MEMORANDUM

TO: Michael G. Cooke

THRU: Trina Vielhauer

FROM: Bobby Bull

DATE: March 8, 2006

SUBJECT: FINAL Permit No. 1050221-010-AC
Calpine Corporation
Auburndale Energy Complex

Attached for approval and signature is a final air construction permit modification for the Auburndale Energy Complex. This air construction permit is to revise several conditions of Permit Nos. PSD-FL-185, 1050221-004-AC, and PSD-FL-287.

This project is not subject to PSD because there will be no emissions changes associated with the modification. The facility will be subject to all current emissions limits. This construction permit is being processed concurrently with the Title V Renewal Permit, 1050221-009-AV.

No Comments were received concerning the DRAFT Permit that was clerked on December 22, 2005.

I recommend your approval and signature.

Attachment

TV/rlb

FINAL DETERMINATION

Calpine Corporation
Auburndale Energy Complex
DEP File No. 1050221-010-AC

The Department distributed a public notice package on December 22, 2005 which revises several conditions of Permit Nos. PSD-FL-185, 1050221-004-AC, and PSD-FL-287 at the Auburndale Energy Complex, located at 1501 and 1651 West Derby Lane in Auburndale, Polk County, Florida. The Public Notice of Intent to Issue was published in The Ledger on February 2, 2006.

COMMENTS/CHANGES

No comments were received.

CONCLUSION

The final action of the Department is to issue the permit.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT REVISION

In the Matter of an
Application for Permit by:

Mr. Robert Callery, General Manager
Calpine Corporation
1501 West Derby Avenue
Auburndale Fl, 33823

Auburndale Energy Complex
No. 1050221-010-AC
Project- Miscellaneous Revisions to
Past Permits

On May 27, 2005, Calpine Corporation submitted an application to revise several conditions of Permit Nos. PSD-FL-185, 1050221-004-AC, and PSD-FL-287. These permits primarily regulate Emissions Units at the Auburndale Energy Complex, which is located at 1501 and 1651 Derby Avenue, Auburndale, Polk County.

Enclosed is Final Permit Revision, which modifies the following air construction permits: PSD-FL-185, 1050221-004-AC, and PSD-FL-287. A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permit modification is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Michael G. Cooke, Director
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 3/10/06 to the persons listed:

Robert Callery, Calpine*
Heidi Whidden, Calpine
Mara Nasca, DEP- SWD

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Victoria Gibson (Clerk) 3/10/06 (Date)

Permit No. PSD-FL-185 (EU 001)

All construction related to this project is complete and no further construction is authorized by this action. The following permit conditions are revised as follows. All other conditions are unchanged and the affected emissions units remain subject to the applicable requirements.

General Condition 8, Page 3 of 10 is hereby revised:

From: If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including dates and times; or if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement by the Department for penalties for revocation of this permit.

To: If temporarily not able to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind, or other cause, the permittee shall notify the Compliance Authority as soon as possible, but at least with in one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future reoccurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations.

Specific Condition 8, Page 6 of 10, is hereby revised:

From: Compliance with NOx, SO2, CO, PM, PM10, and VOC standards shall be determined (while operating at 95% to 100% of the permitted maximum heat rate input) within 180 days of initial operation and annually thereafter, by the following reference methods as described in 40 CFR 60, Appendix A (July 1991 version) and adopted by reference in F.A.C. Rule 17-2.700.

- Method 1. Sample and Velocity Traverses
- Method 2. Volumetric Flow Rate
- Method 3. Gas Analysis
- Method 5. Determination of Particulate Matter Emissions from Stationary Sources
- Method 9. Determination of the Opacity of the Emissions from Stationary Sources
- Method 8. Determination of the Sulfuric Acid of the Emissions from Stationary Sources
- Method 10 Determination of Carbon Monoxide Emissions from Stationary Sources
- Method 20 Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines (Initial Test Only)
- Method 25A Determination of Volatile Organic Compounds Emissions from Stationary Sources

Other DER approved methods may be used for compliance testing after prior Department Approval.

To: Compliance with NOx, SO2, CO, PM, PM10, and VOC standards shall be determined (while operating at 90% to 100% of the permitted maximum heat rate input) within 180 days of initial operation and annually thereafter, by the following reference methods as described in 40 CFR 60, Appendix A and adopted by reference in F.A.C. Rule 17-2.700.

