



August 31, 2006

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BUREAU OF AIR REGULATION

Mr. Jeff Koerner, PE
Professional Engineer Administrator
Division of Air Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road, M.S. 5500
Tallahassee, Florida 32399-2400

RE: Response to Request for Additional Information
Application for Title V Permit Renewal and Title V Permit Revision
Florida Power Corporation d/b/a Progress Energy Florida, Inc.
Hines Energy Complex
Title V Permit No. 1050234-008-AV/-012-AV
Facility ID 1050234

Dear Mr. Koerner:

On June 12, 2006 Florida Power Corporation d/b/a Progress Energy Florida, Inc. ("PEF") received your June 8 letter to Martin J. Drango requesting additional information regarding the recently submitted Title V Permit Renewal/Revision for the Hines Energy Complex. Below addresses each item individually and notes enclosures as necessary.

1. For all of the responses, please identify the affected Power Block(s) (1, 2, and/or 3) and the proposed changes. Since it appears that previously issued air construction permits will be affected by the proposed changes, please request (check the box in the application) under the "Purpose of Application" that the permitting action will include the issuance of an air construction permit and possibly "concurrent processing".

The appropriate pages of the permit application are enclosed. PEF is requesting changes made to permit language that requires changes to the corresponding air construction permits. Therefore, an updated application purpose form is enclosed.

2. For Power Blocks 1, 2 and 3, please list and describe/define the various "methods of operation" that affect each CT and their operation, i.e., startup (cold, warm and hot), shutdown and fuel switch (gas to oil and oil to gas). For the previous two years, submit actual operational CEMS data (Excel worksheet) and a summary of emissions test data in ppm, lbs/hr, lbs/yr and lbs/episode, for each affected pollutant from these various methods of operation. Please provide the actual frequency for each method of operation that has occurred and been experienced at the plant for each emissions unit for the last five years of operation or for which data is available. For each method of operation, please describe the various stages/steps within each method of operation and appropriate duration. Discuss the potential for actual emissions increases as a result of the proposed changes.

Since PEF is requesting changes to Power Block 2, CT2A and CT2B (Emission Unit Nos. -014 and -015) as well as Power Block 3, CT3A and CT3B (Emission Unit Nos. -016, and -017) with regard to CEMS data exclusion, enclosed is the requested information for the different methods of operation for these combustion turbines.

3. From our meeting on June 6th, you plan to revise your original request regarding excess emissions for these various operating methods. Please consider proposing an alternate emissions standard for these periods.

The information in this written response replaces the original request in Attachment PEF-FI-CV6 of the April 2006 Title V Permit Renewal/Revision submittal.

4. For all of the proposed "Excess Emissions" changes, please justify each method of operation and the proposed timeframe associated with each method of operation.

As summarized in the CEMs Data Exclusion Proposed Changes Section of the enclosed, PEF is proposing changes to just two methods of operation, Cold Start – Both Emission Units in Power Block and Fuel Switch.

PEF is also requesting clarification of the language for all Power Blocks (Emission Unit Nos. -001, -002, -014, -015, -016, -017) with regard to the ASTM methods for fuel sulfur content determination (see pages ASTM-1 through ASTM-3 in the enclosed).

5. For any changes/edits made to the initial submittal, please make appropriate changes/edits and resubmit, i.e., ATTACHMENT PEF-FI-CV6.

The information in this response to the Department's request for additional information replaces the previous Attachment PEF-FI-CV6.

6. Under Specific Condition E.9., please define and describe what "process control adjustments" are (including examples), their frequency of occurrence, and any effect on emissions. Please include a response on the process that is involved with handling these types of episodes. Also, provide the same emissions related data as requested in Item #2, above.

As discussed at the June 6, 2006 meeting, PEF is requesting clarification regarding the definition of the major tuning session in CEMS Data Exclusion – DLN tuning in Specific Condition E.9 of the current Title V Permit and Condition 14 of the PSD-FL-330 (PB3) by the addition of "process control adjustments" to the language. Current language states, "A 'major tuning session' would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or other similar circumstances."

Hines Energy Complex has not yet experienced this type of adjustment and has no emissions data available. However a good example of such a process control adjustment has occurred at another PEF facility, which is described below:

Due to original design issues, the superheater section had over-performance issues which resulted in the need for excess desuperheater spray water to cool the steam to acceptable steam piping and steam turbine temperature and saturation limitations.

Several heat recovery steam generator (HRSG) mechanical modifications had been performed over the years without complete success. During some loads the steam temperature could not be adequately controlled resulting in steam temperatures

below saturation. Operating at below saturation presents dangerous and detrimental conditions for the steam piping, superheater and potentially the steam turbine. In an attempt to minimize these potentially adverse impacts the HP desuperheater was operated under manual control during periods of Plant startup, minimum load, transient and shut down operations.

The basis for the process control logic modification and tuning project was to address the HP superheater performance issues and enable the Plant to operate within the equipment limits while maintaining established performance limits. Control logic that had been used on other Progress Energy GE 7F gas turbines with similar HRSG and superheater designs was applied. Therefore, it resulted in minimal on line testing and tuning.

The installation, commissioning and tuning of the new desuperheating control logic resulted in the HRSG HP superheater operation within established limits while in automatic control, utilizing a series of rules and limits based on manufacturer's instructions and industry best practices. The risk to the equipment has essentially been eliminated and the Plant is now able to operate in a safe, controlled mode during Plant startup, minimum load, transient and shut down operations.

Though the Hines Energy Complex is mostly Siemens equipment, PEF is making this request for possible future projects where tuning is required with adjustments related to other pieces of equipment associated with the system. This will minimize the higher emission rates typically seen during multiple start ups of the emission unit for a process control adjustment.

Thank you for your assistance. Please let Ann Quillian know at (727) 820-5962, if you have any questions.

Sincerely,



Martin J. Drango, P.E.
Plant Manager

Enclosures

cc: Ms. Cindy Zhang-Torres, FDEP Southwest District

APPLICATION INFORMATION

Purpose of Application

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

Air Construction Permit

Air construction permit.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

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

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

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

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

Application Comment

The application represents renewal of Title V Permit No. 1050234-012-AV and revision to include Construction Permit No. 1050234-013-AC / PSD-FL-330. Emission Unit No. 004, Emergency Diesel Generator was never installed, therefore request that it be removed from the Title V permit.

APPLICATION INFORMATION

Application Responsible Official Certification

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

1. Application Responsible Official Name: Martin J. Drango, Plant Manager
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: Florida Power Corporation dba Progress Energy Florida, Inc. Street Address: 100 Central Avenue - HE44 City: St. Petersburg State: FL Zip Code: 33701
4. Application Responsible Official Telephone Numbers... Telephone: (863) 519-6103 ext. Fax: (863) 519-6110
5. Application Responsible Official Email Address:
6. Application Responsible Official Certification: <i>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i> Signature <u><i>Martin J. Drango</i></u> Date <u>8/31/06</u>

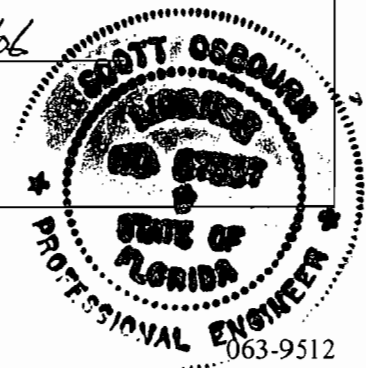
APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Scott Osbourn Registration Number: 57557
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 5100 West Lemon Street City: Tampa State: FL Zip Code: 33609
3. Professional Engineer Telephone Numbers... Telephone: (813) 287-1717 ext. Fax: (813) 287-1716
4. Professional Engineer Email Address: sosbourn@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input checked="" type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature _____ Date <u>8/31/06</u> (seal)

* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization #00001670



CEMs Data Exclusion Proposed Changes
Florida Power Corporation d/b/a Progress Energy Florida, Inc.
Hines Energy Complex
Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

CEMs Data Exclusion Proposed Changes
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

TABLE DE-1
 Summary of CEMs Data Exclusion Proposed Changes

Method of Operation	Current Permit Limitation	Specific Condition No.	Proposed Change	Change in Emissions?
Cold Start – Both Emission Units on One Power Block	4 hours per 24 hour block with total of 6 hours CEM excluded	E.8.a. (PB2) 13.a. (PB3)	Definition of Cold Start; 7 hours Cold Start – Both Emission Units	No Change (possibly a reduction)
Cold Start – One Emission Unit on One Power Block	4 hours per 24 hour block with total of 6 hours excluded	E.8.a. (PB2) 13.a. (PB3)	No Change	No Change
Warm/Hot Start – Both Emission Units on One Power Block	2 hours per 24 hour block	E.8.e. (PB2) 13.e. (PB3)	No Change	No Change
Warm/Hot Start – One Emission Unit on One Power	2 hours per 24 hour block	E.8.e. (PB2) 13.e. (PB3)	No Change	No Change
Shutdown	2 hours per 24 hour block	E.8.e. (PB2) 13.e. (PB3)	No Change	No Change
Fuel Switch	Oil –to- Gas 2 hours per 24 hour period	E.8.e. (PB2) 13.e. (PB3)	Fuel Switch (both directions); 2 hours per switch not to exceed 4 hours per 24 hour block period.	Maintain current site limitation for fuel oil consumption.
Malfunction	Documented with FDEP; 2 hours per 24 hour block	E.8.d. (PB2) 13.d. (PB3)	No Change	No Change
Tuning Session	FDEP Notification	E.9. (PB2) 14. (PB3)	No Change	No Change

Cold Start – Both Emission Units on One Power Block

Current Title V and air construction permit language allows for data exclusions of 4 hours per 24-hour block for cold start with total excluded hours of 6 hours per 24-hour block. Since these permits were written, more operating knowledge with the Siemens F-Class combustion turbines is available. These combustion turbines (CTs) operate differently than the GE counterparts, which the original permit language was based.

CEMs Data Exclusion Proposed Changes
Florida Power Corporation d/b/a Progress Energy Florida, Inc.
Hines Energy Complex
Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

It has been observed that (see the enclosed operational CEMs data and methods of operation) for a cold start of both emission units on one power block, the total hours to reach operating level is 6 hours rather than 4 hours.

Operating in compliance with the current permits, the cold start-both emission units occurs during the night shift and in two 24-hour blocks (i.e. 8 pm – 3 am). This limits the system to cold start – both emission units only during the night and usually before the unit is needed.

PEF is requesting a permit language update to address the time involved in a cold start-both emission units as well as the definition of cold start. This permit language clarification request does not meet the major modification definition in Rule 62-210.200(161), F.A.C., because no change in method of operation or increase in total time for data exclusion would occur. That is for cold startup – both emissions units per power block the maximum period of data excluded would not exceed 7 hours in any 24-hour block and if the cold startup period runs over to the next 24-hour block, the total period for the cold startup-both emission units per power block event will not exceed 7 hours.

This is not an increase in emissions, but rather a decrease. As with the current permit language, the total allowed time for cold start is 8 hours over the midnight time frame and PEF is requesting 7 hours.

PEF is also requesting the FDEP clarify the definition of cold startup to align with the definition in the Power Block 1: CT1A (EU No. -001) and CT1B (EU No. -002) of the Title V Permit.

Fuel Switch

The current permit allows CEMs data exclusion of 2 hours per 24-hour block for oil-to-gas fuel switch and was an artifact copy of similar language for a GE CT for a different utility. It has been observed that the Siemens F-Class CTs' fuel switch operation occurs at low loads in either fuel direction, ^{which} with is different from the GE equivalent CTs. As from the enclosed Methods of Operation, a fuel switch can last 1.5 to 2.5 hours. PEF is requesting that the CEMs data exclusion for fuel switch also apply to gas-to-oil or 2 hours per fuel switch, not to exceed 4 hours total per 24 hour block.

With the increase in hurricane activity, PEF has observed the need to be prepared to burn fuel oil in case of natural gas curtailment. The original equipment manufacturer (OEM), Siemens Power Generation (SPG) has recommended that a fuel switch be performed twice per month per CT. This enables the equipment associated with the fuel oil system to remain in working order and be ready for use during curtailment.

