions of the permit;
    Inspect the facility equipment, practices, or operations regulated or required under this permit; and
  - Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
- 8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
  - A description of and cause of noncompliance; and
  - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may

#### **General Conditions**

result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

- 9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- 10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302 500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.
- 11. This permit is transferable only upon Department approval in accordance with Rules 62-4120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department of the permitted activity.
- 12. This permit or a copy thereof shall be kept at the work site of the permitted activity
- 13. This permit also constitutes:
  - a. Determination of Best Available Control Technology (not applicable):
  - b. Determination of Prevention of Significant Deterioration (not applicable); and
  - c. Compliance with New Source Performance Standards (not applicable).
- 14. The permittee shall comply with the following:
  - a. Upon request the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
  - c. Records of monitoring information shall include:
    - (a) The date, exact place, and time of sampling or measurements;
    - (b) The person responsible for performing the sampling or measurements;
    - (c) The dates analyses were performed;
    - (d) The person responsible for performing the analyses;
    - (e) The analytical techniques or methods used;
    - (f) The results of such analyses.

#### **General Conditions**

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.



## **SECTION 4. APPENDIX C (DRAFT)**

#### **Common Conditions**

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.

#### **EMISSIONS AND CONTROLS**

- 1. Plant Operation Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit of the regulations [Rule 62:4.130, F.A.C.]
- Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
   Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or mal function of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed 2 hours in any 24-hour period unless specifically authorized by the Department for longer duration. Pursuant to Rule 62-210.700(5), F.A.C., the permit subsection may specify more or less stringent requirements for periods of excess emissions. Rule 62-210-700(Excess Emissions), F.A.C., cannot vary or supersede any federal NSPS or NESHAP provision. [Rule 62-210.700(1) FA.C.]
- 4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment of process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210,700(4), F.A.C.]
- 5. Excess Emissions Notification: In case of excess emissions resulting from malfunctions, the permittee shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
- 6. MOC of OS Emissions: No person shall store pump, handle, process, load, unload or use in any process or installation volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296/320(1)], F.A.C.]
- 7. Objectionable Ocion Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
- 8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
- 9. <u>Unconfined Particulate Emissions</u>: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

#### RECORDS AND REPORTS

10. <u>Records Retention</u>: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]

# 11. Emissions Computation and Reporting:

- a. Applicability. This rule sets forth required methodologies to be used by the owner or operator of a facility for computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for computing emissions for purposes of the reporting requirements of subsection 62-210.370(3) and paragraph 62-212.300(1)(e), F.A.C. or of any permit condition that requires emissions be computed in accordance with this rule. This rule is not intended to establish methodologies for determining compliance with the emission limitations of any air permit. [Rule 62-210.370(1), F.A.C.]
- b. Computation of Emissions. For any of the purposes set forth in subsection 62-210370(1), F.A.C., the owner or operator of a facility shall compute emissions in accordance with the requirements set forth in this subsection.
  - (1) Basic Approach. The owner or operator shall employ on a pollutant-specific basis, the most accurate of the approaches set forth below to compute the emissions of a pollutant from an emissions unit; provided, however, that nothing in this rule shall be construed to require installation and operation of any continuous emissions monitoring system (CEMS), continuous parameter monitoring system (CPMS), or predictive emissions monitoring system (PEMS) not otherwise required by rule or permit, nor shall anything in this rule be construed to require performance of any stack testing not otherwise required by rule or permit.
    - (a) If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the owner or operator shall use such CEMS to compute the emissions of the pollutant unless the owner or operator demonstrates to the department that an alternative approach is more accurate because the CEMS represents still-emerging technology.
    - b) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C, but emissions of the pollutant can be computed pursuant to the mass balance methodology of paragraph 62-210.370(2)(c), F.A.C., the owner or operator shall use such methodology unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
    - (c) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the owner or operator shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
  - (2) Continuous Emissions Monitoring System (CEMS).
    - (a) An owner or operator may use a CEMS to compute emissions of a pollutant for purposes of this rule provided:
      - 1) The CEMS complies with the applicable certification and quality assurance requirements of 40 CFR Part 60, Appendices B and F, or, for an acid rain unit, the certification and