- Method 1. Sample and Velocity Traverses
- Method 2. Volumetric Flow Rate
- Method 3. Gas Analysis
- Method 5. Determination of Particulate Matter Emissions from Stationary Sources
- Method 7E Determination of Nitrogen Oxides Emissions From Stationary Sources (Instrumental Analyzer Procedure)
- Method 9. Determination of the Opacity of the Emissions from Stationary Sources
- Method 8. Determination of the Sulfuric Acid of the Emissions from Stationary Sources
- Method 10 Determination of Carbon Monoxide Emissions from Stationary Sources
- Method 20 Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
- Method 25A Determination of Volatile Organic Compounds Emissions from Stationary Sources

Other DER approved methods may be used for compliance testing after prior Department Approval.

Specific Condition 16, Page 8 of 10 is hereby revised:

From: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxide emissions from this source. The continuous emission monitor must comply with the 40 CFR 60, Appendix B, Performance Specification 2 (July 1991).

To: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxide emissions from this source in accordance with 40 CFR 60.334.

Specific Condition 17, Page 8 of 10 is hereby revised:

From: A continuous monitoring system shall be installed and record the fuel consumption on each unit. While steam water injection is being utilized for NOx control, the water (all phases) to fuel ratio shall be continuously monitored. The system shall meet the requirements of 40 CFR 60, Subpart GG. The NOx CEMS will be used in lieu of the water/fuel monitoring system and fuel bound nitrogen monitoring, which are required in 40 CFR 60.334. The NOx CEMS shall be used to report emissions during periods of startup, shutdown and malfunction in lieu of FBN monitoring and the water/fuel monitoring system described in 40 CFR 60.334(c)(1).

To: A continuous monitoring system shall be installed and record the fuel consumption on each unit. While steam water injection is being utilized for NOx control, the water (all phases) to fuel ratio shall be continuously monitored. The system shall meet the requirements of 40 CFR 60, Subpart GG. The NOx CEMS will be used in lieu of the water/fuel monitoring system, which are required in 40 CFR 60.334. The NOx CEMS shall be used to report emissions during periods of startup, shutdown and malfunction in lieu of the water/fuel monitoring system described in 40 CFR 60.334. The permitted will continuously monitor and record the water/fuel ratio as a backup method for ensuring compliance when the NOx CEMS is unavailable.

Specific Condition 24, Page 9 of 10 is hereby revised:

From: Quarterly excess emissions, in accordance with the July 1, 1991 version of 40 CFR 60.7 and 60.334 shall be submitted quarterly to the DER's Southwest District Office.

To: Quarterly excess emissions, in accordance with 40 CFR 60.7 and 60.334 shall be submitted quarterly to the DEP's Southwest District Office.

Specific Condition 27, Page 9 of 10 is hereby revised:

From: Pursuant to F.A.C. Rule 17-210.300(2), Air Operating Permits, the permittee is required to submit annual reports in the actual operating rates and emissions from this facility. These reports shall include, but not be limited to the following: sulfur, nitrogen contents and the lower heating value of the fuel being fired, fuel usage, hours of operation, air emissions limits, etc. Annual reports shall be sent to the Department's Southwest District Office by March 1 of each calendar year.

To: Annual Operating Report: Pursuant to Rule 62-210.370(2), F.A.C., the permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year.

Permit No. 1050221-004-AC (EU 006)

All construction related to this project is complete and no further construction is authorized by this action. The following permit conditions are revised as follows. All other conditions are unchanged and the affected emissions units remain subject to the applicable requirements.

Placard Page, Page 1 of 13, paragraph 1, is hereby revised:

From: The proposed project authorizes the installation of one simple cycle, combustion turbine with an electrical generator set. The gas turbine is capable of producing a nominal 104 MW of electricity.

To: The proposed project authorizes the installation of one simple cycle, combustion turbine with an electrical generator set. The gas turbine is capable of producing a nominal 120 MW of electricity.

Facility Description, Page 2 of 13, paragraph 1, last sentence, is hereby revised:

From: Completion of this project will result in the installation of a new electric power generator capable of providing a nominal 104 MW of electrical power.

To: Completion of this project will result in the installation of a new electric power generator capable of providing a nominal 120 MW of electrical power.

Specific Condition 9, Page 6 of 13, is hereby revised:

From: Water injection Technology: the permittee shall install, calibrate, tune, operate, and maintain a water injection system for the unit. The system shall be designed and operated so as to ensure that NOx emissions do not exceed 25 ppmvd @ 15% O_2.