The Title V Permit and air construction permits limit the amount of annual fuel oil consumption. The site is also limited in the amount of fuel oil stored onsite. PEF is not asking for a change to the current limitation to fuel oil burned and is not changing an existing method of operation. PEF is just requesting a change in the language for fuel switch CEMs data exclusion.

Frequency of Methods of Operation
Years 2003 - 2006

Florida Power Corporation d/b/a Progress Energy Florida, Inc.
Hines Energy Complex

Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Frequency of Methods of Operation
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Power Block 2
 Emission Unit No. -014 (CT2A)

Method of Operation	2003	2004	2005	YTD 6/2006
Cold Start – Both Units	0	6	4	2
Cold Start – One Unit	0	1	3	1
Warm Start – Both Units	0	5	1	0
Warm Start – One Unit	0	6	15	6
Shutdown	1	15	25	11
Fuel Switch	0	2	3	² 2
Malfunction	2	6	2	2
Tuning Session	0	4	1	2

¹PB2 began commercial operation 12/2003.

²Fuel switch occurred during tuning session.

Emission Unit No. -015 (CT2B)

Method of Operation	2003	2004	2005	YTD 6/2006
Cold Start – Both Units	1	6	3	2
Cold Start – One Unit	0	2	3	5
Warm Start – Both Units	0	4	0	0
Warm Start – One Unit	1	4	19	4
Shutdown	3	12	26	11
Fuel Switch	0	2	2	² 2
Malfunction	2	4	4	0
Tuning Session	0	4	1	2

¹PB2 began commercial operation 12/2003.

²Fuel switch occurred during tuning session.

Current Title V Permit Language defines cold start-up in Specific Condition E.8.a. which reads as follows:

- a. Periods of data excluded for startup shall not exceed two hours in any 24-hour block except for cold startups. A “cold startup” is defined as a startup following a complete shutdown lasting a minimum of 48 hours. Periods of data excluded for cold startup shall not exceed four hours in any 24-hour block period.

Frequency of Methods of Operation
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Power Block 3
 Emission Unit No. -016 (CT3A)

Method of Operation	2005	YTD 6/2006
Cold Start – Both Units	1	3
Cold Start – One Unit	1	4
Warm Start – Both Units	1	0
Warm Start – One Unit	4	28
Shutdown	5	32
Fuel Switch	0	² 1
Malfunction	0	2
Tuning Session	0	1

¹PB3 began commercial operation 11/2005.

² Fuel switch occurred during tuning session.

Emission Unit No. -017 (CT3B)

Method of Operation	2005	YTD 6/2006
Cold Start – Both Units	1	2
Cold Start – One Unit	0	4
Warm Start – Both Units	0	1
Warm Start – One Unit	3	6
Shutdown	4	12
Fuel Switch	0	² 2
Malfunction	1	2
Tuning Session	0	2

¹PB3 began commercial operation 11/2005.

²Fuel switch occurred during tuning session.

Current PSD air construction permit defines cold start-up in Specific Condition 13.a. which reads as follows:

- a. Periods of data excluded for startup shall not exceed two hours in any 24-hour block except for cold startups. A “cold startup” is defined as a startup following a complete shutdown lasting a minimum of 48 hours. Periods of data excluded for cold startup shall not exceed four hours in any 24-hour block period.

Operational CEMs Data

June 2004 – June 2006

Florida Power Corporation d/b/a Progress Energy Florida, Inc.

Hines Energy Complex

Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)

Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT2A Emission Unit -014 - Cold Start (Both Emission Units on One Power Block) - 6/2004 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values							Calculated Values					
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
7/6/2004	20	0.088	568.1	23.8	2571.5	49		1061	5.8	3230		64967
7/6/2004	21	0.107	770.4	28.9	4301.5	82			9.7	7468		
7/6/2004	22	0.107	789.9	28.9	4200.1	85			9.5	7477		
7/6/2004	23	0.102	803.1	27.8	4124.1	82			9.2	7397		
7/7/2004	0	0.043	978.5	11.8	1068.5	42			2.4	2319		
7/7/2004	1	0.057	1013.5	15.5	967.9	58	398		2.2	2196	30088	
8/16/2004	12	0.070	461.2	18.9	1878.7	32			4.2	1953		
8/16/2004	13	0.112	700.8	30.3	4262.6	78			9.6	6721		
8/16/2004	14	0.101	785.4	27.5	4107.0	79			9.2	7211		
8/16/2004	15	0.093	923.6	25.3	1772.8	86			4.0	3664		
8/16/2004	16	0.047	1135.1	12.7	179.4	53	329		0.4	459	20008	
12/9/2004	11	0.111	628.1	30.0	3302.0	70			7.4	4671		
12/9/2004	12	0.125	759.1	33.9	4025.8	95			9.0	6859		
12/9/2004	13	0.131	727.7	33.6	1932.1	95			4.6	3337		
12/9/2004	14	0.056	1313.2	14.4	1.1	74	333		0.0	3	14870	
1/16/2005	20	0.163	585.0	41.9	2981.7	95		2073	7.1	4131		110038
1/16/2005	21	0.151	705.7	39.0	3609.7	107			8.5	6004		
1/16/2005	22	0.154	705.1	39.6	3731.6	109			8.8	6228		
1/16/2005	23	0.151	738.8	38.9	3813.0	112			9.0	6656		
1/17/2005	0	0.126	898.4	32.3	2880.9	113			6.8	6146		
1/17/2005	1	0.011	1217.4	3.0	255.5	13	549		0.6	694	29859	
1/31/2005	20	0.129	597.5	35.0	2852.7	77			6.4	3824		
1/31/2005	21	0.136	709.4	37.0	3571.4	96			8.0	5669		
1/31/2005	22	0.141	708.8	38.3	3655.7	100			8.2	5807		
1/31/2005	23	0.135	789.6	36.6	3784.9	107			8.5	6710		
2/1/2005	0	0.125	895.0	33.9	2989.7	112			6.7	6006		
2/1/2005	1	0.076	1115.6	20.6	804.4	85	577		1.8	2015	30030	
3/1/2005	20	0.141	620.8	38.2	2806.4	88			6.3	3914		
3/1/2005	21	0.142	697.5	38.4	3439.5	99			7.7	5400		
3/1/2005	22	0.133	799.7	36.0	3885.6	106			8.7	6988		
3/1/2005	23	0.141	764.8	38.3	3970.9	108			8.9	6806		
3/2/2005	0	0.142	776.6	38.6	3902.8	110			8.7	6787		
3/2/2005	1	0.120	943.1	32.7	2188.0	113			4.9	4609		
3/2/2005	2	0.081	997.9	21.9	1252.3	81			2.8	2813		
3/2/2005	3	0.025	1298.4	6.8	138.7	32	738		0.3	403	37721	
7/13/2005	20	0.103	611.7	27.8	3054.2	63			6.9	4213		
7/13/2005	21	0.107	799.7	28.9	3491.4	86			7.9	6293		
7/13/2005	22	0.052	1179.4	14.2	731.0	61	210		1.6	1922	12428	
2/8/2006	20	0.144	508.7	39.2	2491.4	73		1138	5.6	2834		55908
2/8/2006	21	0.162	728.1	43.9	3733.8	118			8.4	6107		
2/8/2006	22	0.158	743.4	42.9	3952.5	117			8.9	6587		
2/8/2006	23	0.153	764.7	41.6	4007.8	117			9.0	6861		
2/9/2006	0	0.117	884.2	31.8	2803.9	103			6.3	5552		
2/9/2006	1	0.011	1145.0	3.0	285.7	13	542		0.6	730	28672	
3/7/2006	20	0.156	553.0	42.2	2607.1	86			5.9	3244		
3/7/2006	21	0.172	735.4	46.7	3710.2	126			8.3	6117		
3/7/2006	22	0.169	762.1	45.8	4016.3	129			9.0	6875		
3/7/2006	23	0.161	783.4	43.8	3887.1	126			8.7	6814		
3/8/2006	0	0.132	973.4	35.9	1921.5	128	596		4.3	4186	27236	
6/2004 Through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate					Average					
5	5	0.114		30.6	2773.6	87	475	2136	6.3	4713	25657	115456
							TPY	1.1			TPY	57.7

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT2A Emission Unit -014 - Cold Start (One Emission Unit on One Power Block) - 6/2004 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values							
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
11/30/2004	8	0.124	676.4	33.6	3073.0	84		120	6.9	4669		4678	
11/30/2004	9	0.029	1236.7	7.8	3.0	36	120		0.0	8	4678		
11/14/2005	6	0.118	675.6	32.0	3233.0	80		333	7.3	4903		16381	
11/14/2005	7	0.018	1389.1	5.0	176.8	25	105		0.4	538	5441		
11/27/2005	6	0.128	654.6	34.7	3222.4	84			7.2	4736			
11/27/2005	7	0.020	1285.7	5.4	199.7	26	110		0.5	579	5315		
12/12/2005	5	0.122	704.8	33.2	3152.5	86			7.1	4970			
12/12/2005	6	0.025	1321.3	6.8	221.5	33	119		0.5	655	5625		
4/19/2006	10	0.123	676.1	33.4	2791.4	83		132	6.3	4231		6677	
4/19/2006	11	0.066	746.1	17.8	1452.7	49	132		3.3	2446	6677		
6/2004 Through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate			Average								
3	2	0.077			21.0	1753	59	117	293	3.9	2774	5547	13868
							TPY	0.1			TPY	7	

Hines CT2A Emission Unit -014 - Warm/Hot Start (Both Emission Units on One Power Block) - 6/2004 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values							
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
6/18/2004	15	0.102	612.4	27.7	3313.0	62		1410	7.4	4548		82625	
6/18/2004	16	0.077	927.0	20.9	2130.9	71	134		4.8	4430	8978		
7/11/2004	21	0.054	374.0	14.6	2220.2	20			5.0	1869			
7/11/2004	22	0.099	820.0	26.9	2885.9	81			6.5	5301			
7/11/2004	23	0.010	1041.1	2.6	216.1	10	112		0.5	527	7698		
9/6/2004	14	0.096	678.4	26.0	3531.1	65			7.9	5384			
9/6/2004	15	0.094	841.4	25.5	3606.9	79			8.1	6810			
9/6/2004	16	0.095	842.6	25.8	3604.1	80			8.1	6807			
9/6/2004	17	0.089	885.2	24.3	2769.3	79			6.2	5465			
9/6/2004	18	0.071	1111.6	19.2	75.4	79			0.2	189			
9/6/2004	19	0.021	1693.4	5.7	2.9	36	418		0.0	11	24665		
12/14/2004	20	0.145	598.0	39.3	3030.2	87			6.8	4070			
12/14/2004	21	0.157	754.1	42.7	4120.1	118			9.2	6954			
12/14/2004	22	0.155	752.8	42.0	4071.3	117			9.1	6885			
12/14/2004	23	0.139	856.9	37.6	3584.8	119			8.1	6912			
12/15/2004	0	0.081	997.9	22.1	2247.1	81			5.0	5003			
12/15/2004	1	0.013	1170.3	3.6	655.4	15	537		1.4	1686	31510		
12/15/2004	9	0.119	531.0	32.2	2688.9	63			6.0	3212			
12/15/2004	10	0.129	921.4	35.1	2874.5	119			6.4	5925			
12/15/2004	11	0.023	1189.7	6.3	241.2	27	209		0.5	638	9775		
9/2/2005	10	0.099	671.3	27.0	2682.7	66		80	6.0	4019		4349	
9/2/2005	11	0.011	1242.5	3.1	122.6	14	80		0.3	329	4349		
6/2004 Through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate			Average								
3	4	0.085			23.2	2303	68	248	745	5	3953	14496	43487
							TPY	0.4			TPY	22	