- quality assurance requirements of 40 CFR Part 75, all adopted by reference at Rule 62-204.800, F.A.C.; or
- The owner or operator demonstrates that the CEMS otherwise represents the most 2) accurate means of computing emissions for purposes of this rule.
- Stack gas volumetric flow rates used with the CEMS to compute emissions shall be obtained by the most accurate of the following methods as demonstrated by the owner or operator:
  - A calibrated flow meter that records data on a continuous basis, if available; or 1)
  - The average flow rate of all valid stack tests conducted during a five-year period 2) encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
- The owner or operator may use CEMS data in combination with an appropriate f-factor, heat input data, and any other necessary parameters to compute emissions if such method is demonstrated by the owner or operator to be more accurate than using a stack gas volumetric flow rate as set forth at subparagraph 62-210.37.0(2)(b)2. F.A.C., above.
- (3) Mass Balance Calculations.
  - An owner or operator may use mass balance calculations to compute emissions of a pollutant for purposes of this rule provided the owner or operator:
    - Demonstrates a means of validating the content of the pollutant that is contained in or created by all materials or fuels used in or at the emissions unit; and 1)
    - Assumes that the emissions unit emissions unit; and by any material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process or in the capture and destruction of the pollutant by the unit's air pollution control equipment. 2)
    - Where the vendor of a raw material or fuel which is used in or at the emissions unit publishes a range of pollutant content from such material or fuel, the owner or operator shall use the highest value of the range to compute the emissions, unless the owner or operator demonstrates using site-specific data that another content within the range is more accurate.
    - In the case of an emissions unit using coatings or solvents, the owner or operator shall document, through purchase receipts, records and sales receipts, the beginning and ending VOC inventories; the amount of VOC purchased during the computational period, and the amount of VOC disposed of in the liquid phase during such period.

#### (4) Emission Factor

- a. An owner of operator may use an emission factor to compute emissions of a pollutant for purposes of this rule provided the emission factor is based on site-specific data such as stack test data, where available, unless the owner or operator demonstrates to the department that an alternative emission factor is more accurate. An owner or operator using site-specific data to derive an emission factor, or set of factors, shall meet the following requirements.
  - 1) If stack test data are used, the emission factor shall be based on the average emissions per unit of input, output, or gas volume, whichever is appropriate, of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same

- operational and physical configuration of the unit.
- 2) Multiple emission factors shall be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.
- The owner or operator shall compute emissions by multiplying the appropriate emission factor by the appropriate input, output or gas volume value for the period over which the emissions are computed. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.
- b. If site-specific data are not available to derive an emission factor, the owner or operator may use a published emission factor directly applicable to the process for which emissions are computed. If no directly-applicable emission factor is available, the owner or operator may use a factor based on a similar, but different, process.
- (5) Accounting for Emissions During Periods of Missing Data from CEMS, PEMS, or CPMS. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of missing data from CEMS PEMS or CPMS using other site-specific data to generate a reasonable estimate of such emissions!
- (6) Accounting for Emissions During Periods of Startup and Shutdown. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit
- (7) Fugitive Emissions In computing the emissions of a pollutant from a facility or emissions unit, the owner or operator shall account for the fugitive emissions of the pollutant, to the extent quantifiable, associated with such facility or emissions unit.
  - Recordkeeping: The owner or operator shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the department for any regulatory purpose.

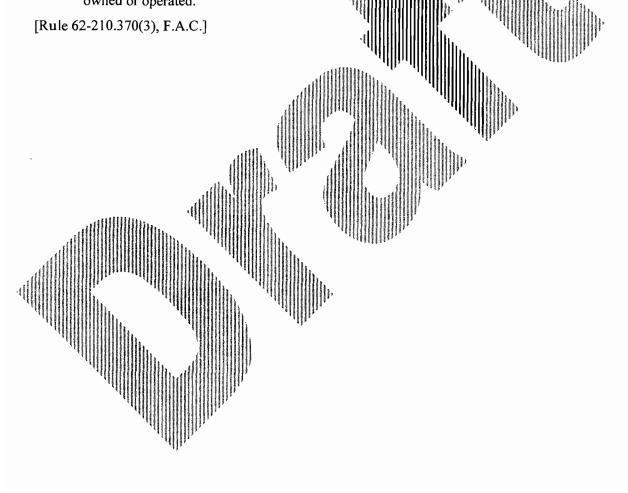
10.370(2), F.A.C

- Annual Operating Report for Air Pollutant Emitting Facility
  - (1) The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year for the following facilities:

    a. All Title W sources.