To: Water injection Technology: the permittee shall install, calibrate, tune, operate, and maintain a water injection system for the unit. The system shall be designed and operated so as to ensure that NOx emissions do not exceed 25.0 ppmvd @ 15% O_2 while burning gas and 42.0 ppmvd @ 15% O2 while burning oil.

Specific Condition 13, Page 6 of 13 is hereby revised:

From: Carbon Monoxide (CO):

CO emissions from the combustion turbine shall not exceed 10.0 ppmvd (at full output of the emissions unit) corrected to 15% oxygen. Additionally, annual emissions of CO from this emission unit shall not exceed 99 TPY, based upon a 12-month rolling total.

The permittee shall demonstrate compliance with this standard by conducting performance tests and emissions monitoring in accordance with EPA Method 10 and the CEMS requirement of this permit. [Rule 62-212.400, F.A.C. (PSD avoidance)]

To: Carbon Monoxide (CO):

CO emissions from the combustion turbine shall not exceed 10.0 ppmvd (at full output of the emissions unit) corrected to 15% oxygen 24-hour average. Additionally, annual emissions of CO from this emission unit shall not exceed 99 TPY, based upon a 12-month rolling total.

The permittee shall demonstrate compliance with this standard by conducting performance tests and emissions monitoring in accordance with EPA Method 10 and the CEMS requirement of this permit. CO (ppmvd) emissions from the new emissions unit shall not exceed the specified limitations based on a 24-hour block average for data collected from the continuous emissions monitor. [Rule 62-212.400, F.A.C. (PSD avoidance)]

Specific Condition 14, Page 6 of 13 is hereby revised:

From: Nitrogen Oxides (NO_X):

NO_X emissions from the combustion turbine shall not exceed 25.0 ppmvd nor 42.0 ppmvd (gas and oil respectively) corrected to 15% oxygen. Additionally, annual emissions of NO_X from this emission unit shall not exceed 115 TPY, based upon a 12-month rolling total. *In this regard, existing EU-001 shall be required to comply with an annual NO_X emission limit of 177 TPY, as well as an equivalent annual NO_X limit of 9 ppmvd corrected to 15% oxygen, based upon a 12-month rolling total and natural gas firing.* These emission limits are *in addition to* all existing limits on EU-001, and are unit specific limits imposed as a result of the applicant's desire to net out of a PSD review for NO_X for EU-006.

The permittee shall demonstrate compliance with this standard as described in Specific Condition 31 and by conducting performance tests and emissions monitoring in accordance with EPA Method 20 and the CEMS requirement of this permit. Short-term (ppmvd) NO_X emissions from the new emissions unit shall not exceed the specified limitations based on a 24-hour block average for data collected from the continuous emissions monitor. [Rule 62-212.400, F.A.C. (PSD avoidance)]

To: Nitrogen Oxides (NO_X):

NO_X emissions from the combustion turbine shall not exceed 25.0 ppmvd nor 42.0 ppmvd (gas and oil respectively) corrected to 15% oxygen 24-hour average. Additionally, annual emissions of NO_X from this emission unit shall not exceed 115 TPY, based upon a 12-month rolling average. *In this regard, existing EU-001 shall be required to comply with an annual NO_X emission limit of 177 TPY based on a 12-month rolling total, as well as an equivalent annual NO_X limit of 9 ppmvd corrected to 15% oxygen, based upon a 12-month rolling total and natural gas firing.* These emission limits are *in addition to* all existing limits on EU-001, and are unit specific limits imposed as a result of the applicant's desire to net out of a PSD review for NO_X for EU-006.

The permittee shall demonstrate compliance with this standard as described in Specific Condition 31 and by conducting performance tests and emissions monitoring in accordance with EPA Method 20 and the CEMS requirement of this permit. NO_X (ppmvd) emissions from the new emissions unit shall not exceed the specified limitations based on a 24-hour block average for data collected from the continuous emissions monitor. [Rule 62-212.400, F.A.C. (PSD avoidance)]

Specific Condition 14, paragraph 2, 1st sentence, Page 7 of 13 is hereby revised:

From: The permittee shall demonstrate compliance with this standard as described in Specific Condition 31 and by conducting performance tests and emissions monitoring in accordance with EPA Method 20 and the CEMS requirement of this permit.

To: The permittee shall demonstrate compliance with this standard as described in Specific Condition 31 and by conducting performance tests and emissions monitoring in accordance with EPA Method 20 or Method 7E and the CEMS requirement of this permit.