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT2A Emission Unit -014 - Warm/Hot Start (One Emission Unit on One Power Block) - 6/2004 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
9/16/2004	9	0.083	470.3	22.5	2462.0	39		505	5.5	2600		21881
9/16/2004	10	0.083	976.8	22.6	1743.8	81	120		3.9	3808	6408	
11/3/2004	2	0.103	792.3	27.9	2165.9	82			4.9	3856		
11/3/2004	3	0.015	1303.1	4.2	7.3	20	101		0.02	21	3877	
11/12/2004	6	0.092	841.8	24.9	1312.4	77			3.0	2485		
11/12/2004	7	0.014	1244.9	3.8	221.5	17	95		0.5	618	3103	
11/13/2004	7	0.067	841.8	18.2	1277.2	56	56		2.9	2409	2409	
12/19/2004	23	0.076	537.2	20.7	2409.7	41			5.4	2893		
12/20/2004	0	0.090	1023.0	24.4	1389.2	92	133		3.1	3191	6084	
3/14/2005	9	0.123	571.6	33.5	2864.5	70		1088	6.4	3659		45368
3/14/2005	10	0.017	1208.6	4.7	44.9	21	91		0.1	119	3779	
7/10/2005	13	0.095	749.8	25.7	2166.0	71			4.9	3654		
7/10/2005	14	0.015	1360.9	4.0	0.0	20	92		0.0	0	3654	
9/22/2005	11	0.109	758.9	29.5	2541.1	83			5.7	4337		
9/22/2005	12	0.007	1241.5	2.0	48.8	9	91		0.1	129	4466	
9/29/2005	6	0.084	819.1	22.9	1507.2	69	69		3.4	2757	2757	
9/30/2005	6	0.085	791.5	23.2	1433.7	67	67		3.2	2531	2531	
10/2/2005	8	0.075	816.1	20.3	1368.4	61			3.1			
10/2/2005	9	0.009	1339.8	2.4	38.1	12	73		0.1	117	117	
10/4/2005	6	0.073	851.0	19.9	1139.6	62	62		2.5	2166	2166	
10/5/2005	6	0.073	792.4	19.9	1214.7	58	58		2.7	2149	2149	
10/6/2005	10	0.075	822.2	20.5	1174.8	62	62		2.6	2151	2151	
10/7/2005	7	0.088	531.7	24.0	2505.4	47			5.6	2973		
10/7/2005	8	0.019	1244.7	5.2	121.4	24	70		0.3	336	3309	
10/9/2005	8	0.097	773.9	26.4	1741.4	75	75		3.9	3014	3014	
10/10/2005	5	0.087	807.0	23.6	1696.1	70	70		3.8	3071	3071	
11/6/2005	11	0.110	675.1	29.9	3159.7	74	74		7.1	4777	4777	
11/8/2005	6	0.081	800.8	22.1	2013.4	65	65		4.5	3597	3597	
11/15/2005	5	0.081	841.3	21.9	2021.7	68	68		4.6	3829	3829	
2/15/2006	4	0.129	585.7	34.9	3215.0	76		620	7.2	4237		28000
2/15/2006	5	0.048	1220.4	13.1	987.2	59	134		2.2	2687	6924	
3/12/2006	10	0.125	800.2	33.8	2336.9	100	100		5.3	4210	4210	
3/13/2006	10	0.112	788.3	30.4	2122.0	88	88		4.8	3751	3751	
3/14/2006	10	0.101	779.0	27.5	2117.8	79	79		4.7	3688	3688	
5/12/2006	8	0.142	538.3	38.4	3352.3	76			7.5	4062		
5/12/2006	9	0.038	1171.8	10.2	487.9	45	121		1.1	1297	5358	
5/17/2006	12	0.143	681.8	38.9	2667.0	97	97		6.0	4069	4069	
6/2004 Through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate				Average						
13	1	0.077		21.0	1597	60	85	1106	4	2646	3663	47625
							TPY	0.6			TPY	24

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT2A Emission Unit -014 - Fuel Switch - 6/2004 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values							
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
12/8/2004	8	0.109	538.5	29.5	2531.8	59		741	5.7	3066		34637	
12/8/2004	9	0.123	736.6	33.3	3826.9	91			8.6	6338			
12/8/2004	10	0.105	537.2	28.4	3009.4	56			6.8	3638			
12/8/2004	11	0.162	706.9	41.7	2579.8	115			6.1	4313			
12/8/2004	12	0.042	1225.3	10.9	3.3	51			0.0	9			
12/8/2004	14	0.080	449.4	21.6	2370.8	36	408		5.3	2402	19767		
12/9/2004	11	0.111	628.1	30.0	3302.0	70			7.4	4671			
12/9/2004	12	0.125	759.1	33.9	4025.8	95			9.0	6859			
12/9/2004	13	0.131	727.7	33.6	1932.1	95			4.6	3337			
12/9/2004	14	0.056	1313.2	14.4	1.1	74	333		0.003	3	14870		
8/30/2005	9	0.099	576.0	26.9	3344.6	57	57	446	7.5	4316	4316	23757	
11/5/2005	7	0.107	600.6	28.9	3410.6	64			7.7	4616			
11/5/2005	10	0.111	650.1	30.2	2795.7	72			6.3	4066			
11/5/2005	11	0.022	1168.9	5.9	63.2	26	162		0.1	168	8850		
12/1/2005	11	0.033	145.4	10.6	2160.6	5			4.1	595			
12/1/2005	13	0.196	538.6	50.3	4301.3	106			10.2	5495			
12/1/2005	14	0.151	771.8	39.0	2473.9	117	227		5.8	4500	10590		
4/7/2006	6	0.128	609.4	34.6	2860.0	78		971	6.4	3925		48501	
4/7/2006	7	0.137	712.4	37.3	3648.4	98			8.2	5811			
4/7/2006	8	0.142	731.9	38.4	3817.1	104			8.6	6289			
4/7/2006	9	0.157	641.9	41.9	4491.9	101			10.2	6576			
4/7/2006	11	0.209	592.5	53.8	3410.8	124			8.1	4779			
4/7/2006	12	0.123	862.4	33.2	1921.5	106	610		4.3	3737	31117		
5/9/2006	7	0.059	352.5	15.9	2110.7	21			4.8	1681			
5/9/2006	8	0.132	642.8	35.7	3171.1	85			7.1	4588			
5/9/2006	10	0.151	613.0	40.3	3413.0	93			7.8	4772			
5/9/2006	11	0.132	728.9	34.4	2784.3	96			6.5	4740			
5/9/2006	12	0.059	1132.3	15.9	627.3	67	361		1.4	1604	17385		
6/2004 Through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate					Average						
4	4	0.114		30.4	2656.8	77	308	1079	6.0	3818	15271	53448	
							TPY	0.5			TPY	26.7	
2006 Fuel Switch occurred during tuning session.													

Hines CT2A Emission Unit -014 - Malfunction - 6/2004 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values							
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
7/11/2004	16	0.020	1240.9	5.3	582.1	25	25	215	1.3	1659	1659	9124	
8/12/2004	13	0.044	1127.7	11.9	958.4	50			2.2	2433			
8/12/2004	14	0.030	1644.1	8.1	2.2	49	99		0.005	8	2441		
10/23/2004	4	0.097	606.4	26.5	2880.9	59			6.4	3892			
10/23/2004	5	0.027	1197.4	7.4	425.4	32	91		0.9	1131	5024		
9/2/2005	8	0.013	1158.9	3.6	147.5	15	15	103	0.3	376	376	4655	
12/31/2005	21	0.105	650.9	28.4	2694.1	68			6.1	3946			
12/31/2005	22	0.015	1323.0	4.1	112.9	20	88		0.3	333	4279		
3/11/2006	10	0.127	636.0	34.5	2939.3	81	81	270	6.6	4189	4189	14416	
4/12/2006	11	0.132	679.4	35.9	2822.0	90			6.3	4291			
4/12/2006	12	0.121	826.4	32.9	3208.5	100	190		7.2	5936	10227		
6/2004 Through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate					Average						
4	2	0.066		18.1	1524.8	53.5	84.1	294	3.4	2563.1	4027.8	14097	
							TPY	0.1			TPY	7.0	

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
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Hines CT2A Emission Unit -014 - Tuning Session - 6/2004 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmv)	DRY CO (corrected ppmv)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
10/16/2004	16	0.082	437.5	22.2	1973.4	36		1430	4.4	1941		73294
10/16/2004	17	0.146	584.7	39.6	2314.9	85			5.2	3038		
10/16/2004	18	0.143	715.8	38.8	3715.0	102			8.3	5966		
10/16/2004	19	0.141	711.5	38.3	3566.1	100			8.0	5686		
10/16/2004	20	0.145	743.9	39.3	3883.2	108			8.7	6488		
10/16/2004	21	0.140	685.3	37.9	3326.2	96			7.5	5125		
10/16/2004	22	0.140	771.9	37.9	3900.5	108			8.8	6770		
10/16/2004	23	0.140	780.9	38.0	4014.2	109			9.0	7030		
10/17/2004	0	0.126	848.4	34.2	3620.7	107			8.1	6889		
10/17/2004	1	0.139	643.9	37.8	3084.9	90			6.9	4446		
10/17/2004	14	0.120	626.1	32.5	2736.9	75			6.2	3851		
10/17/2004	15	0.080	1184.7	21.7	0.0	95			0.0	0		
10/17/2004	16	0.019	1262.3	5.3	35.0	24			0.1	96		
10/17/2004	20	0.012	1242.6	3.2	95.6	15			0.2	271		
10/17/2004	21	0.009	1405.0	2.4	18.5	13			0.0	59		
10/18/2004	0	0.010	1259.8	2.8	126.8	13			0.3	347		
10/18/2004	21	0.013	1323.5	3.6	253.7	17			0.6	738		
10/18/2004	22	0.097	528.6	26.4	2755.5	51			6.2	3258		
10/18/2004	23	0.048	1089.1	13.0	1229.5	52			2.8	3010		
10/19/2004	22	0.051	868.7	13.9	1618.9	44			3.6	3141		
10/20/2004	2	0.100	586.6	27.2	2962.2	59			6.6	3889		
10/20/2004	3	0.026	1192.9	7.0	465.4	31	1430		1.1	1255	73294	
4/25/2005	6	0.128	580.6	34.6	3140.2	74		661	7.1	4106		36659
4/25/2005	7	0.133	766.1	36.2	3826.4	102			8.6	6556		
4/25/2005	8	0.141	694.8	38.4	3770.6	98			8.4	5856		
4/25/2005	9	0.141	712.2	38.2	3857.1	100			8.7	6172		
4/25/2005	10	0.142	733.4	38.4	3797.7	104			8.5	6269		
4/25/2005	11	0.137	819.9	37.1	2986.4	112			6.7	5504		
4/25/2005	12	0.072	974.4	19.6	1008.3	70	661		2.3	2197	36659	
4/7/2006	6	0.128	609.4	34.6	2860.0	78		971	6.4	3925		48501
4/7/2006	7	0.137	712.4	37.3	3648.4	98			8.2	5811		
4/7/2006	8	0.142	731.9	38.4	3817.1	104			8.6	6289		
4/7/2006	9	0.157	641.9	41.9	4491.9	101			10.2	6576		
4/7/2006	11	0.209	592.5	53.8	3410.8	124			8.1	4779		
4/7/2006	12	0.123	862.4	33.2	1921.5	106	610		4.3	3737	31117	
5/9/2006	7	0.059	352.5	15.9	2110.7	21			4.8	1681		
5/9/2006	8	0.132	642.8	35.7	3171.1	85			7.1	4588		
5/9/2006	10	0.151	613.0	40.3	3413.0	93			7.8	4772		
5/9/2006	11	0.132	728.9	34.4	2784.3	96			6.5	4740		
5/9/2006	12	0.059	1132.3	15.9	627.3	67	361		1.4	1604	17385	
6/2004 Through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate					Average					
2	10	0.106		28.7	2508.5	77	766	1531	6	3961	39614	79227
							TPY	0.8			TPY	40
**10/16 - 10/20/2004 assumed the same tuning session.												