    - b. All synthetic non-Title V sources.
    - c. All facilities with the potential to emit ten (10) tons per year or more of volatile organic compounds or twenty-five (25) tons per year or more of nitrogen oxides and located in an ozone nonattainment area or ozone air quality maintenance area.
    - d. All facilities for which an annual operating report is required by rule or permit.
  - (2) Notwithstanding paragraph 62-210.370(3)(a), F.A.C., no annual operating report shall be required for any facility operating under an air general permit.

- Protection (DEP) division, district or DEP-approved local air pollution control program office by April 1 of the following year. If the report is submitted using the Department's electronic annual operating report software, there is no requirement to submit a copy to any DEP or local air program office.
- (4) Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C., for purposes of the annual operating report.
- (5) Facility Relocation. Unless otherwise provided by rule or more stringent permit condition, the owner or operator of a relocatable facility must submit a Facility Relocation Notification Form (DEP Form No. 62-210.900(6)) to the Department at least 30 days prior to the relocation. A separate form shall be submitted for each facility in the case of the relocation of multiple facilities which are jointly owned or operated.



# Livingston, Sylvia

From: Livingston, Sylvia

Sent: Thursday, December 10, 2009 5:30 PM

To: 'jaspuru@ouc.com'

Cc: 'dstalls@ouc.com'; 'Scott\_Osbourn@golder.com'; Shine, Caroline; 'lori.cunniff@ocfl.net';

'jodi.dittell@ocfl.net'; Gibson, Victoria; Read, David; Linero, Alvaro; Walker, Elizabeth (AIR)

Subject: Orlando Utilities Commission - STANTON ENERGY CENTER; 0950137-028-AC

Attachments: 0950137-028-AC - Written Notice.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/0950137.028.AC.D\_pdf.zip

Owner/Company Name: ORLANDO UTILITIES COMMISSION

Facility Name: STANTON ENERGY CENTER

**Project Number:** 0950137-028-AC

Permit Status: DRAFT

**Permit Activity: CONSTRUCTION** 

Facility County: ORANGE Processor: David Read

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 <a href="http://www.dep.state.fl.us/air/eproducts/apds/default.asp">http://www.dep.state.fl.us/air/eproducts/apds/default.asp</a>.

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: Aspuru, Jan [JAspuru@ouc.com]

Sent: Wednesday, December 16, 2009 10:23 AM

To: Livingston, Sylvia

Cc: Stalls, Denise M.; Bowen, Sharon E.

Subject: RE: Orlando Utilities Commission - STANTON ENERGY CENTER; 0950137-028-AC

Ms. Livingston,

My apologies for the late reply. This email is to acknowledge that I am in receipt of the attached document. Thank you.

Jan C. Aspuru VP - Power Resources Orlando Utilities Commission 407-649-3944 (w) 407-275-4120 (f)

#### DISCLAIMER:

Horida has a very broad public records law. As a result, any written communication created or received by Orlando Utilities Commission officials and employees will be made available to the public and media, upon request, unless otherwise exempt. Under Florida law, email addresses are public records. If you do not want your email address retrased in response to a public records request, do not send electronic mail to this office. Instead, contact our office by phone or in writing.

**From:** Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]

Sent: Wednesday, December 16, 2009 10:18 AM

To: Aspuru, Jan

Subject: FW: Orlando Utilities Commission - STANTON ENERGY CENTER; 0950137-028-AC

# Dear Mr. Aspuru:

We have not received confirmation that you were able to access the documents attached to this December 10th e-mail. Please confirm receipt by opening the attachment and sending a reply to me. The Division of Air Resource Management is sending electronic versions of these documents rather than sending them Return Receipt Requested via the US Postal service. Your "receipt confirmation" reply serves the same purpose as tracking the receipt of the signed "Return Receipt" card from the US Postal Service. Please let me know if you have any questions.

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

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: Livingston, Sylvia

Sent: Thursday, December 10, 2009 5:30 PM

To: 'jaspuru@ouc.com'

Cc: 'dstalls@ouc.com'; 'Scott\_Osbourn@golder.com'; Shine, Caroline; 'lori.cunniff@ocfl.net'; 'jodi.dittell@ocfl.net'; Gibson,

Victoria; Read, David; Linero, Alvaro; Walker, Elizabeth (AIR)

Subject: Orlando Utilities Commission - STANTON ENERGY CENTER; 0950137-028-AC

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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

Bureau of Air Regulation

Division of Air Resource Management (DARM)

850/921-9506

sylvia.livingston@dep.state.fl.us

Note: The attached document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <a href="http://www.adobe.com/products/acrobat/readstep.html">http://www.adobe.com/products/acrobat/readstep.html</a>