Specific Condition 18(b), Page 7 of 13 is hereby revised:

From: (b) During all startups, shutdowns and malfunctions, the continuous emissions monitor (CEM) shall monitor and record emissions. However, up to 2 hours of monitoring data during any 24-hour period may be excluded from continuous compliance demonstrations as a result of startups, shutdowns, and documented malfunctions. In case of malfunctions, the permittee shall notify the Compliance Authorities within one working day. A full written report on the malfunction shall be submitted in a quarterly report. [Design; Rules 62-210.700(1), (5), and 62-4.130, F.A.C.]

To: (b) During all startups, shutdowns and malfunctions, the continuous emissions monitor (CEM) shall monitor and record emissions. No valid monitoring data shall be excluded from the mass-based (TPY) CO and NOx emissions limits. Monitoring data collected during startup, shutdown and malfunctions

may be excluded in accordance with Condition 33 of this permit when determining compliance with concentration-based (ppmvd) CO and NOx emissions limits. In case of malfunctions, the permittee shall notify the Compliance Authorities within one working day. A full written report on the malfunction shall be submitted in a quarterly report. [Design; Rules 62-210.700(1), (5), and 62-4.130, F.A.C.]

Specific Condition 18(c), Page 8 of 13 is hereby revised:

From: (c) CEMS data exclusion and replacement methods shall be in accordance with EPA's Acid Rain requirements. Additionally, the permittee's record-keeping for EU-001 and EU-006 NOx emissions caps (TPY) shall be in full agreement with publicly available data on EPA's Acid Rain website.

To: (c) CEMS data exclusion and replacement methods shall be in accordance with EPA's Acid Rain requirements. Additionally, the permittee's record-keeping for EU-001 and EU-006 NOx emissions caps (TPY) shall be in full agreement with publicly available data on EPA's Acid Rain website which includes all documented exclusions reported to the Department in a quarterly report. The permittee may exclude startup, shutdown and Part 75 missing data from the ppmvd calculations. However, this data will need to be recorded for the TPY calculations for netting purposes and required by the Acid Rain Web Site.

Specific Condition 20, Page 8 of 13 is hereby revised:

From: Performance Test Methods: Initial (I) and Annual (A) compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-204.800, F.A.C.

(a) EPA Method 9 – Visual Determination of the Opacity of Emissions from Stationary Sources (I, A);

(b) EPA Method 10 – Determination of Carbon Monoxide Emissions from Stationary Sources (I, A);

(d) EPA Method 20 – Determination of Oxides from Nitrogen Oxide, Sulfur Dioxide, and Diluent Emissions from Stationary Sources (I, A);

(e) EPA Method 25A – Determination of Volatile Organic Concentrations (I). (EPA Method 18 may be conducted to account for the non-regulated methane portion of the VOC emissions.

Annual RATA testing at 100% output may be utilized to satisfy the about annual requirements for CO and NOx tests. No other methods may be used for compliance testing unless prior DEP approval is received, in writing, fro the DEP Emissions Monitoring Section Administrator in accordance with an alternate sampling procedure specified in Rule 62-297.620, F.A.C.

To: Performance Test Methods: Initial (I) and Annual (A) compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-204.800, F.A.C.

(a) EPA Method 9 – Visual Determination of the Opacity of Emissions from Stationary Sources (I, A);

(b) EPA Method 10 – Determination of Carbon Monoxide Emissions from Stationary Sources (I, A);

(c) EPA Method 20 – Determination of Oxides from Nitrogen Oxide(Method 7E may used for Nitrogen Oxide), Sulfur Dioxide, and Diluent Emissions from Stationary Sources (I, A);

(d) EPA Method 25A – Determination of Volatile Organic Concentrations (I). (EPA Method 18 may be conducted to account for the non-regulated methane portion of the VOC emissions.

If the unit does not combust natural gas for greater than 400 hours during the federal fiscal year, the annual compliance tests are not required. Annual RATA testing at 100% output may be utilized to satisfy the about annual requirements for CO and NOx tests. No other methods may be used for compliance testing unless prior DEP approval is received, in writing from the Department.

Specific Condition 23, Page 8 of 13 is hereby revised:

From: Annual Performance Tests: To demonstrate compliance with the emission standards specified in this permit, the permittee shall conduct annual performance tests for CO, NO_X and visible emissions from the combustion turbine. If conducted at permitted capacity, CO and NO_X emissions data collected during the annual CO and NO_X continuous monitor RATA required pursuant to 40 CFR 75 may be substituted for the required annual performance test. Tests required on an annual basis shall be conducted at least once during each federal fiscal year (October 1st to September 30th). [Rule 62-297.310(7)(a)4., F.A.C.]