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT2B Emission Unit -015 - Cold Start (Both Emission Units on One Power Block) - 6/2004 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values							
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
7/6/2004	20	0.087	586.600	23.600	2538.200	51.034		1418	5.7	3341		82110	
7/6/2004	21	0.115	819.000	31.300	3709.100	94.185			8.3	6794			
7/6/2004	22	0.117	819.700	31.700	3724.600	95.905			8.4	6859			
7/6/2004	23	0.113	832.400	30.600	3602.700	94.061			8.1	6741			
7/7/2004	0	0.046	1003.100	12.500	1217.900	46.143			2.7	2737			
7/7/2004	1	0.057	1061.000	15.500	919.200	60.477	442		2.1	2183	28655		
8/16/2004	12	0.070	489.800	19.100	2227.000	34.286			5.0	2433			
8/16/2004	13	0.119	736.900	32.300	3494.900	87.691			7.8	5776			
8/16/2004	14	0.111	819.700	30.000	3565.900	90.987			8.0	6583			
8/16/2004	15	0.101	955.300	27.400	1806.000	96.485			4.1	3871			
8/16/2004	16	0.049	1167.500	13.400	472.800	57.208	367		1.1	1229	19892		
12/14/2004	20	0.166	617.800	45.000	3409.000	102.555			7.7	4729			
12/14/2004	21	0.177	775.100	48.000	4563.000	137.193			10.2	7939			
12/14/2004	22	0.178	773.900	48.200	4463.000	137.754			10.0	7764			
12/14/2004	23	0.149	874.500	40.400	3694.000	130.301			8.3	7252			
12/15/2004	0	0.086	1020.300	23.200	2280.200	87.746			5.1	5250			
12/15/2004	1	0.011	1248.300	3.000	225.700	13.731	609		0.5	629	33563		
1/16/2005	20	0.157	614.000	42.700	3313.000	96.398		1408	7.4	4553		81144	
1/16/2005	21	0.165	731.800	44.800	4287.700	120.747			9.6	7035			
1/16/2005	22	0.163	732.400	44.300	4297.400	119.381			9.6	7049			
1/16/2005	23	0.157	766.900	42.600	4305.500	120.403			9.7	7407			
1/17/2005	0	0.131	927.400	35.700	3173.900	121.489			7.1	6575			
1/17/2005	1	0.007	1247.700	2.000	283.500	8.734	587		0.6	754	33372		
1/31/2005	20	0.148	633.700	40.200	3254.400	93.788			7.3	4622			
1/31/2005	21	0.163	733.100	44.300	4193.600	119.495			9.4	6886			
1/31/2005	22	0.164	733.100	44.500	4167.900	120.228			9.4	6854			
1/31/2005	23	0.153	815.200	41.500	4131.300	124.726			9.3	7558			
2/1/2005	0	0.142	922.200	38.500	3267.100	130.952			7.3	6764			
2/1/2005	1	0.032	1142.600	8.600	884.500	36.563	626		2.0	2289	34973		
7/13/2005	20	0.108	596.300	29.300	3361.000	64.400			7.5	4497			
7/13/2005	21	0.107	782.700	28.900	3623.900	83.749			8.2	6392			
7/13/2005	22	0.041	1149.100	11.000	732.200	47.113	195		1.7	1909	12798		
2/8/2006	20	0.155	475.700	42.200	3373.900	73.734		1011	7.5	3588		56437	
2/8/2006	21	0.167	681.700	45.400	4391.100	113.844			9.8	6703			
2/8/2006	22	0.164	681.700	44.600	4361.800	111.799			9.8	6655			
2/8/2006	23	0.159	681.700	43.300	4336.500	108.390			9.7	6608			
2/9/2006	0	0.138	797.900	37.600	3046.000	110.110			6.8	5430			
2/9/2006	1	0.013	1217.200	3.600	362.500	15.824	534		0.8	970	29954		
3/7/2006	20	0.155	436.700	42.000	3097.000	67.689			7.0	3038			
3/7/2006	21	0.158	660.000	43.000	4319.000	104.280			9.7	6376			
3/7/2006	22	0.158	660.000	42.800	4379.800	104.280			9.8	6496			
3/7/2006	23	0.150	660.000	40.600	4183.600	99.000			9.4	6210			
3/8/2006	0	0.100	920.100	27.200	2038.600	92.010			4.6	4198			
3/8/2006	1	0.008	1207.000	2.200	62.100	9.656	477		0.1	166	26483		
6/2004 Through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate							Average				
4	6	0.116		31.6	2981	87	480	1918	7	4993	27461	109845	
							TPY	1.0			TPY	55	

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT2B Emission Unit -015 - Cold Start (One Emission Unit on One Power Block) - 6/2004 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values							
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
11/16/2004	9	0.141	656.7	38.4	3188.3	93		294	7.1	4680		10851	
11/16/2004	10	0.039	1266.8	10.6	18.6	49	142		0.0	53	4733		
12/26/2004	8	0.126	647.7	34.1	3062.3	82			6.9	4461			
12/26/2004	9	0.058	1220.3	15.9	611.6	71	152		1.4	1657	6118		
10/31/2005	7	0.017	142.0	4.7	1743.6	2		783	3.8	545		35874	
10/31/2005	8	0.158	625.3	43.0	3832.5	99			8.6	5360			
10/31/2005	9	0.163	687.6	44.2	4490.9	112			10.1	6932			
10/31/2005	10	0.159	704.3	43.3	4469.7	112			10.0	7036			
10/31/2005	11	0.124	876.9	33.7	2051.0	109			4.6	4028			
10/31/2005	12	0.085	1096.7	23.1	76.8	93	527		0.2	189	24090		
12/21/2005	4	0.123	587.4	33.4	3502.4	72			7.9	4612			
12/21/2005	5	0.042	1195.0	11.5	588.1	50	122		1.3	1562	6174		
12/26/2005	16	0.142	571.6	38.5	3286.3	81			7.4	4217			
12/26/2005	17	0.045	1169.7	12.1	525.8	53	134		1.2	1392	5610		
1/15/2006	3	0.144	665.7	39.2	3014.7	96		798	6.7	4488		32600	
1/15/2006	4	0.040	1259.9	10.9	434.4	50	146		1.0	1223	5710		
1/18/2006	15	0.163	653.3	44.4	3641.2	106			8.1	5316			
1/18/2006	16	0.013	1230.0	3.6	38.8	16	122		0.1	105	5421		
2/12/2006	17	0.135	673.3	36.8	3469.0	91	91		7.7	5216	5216		
4/14/2006	20	0.123	705.8	33.4	2998.8	87			6.7	4745			
4/14/2006	21	0.114	933.3	30.9	2429.6	106			5.5	5092			
4/14/2006	22	0.092	1046.2	24.9	840.7	96			1.9	1978			
4/14/2006	23	0.015	1316.8	4.0	14.8	20	309		0.0	44	11859		
5/15/2006	11	0.114	698.5	31.0	2720.4	80			6.1	4254			
5/15/2006	12	0.035	1403.8	9.5	44.5	49	129		0.1	140	4394		
6/2004 Through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate						Average					
5	3	0.096		26.2	2043.8	75	188	938	4.6	3173	7932	39662	
							TPY	0.5			TPY	20	

Hines CT2B Emission Unit -015 - Warm/Hot Start (Both Emission Units on One Power Block) - 6/2004 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values							
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
6/18/2004	15	0.104	632.3	28.1	2969.8	66		856	6.7	4230		50242	
6/18/2004	16	0.099	941.4	26.9	1941.8	93	159		4.4	4095	8326		
7/11/2004	21	0.042	387.2	11.3	2499.6	16			5.7	2190			
7/11/2004	22	0.105	846.5	28.6	2551.9	89			5.7	4828			
7/11/2004	23	0.007	1064.9	2.0	577.4	7			1.2	1310			
7/12/2004	0	0.009	1356.6	2.5	44.9	12	125		0.1	133	8461		
9/6/2004	14	0.104	706.3	28.3	3045.8	73			6.8	4812			
9/6/2004	15	0.103	866.8	28.0	3109.9	89			7.0	6036			
9/6/2004	16	0.103	866.2	28.1	3130.1	89			7.0	6049			
9/6/2004	17	0.095	908.3	25.9	2470.9	86			5.5	5011			
9/6/2004	18	0.006	1134.9	1.6	267.8	7	345		0.6	694	22603		
12/15/2004	9	0.129	544.6	35.1	3155.1	70			7.1	3844			
12/15/2004	10	0.141	943.8	38.2	3045.5	133			6.8	6458			
12/15/2004	11	0.020	1213.3	5.5	205.2	24	228		0.5	551	10853		
6/2004 Through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate						Average					
2	4	0.076		20.7	2073	61	214	428	4.6	3589	12561	25121	
							TPY	0.2			TPY	13	

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT2B Emission Unit -015 - Warm/Hot Start (One Emission Unit on One Power Block) - 6/2004 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values							
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
7/12/2004	11	0.100	652.8	27.1	2918.9	65		513	6.6	4280		25818	
7/12/2004	12	0.014	1319.6	3.9	150.6	18	84		0.3	434	4714		
9/27/2004	15	0.100	596.8	27.2	3005.2	60			6.7	4014			
9/27/2004	16	0.104	847.1	28.1	3253.3	88			7.3	6209			
9/27/2004	17	0.101	887.2	27.5	2676.4	90			6.0	5309			
9/27/2004	18	0.083	1029.2	22.4	479.7	85			1.08	1114			
9/27/2004	19	0.012	1366.8	3.2	20.1	16	339		0.0	63	16707		
11/8/2004	6	0.134	668.8	36.4	2933.7	90	90		6.6	4397	4397		
3/2/2005	1	0.082	396.7	22.4	2460.0	33		1595	5.5	2175		81844	
3/2/2005	2	0.097	908.3	26.3	2328.2	88			5.2	4748			
3/2/2005	3	0.006	1321.0	1.6	149.6	8	129		0.3	451	7373		
3/15/2005	8	0.078	831.1	21.3	2118.6	65	65		4.7	3925	3925		
3/16/2005	8	0.076	881.4	20.7	2092.3	67	67		4.7	4121	4121		
3/17/2005	6	0.082	730.6	22.3	1822.0	60			4.1	2980			
3/17/2005	7	0.005	1224.1	1.4	362.4	6	66		0.8	964	3944		
3/18/2005	5	0.096	729.3	26.1	2178.2	70			4.9	3557			
3/18/2005	6	0.005	1594.2	1.3	33.4	8	78		0.1	125	3681		
3/22/2005	6	0.105	784.7	28.5	3033.1	82	82		6.8	5338	5338		
3/23/2005	8	0.102	775.7	27.8	2710.1	79	79		6.1	4695	4695		
3/25/2005	7	0.106	767.5	28.9	2861.3	81			6.4	4903			
3/25/2005	8	0.015	1550.2	4.2	45.6	23	105		0.1	154	5057		
3/26/2005	7	0.095	844.5	25.9	1995.2	80	80		4.5	3762	3762		
3/27/2005	8	0.076	841.4	20.7	1996.0	64	64		4.5	3753	3753		
3/28/2005	9	0.105	842.0	28.6	2141.3	88	88		4.8	4029	4029		
3/29/2005	8	0.113	838.1	30.7	2046.4	95	95		4.6	3843	3843		
4/3/2005	6	0.112	857.9	30.4	2354.6	96	96		5.3	4530	4530		
4/4/2005	7	0.115	861.1	31.1	2271.9	99	99		5.1	4403	4403		
4/30/2005	7	0.125	611.3	33.8	3459.4	76			7.8	4761			
4/30/2005	8	0.053	1141.9	14.3	926.3	61	137		2.1	2386	7147		
6/24/2005	6	0.091	726.6	24.7	2441.4	66	66		5.5	3978	3978		
10/3/2005	4	0.088	2.3	23.9	2106.2	0.20	0		4.7	11	11		
11/9/2005	11	0.096	788.7	26.2	1938.3	76	76		4.3	3410	3410		
11/20/2005	8	0.119	683.6	32.3	2968.6	81			6.7	4551			
11/20/2005	9	0.031	1342.6	8.4	96.8	42	123		0.2	292	4843		
4/8/2006	8	0.111	714.2	30.2	3149.9	79		352	7.0	5033		16222	
4/8/2006	9	0.016	1340.4	4.2	5.9	21	101		0.0	18	5052		
5/10/2006	7	0.090	864.2	24.4	1859.2	78	78		4.2	3607	3607		
5/18/2006	8	0.099	848.5	27.0	2193.0	84	84		4.9	4153	4153		
5/19/2006	9	0.092	968.6	24.9	1565.2	89	89		3.5	3410	3410		
6/2004 Through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate				Average							
13	2	0.091		21.8	1876	63	95	1230	4	3177	4765	61942	
							TPY	0.6			TPY	31	

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT2B Emission Unit -015 - Fuel Switch - 6/2004 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
12/8/2004	14	0.134	594.3	36.5	3326.3	80		343	7.4	4418		13890
12/8/2004	15	0.137	769.9	35.3	1238.2	105			2.9	2252		
12/8/2004	16	0.011	1269.5	2.9	1.3	14			0.0	4		
12/8/2004	17	0.045	871.8	11.6	866.9	39			2.0	1785		
12/8/2004	18	0.170	617.8	46.0	3908.4	105	343		8.792	5432	13890	
8/30/2005	9	0.000	641.3	0.0	3529.1			97				5011
8/30/2005	10	0.000	620.3	0.0	3505.1							
8/31/2005	10	0.089	428.7	24.1	2420.5	38			5.4	2333		
8/31/2005	11	0.065	899.1	17.6	1325.1	58	97		3.0	2678	5011	
4/7/2006	14	0.095	799.0	25.7	2829.0	76	76	410	6.4	5086	5086	22967
5/9/2006	14	0.084	431.8	22.9	2199.7	36			4.9	2121		
5/9/2006	15	0.156	700.1	42.1	3658.7	109			8.3	5778		
5/9/2006	16	0.162	660.9	42.4	2911.9	107			6.8	4476		
5/9/2006	17	0.121	670.8	32.5	3622.4	81	334		8.2	5507	17881	
6/2004 Through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate			Average							
2	4	0.091		24.3	2524.5	71	212	425	5	3489	10467	20934
2006 Fuel Switch occurred during tuning session.							TPY	0.2			TPY	10.5

Hines CT2B Emission Unit -015 - Malfunction - 6/2004 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
12/15/2004	1	0.011	1248.3	3.0	225.7	14	14	14	0.5	629	629	629
3/1/2005	20	0.150	635.0	40.6	2939.5	95	95		6.6	4198	4198	
6/6/2005	14	0.011	1637.9	3.0	20.1	18			0.0	73		
6/6/2005	15	0.029	1102.9	7.8	795.1	32	50		1.8	1985	2058	
9/2/2005	10	0.120	575.1	32.5	3619.7	69			8.1	4679		
9/2/2005	11	0.052	1064.0	14.1	825.8	55	124		1.854	1972	6651	
11/9/2005	6	0.017	1553.2	4.5	261.5	26	26		0.6	934		
6/2004 Through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate			Average							
3	1	0.056		15.1	1241.1	44	62	7	3	2067	3384	314
							TPY	0.0			TPY	0.2

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT2B Emission Unit -015 - Tuning Session - 6/2004 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values							Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmv)	DRY CO (corrected ppmv)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
10/16/2004	17	0.078	429.9	21.1	2067.7	34		1347	4.7	2000		76475	
10/16/2004	18	0.112	465.0	30.5	2052.7	52			4.6	2134			
10/16/2004	20	0.123	631.8	33.5	3317.7	78			7.4	4685			
10/16/2004	21	0.133	774.5	36.0	4054.1	103			9.1	7061			
10/16/2004	22	0.132	784.0	35.7	3998.1	103			9.0	7055			
10/16/2004	23	0.040	1057.3	11.0	1142.1	42			2.5	2673			
10/17/2004	0	0.023	988.5	6.3	1825.0	23			4.1	4009			
10/17/2004	1	0.124	727.3	33.7	3609.3	90			8.1	5879			
10/17/2004	11	0.097	476.4	26.2	2759.8	46			6.2	2963			
10/17/2004	12	0.136	783.4	36.9	3968.6	107			8.9	6975			
10/17/2004	13	0.123	817.2	33.3	3505.6	101			7.9	6441			
10/17/2004	14	0.125	860.5	34.0	3319.3	108			7.4	6392			
10/17/2004	15	0.088	972.5	23.8	1793.7	86			4.0	3926			
10/17/2004	16	0.021	1145.8	5.8	42.1	24			0.1	106			
10/17/2004	17	0.023	1146.4	6.3	47.7	26			0.1	122			
10/17/2004	18	0.022	1148.4	5.9	62.1	25			0.1	162			
10/17/2004	19	0.020	1161.1	5.4	67.6	23			0.2	177			
10/17/2004	20	0.007	1224.8	1.9	61.3	9			0.1	168			
10/17/2004	21	0.008	1413.9	2.3	11.3	11			0.0	34			
10/18/2004	0	0.012	1261.1	3.2	126.8	15			0.3	365			
10/18/2004	21	0.012	1378.9	3.4	19.6	17			0.0	58			
10/18/2004	22	0.008	1255.3	2.2	24.0	10			0.1	67			
10/19/2004	1	0.035	1027.3	9.4	1024.9	36			2.3	2386			
10/19/2004	2	0.086	486.0	23.4	2376.7	42			5.3	2584			
10/19/2004	3	0.033	1047.0	8.9	848.9	35			1.9	2006			
10/20/2004	3	0.013	1310.1	3.6	253.1	17			0.6	729			
10/20/2004	4	0.089	612.0	24.2	3319.7	54			7.4	4548			
10/20/2004	5	0.021	1466.7	5.7	234.1	31	1347		0.5	770	76475		
4/25/2005	6	0.138	601.300	37.400	3556.300	82.979		717	8.0	4803		41279	
4/25/2005	7	0.145	749.300	39.200	4159.700	108.649			9.4	7018			
4/25/2005	8	0.154	680.900	41.900	4255.900	104.859			9.5	6483			
4/25/2005	9	0.157	702.600	42.600	4406.400	110.308			9.9	6945			
4/25/2005	10	0.153	726.600	41.600	4206.000	111.170			9.4	6842			
4/25/2005	11	0.145	817.800	39.400	3400.000	118.581			7.6	6229			
4/25/2005	12	0.077	973.700	20.800	1328.900	74.975			3.0	2916			
4/25/2005	13	0.005	1164.700	1.300	15.800	5.824	717		0.0	43	41279		
4/7/2006	6	0.124	637.9	33.6	3176.2	79		778	7.1	4551		37017	
4/7/2006	7	0.135	739.0	36.6	3999.3	100			9.0	6636			
4/7/2006	8	0.132	815.9	35.8	3485.2	108			7.8	6382			
4/7/2006	9	0.090	1080.4	24.4	618.4	97			1.4	1500			
4/7/2006	10	0.048	1250.5	13.1	24.0	60	444		0.1	67	19136		
5/9/2006	14	0.084	431.8	22.9	2199.7	36			4.9	2121			
5/9/2006	15	0.156	700.1	42.1	3658.7	109			8.3	5778			
5/9/2006	16	0.162	660.9	42.4	2911.9	107			6.8	4476			
5/9/2006	17	0.121	670.8	32.5	3622.4	81	334		8.2	5507	17881		
6/2004 Through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate					Average						
2	11	0.084		22.7	2110.2	63	710	1421	4.7	3439.4	38693	77386	
							TPY	0.7			TPY	39	
**10/16 - 10/20 assumed the same tuning session.													

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT3A Emission Unit -016 - Cold Start (Both Emission Units on One Power Block) - 11/2005 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmv)	DRY CO (corrected ppmv)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
12/21/2005	20	0.144	619.6	39.0	3335.5	89		631	7.5	4645		36527
12/21/2005	21	0.143	733.0	38.9	4132.8	105			9.2	6779		
12/21/2005	22	0.156	732.9	42.2	4149.0	114			9.3	6842		
12/21/2005	23	0.152	745.3	41.3	4190.6	113			9.4	6997		
12/22/2005	0	0.150	757.5	40.6	4163.7	114			9.4	7093		
12/22/2005	1	0.093	1028.9	25.3	1811.8	96	631		4.1	4171	36527	
1/6/2006	20	0.150	571.7	40.6	2871.6	86		1636	6.5	3692		82380
1/6/2006	21	0.147	719.7	39.9	3772.4	106			8.5	6089		
1/6/2006	22	0.142	751.1	38.4	3928.7	107			8.8	6642		
1/6/2006	23	0.141	754.3	38.3	3933.6	106			8.8	6649		
1/7/2006	0	0.142	752.6	38.4	3915.9	107			8.8	6634		
1/7/2006	1	0.119	458.9	32.2	3146.8	55			7.1	3249		
1/7/2006	2	0.060	1123.6	16.3	794.4	67	633		1.8	2000	34954	
1/21/2006	20	0.139	635.1	37.7	3318.5	88			7.4	4730		
1/21/2006	21	0.132	730.2	35.9	3828.6	96			8.6	6257		
1/21/2006	22	0.125	771.4	34.0	3771.9	96			8.4	6512		
1/21/2006	23	0.114	880.7	31.0	2949.2	100			6.6	5814		
1/22/2006	0	0.091	1039.1	24.7	1135.9	95			2.5	2647		
1/22/2006	1	0.028	1200.5	7.6	112.9	34	510		0.3	304	26264	
3/5/2006	20	0.141	566.2	38.4	1624.1	80			3.6	2055		
3/5/2006	21	0.130	797.7	35.2	2918.1	104			6.6	5233		
3/5/2006	22	0.130	818.3	35.4	2666.9	106			6.0	4878		
3/5/2006	23	0.132	815.5	35.8	2916.7	108			6.5	5338		
3/6/2006	0	0.093	939.4	25.4	1419.9	87			3.2	2973		
3/6/2006	1	0.007	1125.5	2.0	285.2	8	493		0.6	684	21162	
11/2005 through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate					Average					
6	6	0.120		32.6	2843.8	91	567	3400	6.4	4756.3	29727	178361
Estimates per year are extrapolated from 8 months of operation.							TPY	1.7			TPY	89
PB3 taken over by operations on November 1, 2005.												

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT3A Emission Unit -016 - Cold Start (One Emission Unit on One Power Block) - 11/2005 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
12/5/2005	20	0.123	680.2	33.4	3607.3	84		552	8.1	5500		30171
12/5/2005	21	0.136	680.3	36.9	3703.9	93			8.3	5653		
12/5/2005	22	0.129	766.9	35.1	4173.8	99			9.3	7161		
12/5/2005	23	0.129	810.2	35.1	3867.1	105			8.7	7009		
12/6/2005	0	0.103	1018.3	27.9	1877.9	105			4.2	4297		
12/6/2005	1	0.054	1247.7	14.5	194.5	67	552		0.4	550	30171	
2/6/2006	3	0.139	673.9	37.8	3402.7	94		896	7.6	5133		33895
2/6/2006	4	0.069	1123.4	18.7	685.2	78	171		1.5	1729	6862	
5/2/2006	10	0.150	638.5	40.7	2887.6	96			6.5	4136		
5/2/2006	11	0.047	1189.0	12.9	103.8	56	152		0.2	274	4410	
5/18/2006	20	0.128	582.3	34.8	2987.9	75			6.7	3895		
5/18/2006	21	0.113	453.3	30.6	2968.1	51			6.7	3024		
5/18/2006	22	0.130	702.0	35.2	3765.2	91			8.5	5942		
5/18/2006	23	0.118	822.7	32.0	2379.2	97			5.3	4394		
5/19/2006	0	0.094	1024.6	25.6	481.0	96			1.1	1102		
5/19/2006	1	0.030	1288.8	8.2	5.2	39	449		0.0	15	18372	
6/7/2006	3	0.118	609.7	32.1	3031.9	72			6.8	4136		
6/7/2006	4	0.047	1108.7	12.7	46.0	52	124		0.1	115	4251	
11/2005 through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate		Average								
8	4	0.103		28.0	2232	80	290	2172	5.0	3559	12813	96098
Estimates per year are extrapolated from 8 months of operation.							TPY	1.1			TPY	48
PB3 taken over by operations on November 1, 2005.												