To: Annual Performance Tests: To demonstrate compliance with the emission standards specified in this permit, the permittee shall conduct annual performance tests for visible emissions from the combustion turbine. Tests required on an annual basis shall be conducted at least once during each federal fiscal year (October 1st to September 30th). For each CEMS, the permittee shall conduct annual RATAs in accordance with the regulations of 40 CFR 75 for NOx and Performance Specification 4 or 4A for CO. [Rules 62-297.401 and 62-297.310, F.A.C.]

Specific Condition 31, 2nd paragraph, First Sentence, Page 10 of 13 is hereby revised:

From: Compliance with the emission limits for NO_X shall be based on a 24-hour block average starting at midnight of each operating day.

To: Compliance with the emission limits for CO and NO_X shall be based on a 24-hour block average starting at midnight of each operating day.

Specific Condition 31, 4th paragraph and formula, Page 10 of 13 is hereby revised:

From: For the 9-ppmvd annual equivalent emissions limit, which is being placed upon EU-001, measurements shall be in ppmvd and be based on a 12-month rolling total starting at the first day of each calendar month. Each monthly total shall be calculated by adding each valid (daily) 24-hour gas firing block averages (as determined above) from valid operating days within the calendar month. This monthly total shall be combined with the previous valid 11 calendar months and shall comprise a 12-month rolling total. In order to convert each 12-month rolling total to an annual equivalent limit, the following formula shall be utilized:

$ppmvd_e = ppmvd_a * [hours_g/8760]$ where:
$ppmvd_e$ = the equivalent annual short-term emissions for nitrogen oxides (ppmvd corrected to 15% O_2)
$ppmvd_a$ = the measured (CEMS) 12-month rolling short-term emissions for NO_X (ppmvd corr. to 15% O_2)
$hours_g$ = 12-month rolling total valid hours of operation combusting natural gas

To: For the 9-ppmvd annual equivalent NOx emissions limit, which is being placed upon EU-001, measurements shall be in ppmvd and be based on a 12-month rolling average starting at the first day of each calendar month while firing natural gas only. Each monthly average shall be calculated by adding each valid (daily) 24-hour gas firing block averages (as determined above) from valid operating days within the calendar month. This monthly average shall be combined with the previous valid 11 calendar months and shall comprise a 12-month rolling average. In order to convert each 12-month rolling average to an annual equivalent limit, the following formula shall be utilized:

$ppmvd_e = ppmvd_a * [hours_g/8760]$ where:
$ppmvd_e$ = the equivalent annual NOx average (ppmvd corrected to 15% O_2)
$ppmvd_a$ = the measured (CEMS) 12-month rolling NO_X average (ppmvd corr. to 15% O_2) while firing only natural gas
$hours_g$ = 12-month rolling total valid hours of operation combusting natural gas

Specific Condition 33, 1st paragraph Page 11 of 13 is hereby revised:

From: NO_X/CO CEMS Data Requirements: NO_X, CO and O_2 emissions data shall be recorded by the CEM system during episodes of startup, shutdown and malfunction. NO_X and CO emissions data recorded during these episodes may be excluded from the block average calculated to demonstrate compliance with the emission limits of this permit as provided in this paragraph. Periods of data excluded for startup and shutdown shall not exceed two hours in any block 24-hour period. Periods of data excluded for malfunctions shall not exceed two hours in any 24-hour block period. All periods of data excluded for any startup, shutdown or malfunction episode shall be consecutive for each episode. Periods of data excluded for all startup, shutdown or malfunction episodes shall not exceed four hours in any 24-hour block period. The owner or operator shall minimize the duration of data excluded for startup, shutdown and malfunctions, to the extent practicable. Data recorded during startup, shutdown or malfunction events shall not be excluded if the startup, shutdown or malfunction episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented.

To: NO_X/CO CEMS Data Requirements: NO_X, CO and O_2 emissions data shall be recorded by the CEM system during episodes of startup, shutdown and malfunction. No valid monitoring data shall be excluded from the mass-based (TPY) CO and NOx emissions limits. Monitoring data collected during startup, shutdown and malfunctions may be excluded in accordance with the following conditions when determining compliance with concentration-based (ppmvd) CO and NOx emissions limits. NO_X and CO emissions data recorded during these episodes may be excluded from the 24-hour block average calculated to demonstrate compliance with the emission limits of this permit as provided in this paragraph. Periods of data excluded for startup and shutdown shall not exceed two hours in any block 24-hour period. Periods of data excluded for malfunctions shall not exceed two hours in any 24-hour block period. All periods of data excluded for any startup, shutdown or malfunction episode shall be consecutive for each episode. Periods of data excluded for all startup, shutdown or malfunction episodes shall not exceed four hours in any 24-hour block period. The owner or operator shall minimize the duration of data excluded for startup, shutdown and malfunctions, to the extent practicable. Data recorded during startup, shutdown or malfunction events shall not be excluded if the startup, shutdown or malfunction episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented.