Hines CT3A Emission Unit -016 - Warm/Hot Start (Both Emission Units on One Power Block) - 11/2005 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
11/7/2005	9	0.104	472.6	28.2	3177.7	49		126	7.1	3371		6783
11/7/2005	10	0.076	1012.4	20.6	1500.5	77	126		3.4	3411	6783	
11/2005 through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate		Average								
2	2	0.090		24.4	2339	63	126	189	5	3391	6783	10174
Estimates per year are extrapolated from 8 months of operation.							TPY	0.1			TPY	5
PB3 taken over by operations on November 1, 2005.												

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex

Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT3A Emission Unit -016 - Warm/Hot Start (One Emission Unit on One Power Block) - 11/2005 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
11/1/2005	6	0.072	1003.6	19.6	1117.2	72	72	345	2.5	2507	2507	17683
11/4/2005	6	0.112	781.6	30.5	2515.9	88			5.6	4395		
11/4/2005	7	0.010	1241.2	2.8	5.9	12	100		0.0	16	4411	
11/4/2005	16	0.097	499.9	26.4	3572.8	48			8.0	3995		
11/4/2005	17	0.059	965.8	16.1	1734.8	57	105		3.9	3737	7732	
11/16/2005	6	0.072	939.5	19.4	1428.9	68	68		3.2	3033	3033	
1/24/2006	7	0.104	802.0	28.3	2274.6	83	83	2310	5.1	4081	4081	84735
1/26/2006	4	0.150	648.0	40.7	3476.8	97			7.8	5054		
1/26/2006	5	0.023	1179.1	6.2	162.2	27	124		0.4	432	5486	
3/10/2006	8	0.080	904.8	21.7	955.9	72	72		2.1	1941	1941	
3/11/2006	8	0.108	769.4	29.2	1807.0	83	83		4.1	3130	3130	
3/12/2006	9	0.088	430.9	23.9	1234.8	38			2.8	1193		
3/12/2006	10	0.088	690.6	23.9	1224.1	61			2.7	1895		
3/12/2006	11	0.010	1299.3	2.7	1.9	13	112		0.0	6	3093	
3/13/2006	8	0.069	850.7	18.6	1003.1	59			2.3	1927		
3/13/2006	9	0.016	1565.8	4.4	1.6	25	84		0.0	6	1932	
3/14/2006	8	0.058	933.8	15.7	886.2	54	54		2.0	1861	1861	
3/17/2006	12	0.139	660.2	37.8	2173.8	92			4.9	3212		
3/17/2006	13	0.044	1289.0	11.9	56.8	57	148		0.1		3212	
3/29/2006	10	0.154	621.7	41.7	2876.4	96			6.5	4020		
3/29/2006	11	0.029	1318.9	7.8	2.6	38	134		0.0	8	4028	
3/30/2006	11	0.146	661.2	39.5	3007.8	97			6.8	4475		
3/30/2006	12	0.020	1358.8	5.5	1.0	27	124		0.0	3	4478	
3/31/2006	11	0.131	768.1	35.6	2227.6	101	101		5.0	3833	3833	
4/1/2006	10	0.078	890.6	21.3	1310.7	69			2.9	2602		
4/1/2006	11	0.014	1612.1	3.8	0.7	23	92		0.0	3	2605	
4/3/2006	8	0.120	700.2	32.6	2926.9	84			6.6	4592		
4/3/2006	9	0.003	1237.9	0.8	94.2	4	88		0.2	266	4858	
4/4/2006	9	0.063	887.5	17.2	1400.0	56			3.1	2770		
4/4/2006	10	0.014	1398.4	3.8	0.8	20	75		0.0	3	2773	
4/5/2006	9	0.068	906.9	18.4	1260.6	62	62		2.8	2572	2572	
4/6/2006	6	0.076	848.3	20.5	1365.3	64			3.1	2614		
4/6/2006	7	0.013	1469.4	3.5	1.0	19	84		0.0	3	2617	
4/7/2006	6	0.104	794.4	28.3	1739.5	83	83		3.9	3091	3091	
4/8/2006	8	0.071	863.3	19.2	918.8	61	61		2.1	1785	1785	
4/9/2006	13	0.108	745.4	29.2	1933.0	81	81		4.4	3244	3244	
4/10/2006	9	0.071	965.0	19.3	1048.9	69	69		2.3	2267	2267	
4/12/2006	7	0.072	898.7	19.5	1375.0	65	65		3.1	2777	2777	
4/14/2006	9	0.086	870.5	23.3	1378.6	75			3.1	2696		
4/14/2006	10	0.012	1281.4	3.3	1.0	15	90		0.0	3	2699	
4/16/2006	9	0.063	933.4	17.2	1151.9	59	59		2.6	2397	2397	
4/26/2006	8	0.054	990.0	14.7	911.0	53	53		2.0	2017	2017	
4/27/2006	6	0.109	595.0	29.5	3250.2	65	65		7.3	4350	4350	
4/28/2006	16	0.125	551.2	33.9	3121.3	69	69		7.0	3862	3862	
5/11/2006	8	0.052	1004.9	14.2	848.2	52	52		1.9	1900	1900	
6/8/2006	3	0.048	905.8	13.0	907.5	43	43		2.0	1848	1848	
11/2005 through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate	Average									
48	1	0.072	19.5	1319	58	83	3983	3.0	2276	3201	153627	
Estimates per year are extrapolated from 8 months of operation.								TPY	2.0		TPY	77
PB3 taken over by operations on November 1, 2005.												

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT3A Emission Unit -016 - Shutdown (Includes Blend Out) - 11/2005 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total Hf for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
11/3/2005	22	0.007	1227.5	1.8	81.1	9		166	0.2	236		16064
11/3/2005	23	0.079	699.5	21.4	3419.8	55	64		7.7	5375	5611	
11/15/2005	22	0.019	1156.0	5.1	796.2	22	22		1.8	2087	2087	
11/17/2005	7	0.012	1264.5	3.2	354.7	15	15		0.8	1024	1024	
12/14/2005	11	0.039	824.7	10.6	2744.0	32	32		6.1	5068	5068	
12/23/2005	23	0.034	958.6	9.3	1065.7	33	33		2.4	2273	2273	
1/7/2006	11	0.042	865.9	11.4	1972.9	36	36	1175	4.42	3831	3831	89544
1/23/2006	22	0.023	1215.8	6.3	863.3	28	28		1.9	2333	2333	
1/24/2006	22	0.023	1082.0	6.3	1039.7	25	25		2.3	2500	2500	
1/27/2006	10	0.048	845.7	13.2	1624.5	41	41		3.6	3041	3041	
2/17/2006	22	0.027	926.2	7.3	1465.4	25	25		3.3	3056	3056	
3/9/2006	22	0.018	1107.8	4.8	693.0	20	20		1.6	1752	1752	
3/10/2006	22	0.010	1262.0	2.7	162.0	13			0.4	461		
3/10/2006	23	0.075	715.6	20.3	2508.9	54	66		5.6	4038	4499	
3/11/2006	22	0.009	1404.9	2.5	99.5	13			0.2	306		
3/11/2006	23	0.064	744.4	17.4	1902.8	48	60		4.3	3171	3478	
3/12/2006	22	0.021	1004.6	5.6	992.9	21	21		2.3	2277	2277	
3/13/2006	22	0.010	1173.1	2.8	347.5	12			0.8	886		
3/13/2006	23	0.083	664.1	22.5	2630.3	55	67		5.9	3922	4809	
3/14/2006	22	0.009	1199.0	2.5	270.3	11			0.6	710		
3/14/2006	23	0.055	730.9	15.0	2010.9	40	51		4.5	3280	3991	
3/28/2006	22	0.018	1136.8	4.8	542.7	20	20		1.2	1408	1408	
3/29/2006	22	0.012	1182.9	3.3	455.1	14			1.0	1192		
3/29/2006	23	0.119	607.1	32.3	2900.4	72	86		6.5		1192	
3/30/2006	22	0.043	890.7	11.7	1484.2	38	38		3.3	2957	2957	
3/31/2006	22	0.019	1112.8	5.1	779.8	21	21		1.8	1968	1968	
4/1/2006	22	0.022	1072.8	6.0	891.8	24	24		2.0	2135	2135	
4/3/2006	21	0.020	1086.6	5.3	850.1	22	22		2.0	2122	2122	
4/4/2006	21	0.010	1214.2	2.6	258.5	12			0.6	735		
4/4/2006	22	0.089	645.5	24.2	3142.0	57	70		7.0	4540	5275	
4/5/2006	21	0.009	1229.5	2.5	193.6	11	11		0.4	522	522	
4/6/2006	21	0.009	1235.6	2.4	157.0	11			0.4	443		
4/6/2006	22	0.064	748.0	17.4	2918.0	48	59		6.5	4887	5330	
4/7/2006	21	0.009	1498.7	2.3	56.0	13			0.1	200		
4/7/2006	22	0.040	832.0	10.7	1963.0	33	47		4.5	3716	3916	
4/8/2006	22	0.040	830.8	10.9	1793.6	33	33		4.0	3329	3329	
4/9/2006	21	0.009	1309.0	2.3	160.5	12			0.4	500		
4/9/2006	22	0.074	701.3	20.1	3027.9	52	64		6.8	4759	5259	
4/11/2006	21	0.017	1159.3	4.6	625.4	20	20		1.4	1631	1631	
4/13/2006	21	0.018	1139.4	4.9	621.7	21	21		1.4	1584	1584	
4/15/2006	22	0.032	955.2	8.6	1043.3	31	31		2.4	2257	2257	
4/25/2006	22	0.009	1262.0	2.4	41.6	11			0.1	120		
4/25/2006	23	0.070	647.6	19.0	2653.9	45	57		6.0	3854	3974	
4/26/2006	23	0.059	692.3	16.1	2435.4	41	41		5.4	3761	3761	
5/10/2006	22	0.020	1007.4	5.5	938.0	20	20		2.1	2092	2092	
5/11/2006	22	0.014	1238.2	3.7	386.1	17	17		0.9	1101	1101	
5/28/2006	22	0.014	1161.8	3.7	390.9	16	16		0.9	1046	1046	
6/7/2006	14	0.014	1289.8	3.8	387.4	18	18		0.9	1121	1121	
11/2005 through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate				Average						
56	1	0.033		8.92	1211	28	36	2012	2.7	2247	2854	158412
Estimates per year are extrapolated from 8 months of operation.							TPY	1.0			TPY	79
PB3 taken over by operations on November 1, 2005.												

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT3A Emission Unit -016 - Fuel Switch -11/2005 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values							
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
5/16/2006	10	0.117	611.9	31.8	3088.5	72		294	6.9	4233		13603	
5/16/2006	11	0.180	781.5	46.7	2377.3	141			5.6	4359			
5/16/2006	12	0.125	657.2	34.0	3407.7	82	294		7.6	5012	13603		
11/2005 through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate					Average						
2	3	0.141					98	294	442	6.7	4534	13603	20405
Estimates per year are extrapolated from 8 months of operation.							TPY	0.2			TPY	10.2	
PB3 taken over by operations on November 1, 2005.													
Fuel Switch occurred during tuning session.													

Hines CT3A Emission Unit -016 - Malfunction - 11/2005 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values							
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
1/15/2006	2	0.126	512.4	34.1	2672.7	65	65	105	6.0	3080	3080	3088	
6/14/2006	10	0.011	1681.3	3.0	1.0	18			0.0	4			
6/14/2006	11	0.013	1687.5	3.4	1.0	22	40		0.002	4	8		
11/2005 through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate					Average						
3	2	0.050					35.0	52.5	157	2.0	1029.3	1544.0	4632
Estimates per year are extrapolated from 8 months of operation.							TPY	0.1			TPY	2.3	
PB3 taken over by operations on November 1, 2005.													

Hines CT3A Emission Unit -016 - Tuning Session - 11/2005 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values							
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
5/16/2006	10	0.117	611.9	31.8	3088.5	72		294	6.9	4233		13603	
5/16/2006	11	0.180	781.5	46.7	2377.3	141			5.6	4359			
5/16/2006	12	0.125	657.2	34.0	3407.7	82	294		7.6	5012	13603		
11/2005 through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate					Average						
2	3	0.141					98	294	442	6.7	4534	13603	20405
Estimates per year are extrapolated from 8 months of operation.							TPY	0.2			TPY	10.2	
PB3 taken over by operations on November 1, 2005.													

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT3B Emission Unit -017 - Cold Start (Both Emission Units on One Power Block) - 11/2005 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values							Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
12/21/2005	20	0.156	606.0	42.2	3259.9	95		635	7.3	4445		35712	
12/21/2005	21	0.155	708.4	42.1	3989.0	110			8.9	6333			
12/21/2005	22	0.156	724.8	42.3	4180.2	113			9.4	6802			
12/21/2005	23	0.152	736.8	41.3	4224.8	112			9.5	6974			
12/22/2005	0	0.150	749.4	40.6	4198.7	112			9.4	7076			
12/22/2005	1	0.091	1022.3	24.6	1773.6	93	635		4.0	4083	35712		
1/6/2006	20	0.148	575.1	40.1	2370.6	85		774	5.3	3063		41424	
1/6/2006	21	0.144	729.0	39.0	3692.5	105			8.3	6050			
1/6/2006	22	0.143	761.5	38.7	3922.6	109			8.8	6719			
1/6/2006	23	0.143	763.9	38.7	3933.2	109			8.8	6758			
1/7/2006	0	0.143	762.2	38.7	3918.5	109			8.8	6718			
1/7/2006	1	0.135	535.2	36.7	2854.3	72			6.4	3421			
1/7/2006	2	0.055	1186.6	14.8	635.9	65	655		1.4	1707	34435		
3/5/2006	20	0.022	620.4	5.9	428.1	14			1.0	603			
3/5/2006	21	0.030	875.2	8.1	820.8	26			1.9	1620			
3/5/2006	22	0.025	897.6	6.8	638.8	22			1.4	1283			
3/5/2006	23	0.025	893.5	6.7	661.7	22			1.5	1343			
3/6/2006	0	0.025	1027.1	6.8	469.7	26			1.1	1080			
3/6/2006	1	0.007	1226.2	1.9	385.8	9	119		0.9	1061	6989		
11/2005 through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate						Average					
5	6	0.100		27.2		2439.9		74		470		2113	
										5.5		4060	
										25712		115704	
										TPY		1.1	
										TPY		58	

Estimates per year are extrapolated from 8 months of operation.
 PB3 taken over by operations on November 1, 2005.

Hines CT3B Emission Unit -017 - Cold Start (One Emission Unit on One Power Block) - 11/2005 through 6/2006													
CEMS Data Acquisition and Handling System (DAHS) Values							Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)	
1/10/2006	20	0.140	657.6	38.0	3369.5	92		1030	7.6	4969		46924	
1/10/2006	21	0.128	806.3	34.6	3449.5	103			7.8	6263			
1/10/2006	22	0.120	915.5	32.6	2620.9	110			5.9	5376			
1/10/2006	23	0.082	1070.8	22.3	554.0	88	393		1.2	1328	17936		
1/30/2006	20	0.125	597.4	33.9	3208.9	75			7.2	4303			
1/30/2006	21	0.118	833.8	32.1	3024.2	98			6.8	5642			
1/30/2006	22	0.118	874.1	32.1	2898.2	103			6.5	5669			
1/30/2006	23	0.095	1038.3	25.8	1203.7	99			2.7	2801			
1/31/2006	0	0.022	1235.2	6.1	34.7	27	402		0.1	94	18509		
2/12/2006	14	0.142	722.7	38.5	3442.8	103			7.7	5586			
2/12/2006	15	0.042	1231.8	11.5	203.7	52	154		0.5	558	6144		
5/28/2006	6	0.069	668.8	18.8	2853.1	46			6.4	4263			
5/28/2006	7	0.028	1245.2	7.7	25.9	35	81		0.1	71	4334		
11/2005 through 6/2006													
No. per yr.	Hr/Ep	Avg NOX Rate						Average					
6	3	0.095		25.7		2068		79		258		1545	
										4.6		3610	
										11731		70386	
										TPY		0.8	
										TPY		35.2	

Estimates per year are extrapolated from 8 months of operation.
 PB3 taken over by operations on November 1, 2005.

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Hines CT3B Emission Unit -017 - Warm/Hot Start (Both Emission Units on One Power Block) - 11/2005 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
11/7/2005	6	0.104	1.1	28.3	2810.3	0.1		21	6.3	7		568
11/7/2005	7	0.058	357.1	15.8	702.6	21	21		1.6	561	568	
11/2005 through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate				Average						
1.5	2	0.081		22.1	1756	10	21	31	4	284	568	851
Estimates per year are extrapolated from 8 months of operation.							TPY	0.0			TPY	0.4
PB3 taken over by operations on November 1, 2005.												

Hines CT3B Emission Unit -017 - Warm/Hot Start (One Emission Unit on One Power Block) - 11/2005 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
11/2/2005	6	0.066	971.1	18.0	1067.4	64	64	231	2.4	2314	2314	10204
11/3/2005	6	0.069	290.1	18.6	2356.6	20			5.3	1544		
11/3/2005	7	0.074	960.2	20.0	1313.3	71	91		3.0	2840	4384	
11/17/2005	6	0.074	896.1	20.0	1490.9	66			3.4	3009		
11/17/2005	7	0.007	1381.7	1.8	152.1	10	76		0.4	497	3506	
1/22/2006	9	0.152	574.4	41.3	3661.4	87		619	8.20	4712		22764
1/22/2006	10	0.072	1003.3	19.6	1474.5	72	160		3.3	3308	8020	
3/7/2006	18	0.118	973.4	31.9	1471.6	115	115		3.3	3225	3225	
4/11/2006	9	0.059	1013.5	15.9	877.8	60			2.0	2009		
4/11/2006	10	0.012	1354.7	3.2	1.2	16	76		0.0	4	2013	
5/3/2006	9	0.098	894.5	26.6	1544.8	88			3.5	3099		
5/3/2006	10	0.012	1326.9	3.3	1.5	16	104		0.0	4	3103	
5/4/2006	9	0.076	913.9	20.5	1272.1	69	69		2.9	2624	2624	
5/5/2006	13	0.121	790.0	32.8	2130.1	96	96		4.8	3779	3779	
11/2005 through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate				Average						
13.5	2	0.072		19.5	1344	61	94	1275	3	2355	3663	49451
Estimates per year are extrapolated from 8 months of operation.							TPY	0.6			TPY	25
PB3 taken over by operations on November 1, 2005.												

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
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Hines CT3B Emission Unit -017 - Shutdown (Includes Blend Out) - 11/2005 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
11/1/2005	18	0.009	1134.3	2.5	274.8	10		177	0.6	683		14429
11/1/2005	19	0.080	653.8	21.7	3542.9	52	63		8.0	5198	5881	
11/2/2005	23	0.027	911.5	7.3	1219.0	25	25		2.7	2502	2502	
11/16/2005	22	0.029	953.0	7.8	1071.2	28	28		2.4	2310	2310	
12/23/2005	13	0.008	1255.2	2.3	43.2	10			0.1	115		
12/23/2005	14	0.083	628.4	22.5	2566.3	52	62		5.8	3621	3736	
1/7/2006	11	0.036	875.2	9.7	1760.7	32	32	462	3.98	3481	3481	41005
1/16/2006	14	0.035	886.2	9.6	1193.7	31	31		2.6	2348	2348	
1/27/2006	21	0.023	960.9	6.3	1316.9	22	22		2.9	2812	2812	
2/10/2006	12	0.052	829.7	14.0	2455.4	43	43		5.6	4606	4606	
2/15/2006	9	0.018	1146.7	4.9	725.2	21	21		1.6	1859	1859	
3/6/2006	22	0.009	1358.5	2.4	58.9	12			0.1	183		
3/6/2006	23	0.071	761.4	19.4	2912.0	54	66		6.5	4939	5122	
4/10/2006	21	0.011	1266.8	3.0	337.9	14			0.8	955		
4/10/2006	22	0.093	661.2	25.3	3331.0	61	75		7.5	4928	5883	
4/27/2006	23	0.035	863.9	9.6	1305.5	30	30		2.9	2503	2503	
5/2/2006	22	0.030	955.5	8.2	1157.1	29	29		2.6	2462	2462	
5/3/2006	22	0.041	807.3	11.2	1952.8	33	33		4.4	3513	3513	
5/4/2006	21	0.009	1439.2	2.4	12.9	13			0.0	42		
5/4/2006	22	0.044	824.5	11.9	2015.2	36	49		4.5	3740	3782	
5/12/2006	23	0.038	812.5	10.3	1442.8	31	31		3.2	2633	2633	
11/2005 through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate				Average						
24	1	0.037		10.1	1462	30	40	959	3	2640	3465	83151
Estimates per year are extrapolated from 8 months of operation.								TPY	0.5		TPY	41.6
PB3 taken over by operations on November 1, 2005.												

Hines CT3B Emission Unit -017 - Fuel Switch -11/2005 through 6/2006												
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values						
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)
4/28/2006	4	0.117	583.8	31.2	3838.4	68		501	8.8	5115		24747
4/28/2006	5	0.051	1454.1	13.2	224.7	74			0.5	768		
4/28/2006	6	0.045	1057.9	11.7	1048.3	48			2.5	2596		
4/28/2006	7	0.026	1109.1	7.1	940.0	29	219		2.1	2324	10804	
5/16/2006	15	0.097	388.9	26.4	2385.8	38			5.3	2075		
5/16/2006	16	0.168	803.1	44.5	3254.5	135			7.5	6006		
5/16/2006	17	0.142	772.1	37.6	3302.4	110	282		7.6	5862	13943	
11/2005 through 6/2006												
No. per yr.	Hr/Ep	Avg NOX Rate				Average						
3	4	0.092		24.5	2142.0	72	251	752	4.9	3535	12373	37120
Estimates per year are extrapolated from 8 months of operation.								TPY	0.4		TPY	18.6
PB3 taken over by operations on November 1, 2005.												
Fuel Switch occurred during tuning session.												

Operational CEMs Data
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
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Hines CT3B Emission Unit -017 - Malfunction - 11/2005 through 6/2006														
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values								
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)		
12/12/2005	5	0.141	563.3	38.2	2708.6	79		358	6.1	3428		12157		
12/12/2005	6	0.113	589.9	30.6	3088.1	67			6.9	4095				
12/12/2005	7	0.120	951.0	32.7	2176.0	114			4.9	4623				
12/12/2005	8	0.064	1271.5	17.4	2.4	81			0.0	7				
12/12/2005	9	0.013	1272.9	3.6	1.8	17	358		0.0	5	12157			
1/15/2006	20	0.030	1432.9	8.1	1.6	43		135	0.0	5		10		
1/15/2006	21	0.064	1433.7	17.4	1.6	92	135		0.0	5	10			
11/2005 through 6/2006														
No. per yr.	Hr/Ep	Avg NOX Rate				Average								
3	4	0.078				21.1	1140	70	246	739	2.6	1738	6084	18252
Estimates per year are extrapolated from 8 months of operation.							TPY	0.4				TPY	9.1	
PB3 taken over by operations on November 1, 2005.														

Hines CT3B Emission Unit -017 - Tuning Session - 11/2005 through 6/2006														
CEMS Data Acquisition and Handling System (DAHS) Values						Calculated Values								
Date	Hour	NOX Rate (lb/mmBTU)	Total HI for this Hour (MMBTU)	DRY NOX (corrected ppmvd)	DRY CO (corrected ppmvd)	NOX Mass Rate (lb/hr)	NOX Total Mass Rate (lbs/Episode)	NOX Total Mass per year (lbs/yr)	CO Rate (lb/mmBTU)	CO Mass Rate (lb/hr)	CO Total Mass Rate (lbs/Episode)	CO Total Mass per year (lbs/yr)		
4/28/2006	4	0.117	583.8	31.2	3838.4	68		501	8.8	5115		24747		
4/28/2006	5	0.051	1454.1	13.2	224.7	74			0.5	768				
4/28/2006	6	0.045	1057.9	11.7	1048.3	48			2.5	2596				
4/28/2006	7	0.026	1109.1	7.1	940.0	29	219		2.1	2324	10804			
5/16/2006	15	0.097	388.9	26.4	2385.8	38			5.3	2075				
5/16/2006	16	0.168	803.1	44.5	3254.5	135			7.5	6006				
5/16/2006	17	0.142	772.1	37.6	3302.4	110	282		7.6	5862	13943			
11/2005 through 6/2006														
No. per yr.	Hr/Ep	Avg NOX Rate				Average								
3	4	0.092				24.5	2142.0	72	251	752	4.9	3535	12373	37120
Estimates per year are extrapolated from 8 months of operation.							TPY	0.4				TPY	18.6	
PB3 taken over by operations on November 1, 2005.														

ASTM Methods – Fuel Sulfur Content

Florida Power Corporation d/b/a Progress Energy Florida, Inc.

Hines Energy Complex

Power Block 1: CT1A (Emission Unit No. -001) and CT1B (Emission Unit -002)

Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)

Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

ASTM Methods – Fuel Sulfur Content
Florida Power Corporation d/b/a Progress Energy Florida, Inc.
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Power Block 1: CT1A (Emission Unit No. -001) and CT1B (Emission Unit -002)
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Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

In the PEF Hines Energy Complex Title V Permit as well as the Power Block 3 PSD construction permit, the ASTM methods listed for fuel sulfur content determination are out of date for both fuel oil and natural gas. Also, the references to specific paragraphs of NSPS, 40 CFR 60 Subpart GG that related to sulfur content analysis were either out of date or incorrect. Recently, PEF discovered that not only were these methods not current, they were also no longer performed by the certified laboratories.

These emission units are also subject to Acid Rain which also lists specific ASTM methods for sulfur content determination. Some of these methods are the same as those required by 40 CFR 60, Subpart GG.

In 40 CFR 60, Subpart GG, the ASTM methods are listed in two separate sections for natural gas:

- In 40 CFR 60.334(h)(1), which is as follows, if the sulfur content of the natural gas is known to be less than 0.4 wt% or 4000 ppmw, then these methods may be used in lieu of those in §60.335(b)(10)(ii).

§60.335(b)(10)(ii).

h) The owner or operator of any stationary gas turbine subject to the provisions of this subpart:

(1) Shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in paragraph (h)(3) of this section. The sulfur content of the fuel must be determined using total sulfur methods described in Sec. 60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86 all of which are incorporated by reference-see Sec. 60.17), which measure the major sulfur compounds may be used; and

- The ASTM methods to be used no matter what the sulfur content are listed in 40 CFR 60.335(b)(10)(ii), which is below.

§60.335(b)(10)(ii)

(ii) For gaseous fuels, ASTM D1072-80, 90 (Reapproved 1994); D3246-81, 92, 96; D4468-85 (Reapproved 2000); or D6667-01 (all of which are incorporated by reference, see Sec. 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the prior approval of the Administrator.

- For fuel oil, ASTM methods are in 40 CFR 60.335(b)(10)(i), which is as follows:

§60.335(b)(10)(i)

(i) For liquid fuels, ASTM D129-00, D2622-98, D4294-02, D1266-98, D5453-00 or D1552-01 (all of which are incorporated by reference, see § 60.17); or

ASTM Methods – Fuel Sulfur Content
Florida Power Corporation d/b/a Progress Energy Florida, Inc.
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In the Acid Rain program, 40 CFR 75, Appendix D, the ASTM methods are listed as follows:

Appendix D to 40 CFR 75

App. D § 2.3.3.1.2

2.3.3.1.2 Use one of the following methods when using manual sampling (as applicable to the type of gas combusted) to determine the sulfur content of the fuel: ASTM D1072-90, "Standard Test Method for Total Sulfur in Fuel Gases," ASTM D4468-85 (Reapproved 1989) "Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Radiometric Colorimetry," ASTM D5504-94 "Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence," or ASTM D3246-81 (Reapproved 1987) "Standard Test Method for Sulfur in Petroleum Gas By Oxidative Microcoulometry" (incorporated by reference under § 75.6).

App. D § 2.2.5

2.2.5 Split and label each oil sample. Maintain a portion (at least 200 cc) of each sample throughout the calendar year and in all cases for not less than 90 calendar days after the end of the calendar year allowance accounting period. Analyze oil samples for percent sulfur content by weight in accordance with ASTM D129-91, "Standard Test Method for Sulfur in Petroleum Products (General Bomb Method)," ASTM D1552-90, "Standard Test Method for Sulfur in Petroleum Products (High Temperature Method)," ASTM D2622-92, "Standard Test Method for Sulfur in Petroleum Products by X-Ray Spectrometry," or ASTM D4294-90, "Standard Test Method for Sulfur in Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectroscopy" (incorporated by reference under § 75.6).

PEF is requesting that all references to the ASTM methods for fuel sulfur content determination be clarified, corrected, and updated as well as language be included to address the future event of ASTM methods in the Title V permit being no longer used and not applicable.

Methods of Operation
Florida Power Corporation d/b/a Progress Energy Florida, Inc.
Hines Energy Complex
Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

**The Methods of Operation (Pages MO-2 through MO-6)
contains Company Confidential information.**

**Company
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Methods of Operation
 Florida Power Corporation d/b/a Progress Energy Florida, Inc.
 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Abbreviations:
 CT = Combustion Turbine
 HRSG = Heat Recovery Steam Generator
 PB = Power Block
 ST = Steam Turbine

Cold Start-up (Both Emission Units on One Power Block)

Initial Conditions: Both emission units shut down for >48 hours. Start up both emission units in one PB.

	Minimum	Average	Maximum	Operation Description
	35	37.5	40	The combustion turbines (CTs) are started and online within 35 to 40 minutes.
	5	7.5	10	Once the CT breakers are closed the steam turbine (ST) is started; begins its tests; awaits proper conditions.
	30	32.5	35	The CTs are taken to 16 MW to allow for the heat recovery steam generator (HRSG) midwall temperature to drop below 165 degrees_F
	10	12.5	15	The CTs are then ramped up to 25 to 40 MW and sit at that load until the ST is on line.
	50	75	100	The ST waits for proper conditions and temperatures, then rolls up and comes on line.
	15	17.5	20	Once the ST is online, the plant is stabilized, and the CTs can begin to ramp up in load.
	145	152.5	160	The CTs are slowly ramped up at approximately 0.70 MW per minute. This slow rate is due to the restrictions caused by minimizing the stresses on the ST. At 125 MW on the CTs the units are in compliance.
Total Minutes	290	335	380	

	Minimum	Average	Maximum	
Hours	4	5	6	This is the time it takes for the two emission units on each PB to come on line and get in compliance during a Two (CT) -on-One (ST) Cold Start.
Minutes	50	35	20	

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 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Abbreviations:
 CT = Combustion Turbine
 HRSG = Heat Recovery Steam Generator
 PB = Power Block
 ST = Steam Turbine

Cold Blend Start-up - One Emission Unit on One Power Block (Emission Unit shut down >48 hours)

Initial Conditions: 1 CT on 1 ST at minimum load. Start and blend in off line emission unit.

	Minimum	Average	Maximum	Operation Description
				Initiate start
	7	10	13	Flame on.
	11	13	15	Field breaker closed.
	2	4.5	7	Generator Breaker closed
	15	30	45	Hold for midwall temp @ 16MW
	45	55	65	HRSG blended ¹ in.
	6	10.5	15	CT in Compliance
Total Minutes	86	123	160	

	Minimum	Average	Maximum	
Hours	1	2	2	Time required to blend in one emission unit on each PB after a long shutdown (>48 hours).
Minutes	26	3	40	

¹ "Blend in" means admit steam to steam turbine.

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Methods of Operation
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 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Abbreviations:
 CT = Combustion Turbine
 HRSG = Heat Recovery Steam Generator
 PB = Power Block
 ST = Steam Turbine

**Warm Blend Start-up – One Emission Unit on Power Block
 (Emission Unit on One Power Block Shut Down <48 hours)**

Initial Conditions: 1(CT) on 1 (ST) at minimum load. Start and blend in off line emission unit.

Minimum	Average	Maximum	Operation Description
			Initiate start
7	10	13	Flame on.
11	13	15	Field breaker closed.
2	4.5	7	Generator Breaker closed
45	55	65	HRSG blended ¹ in.
6	10.5	15	CT in Compliance

Total Minutes	71	93	115
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	Minimum	Average	Maximum	
Hours	1	1	1	Time required to blend in one emission unit on each PB.
Minutes	11	33	55	

¹ "Blend in" means admit steam to steam turbine.

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Methods of Operation
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 Hines Energy Complex
 Power Block 2: CT2A (Emission Unit No. -014) and CT2B (Emission Unit-015)
 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Abbreviations:
 CT = Combustion Turbine
 HRSG = Heat Recovery Steam Generator
 PB = Power Block
 ST = Steam Turbine

Shutdown (One Emission Unit per Power Block)

Initial Conditions: 2 (CT) on 1 (ST) at minimum load. Blend out one emission unit.

Minimum	Average	Maximum	Operation Description
5	10	15	Lower Load. CT's go out of compliance at 110MW
15	20	25	Decrease power to 80 MW at 2MW/min
5	10	15	Get Steam Bypasses open, shut Block valves (~80MW)
36	38	40	Turbine Normal Stop, Decrease power to 4MW and breaker open
5	5	5	5 minute fired cool down.

Total Minutes	66	83	100
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	Minimum	Average	Maximum	
Hours	1	1	1	Time required to blend out one emission unit on one PB.
Minutes	6	23	40	

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 Power Block 3: CT3A (Emission Unit No. -016) and CT3B (Emission Unit No. -017)

Abbreviations:
 CT = Combustion Turbine
 HRSG = Heat Recovery Steam Generator
 PB = Power Block
 ST = Steam Turbine

Fuel Switch - Gas to Fuel Oil ^{1,2,3}

Initial Conditions: 2 (CT) on 1 (ST) at minimum load. Swap one emission unit at a time.

Minimum	Average	Maximum	Operation Description
5	10	15	Lower Load. CT's go out of compliance at 110MW
15	20	25	Get Steam Bypasses open, shut Block valves (~80MW)
25	30	35	Target MW load of 30MW (19%)
5	12.5	20	Transfer to fuel oil @ TXP turbine control system
25	30	35	30MW to Blend in (~80 MW); water injection begins for CT.
15	20	25	80MW to Compliance

Total Minutes per CT ²	90	122.5	155
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Double these numbers for shifting both emission units to fuel oil.

	Minimum	Average	Maximum	
Hours	1	2	2	Time required to switch from gas to fuel oil operations per emission unit.
Minutes	30	2.5	35	

¹ Fuel Switch from fuel oil to gas is the same as above, but in reverse order.
² Typically an emission unit would swap from gas to oil and then back to gas in less than a 24 hour period, thus doubling the estimated time per CT per 24 hour period.
³ Bill Reese of Siemens Power Generation (SPG), the original equipment manufacturer (OEM), recommends operation on oil twice per month per CT to ensure reliable fuel oil operation. However, PEF operates the site at less than 1000 hours per year, which exempts the site from the CT MACT applicability. On average this will allow approximately one fuel switch per month per CT.