Permit No. PSD-FL-287 (EU 007 and EU 008)

All construction related to this project is complete and no further construction is authorized by this action. The following permit conditions are revised as follows. All other conditions are unchanged and the affected emissions units remain subject to the applicable requirements.

Specific Condition 20, Page 8 of 13 is hereby revised:

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

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

Specific Condition 29, Page 10 of 13, is hereby revised:

From: EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources" (I, A).

To: EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources" (I, A) or RATA test data may be used to demonstrate compliance with the annual test requirement. CO compliance must be in accordance with Specific Condition 32.

Specific Condition 32, Page 10 of 13 is hereby revised:

From: Compliance with CO emission limit: An initial and annual test for CO shall be conducted at 100% capacity with the duct burners off. The NOx and CO test results shall be the average of three valid one-hour test runs. Annual RATA testing for the CO and NOx CEMS shall be required pursuant 40 CFR 75.

To: Compliance with CO emission limit: An initial and annual test for CO shall be conducted at 100% capacity with the duct burners off. The NOx and CO test results shall be the average of three valid test runs with each being at least one hour long. Annual RATA testing for the CO and NOx CEMS shall be required pursuant 40 CFR 75.

Specific Condition 41, Page 11 of 13 is hereby revised:

From: CEMS for reporting excess emissions: The CEMS shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998 version). Upon request from DEP, the CEMS emission rates shall be corrected to ISO conditions to demonstrate compliance wit the applicable standards listed within this permit and established in 40 CFR 60.332.

To: CEMS for reporting excess emissions: The CEMS shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG. Upon request from DEP, the CEMS emission rates shall be corrected to ISO conditions to demonstrate compliance wit the applicable standards listed within this permit and established in 40 CFR 60.332.

Specific Condition 46, Fifth Bullet, Page 13 of 13 is hereby revised:

From: Selective Catalytic Reduction System (SCR) Compliance Procedures:

- Ammonia emissions shall be calculated continuously using inlet and outlet NO_X concentrations from the SCR system and ammonia flow supplied to the SCR system. The calculation procedure shall be provided with the CEM monitoring plan required by 40CFR Part 75. The following calculation represents one means by which the permittee may demonstrate compliance with this condition:

Ammonia slip @ 15%O_2 = (A-(BxC/1,000,000)) x (1,000,000/B) x D, where:
A= ammonia injection rate (lb/hr)/ 17 (lb/lb.mol)
B = dry gas exhaust flow rate (lb/hr) / 29 (lb/lb.mol)
C = change in measured NO_X (ppmv@15%O_2) across catalyst
D = correction factor, derived annually during compliance testing by comparing actual to tested ammonia slip

The calculation along with each newly determined correction factor shall be submitted with each annual compliance test. Calibration data ("as found" and "as left") shall be provided for each measurement device utilized to make the ammonia emission measurement and submitted with each annual compliance test.

To: Selective Catalytic Reduction System (SCR) Compliance Procedures:

- Ammonia emissions shall be calculated continuously using inlet and outlet NO_X concentrations from the SCR system and ammonia flow supplied to the SCR system. The calculation procedure shall be provided with the CEM monitoring plan required by 40CFR Part 75. The following calculation represents one means by which the permittee may demonstrate compliance with this condition:

  Ammonia slip @ 15%O_2 = (A-(BxC/1,000,000)) x (1,000,000/B) x D, where:
  A= ammonia injection rate (lb/hr)/ 17 (lb/lb.mol)
  B = dry gas exhaust flow rate (lb/hr) / 29 (lb/lb.mol)
  C = change in measured NO_X (ppmv@15%O_2) across catalyst
  D = correction factor, derived annually during compliance testing by comparing actual to tested ammonia slip

  The calculation along with each newly determined correction factor shall be submitted with each annual compliance test. Calibration data ("as found" and "as left") shall be provided for each measurement device utilized to make the ammonia emission measurement and submitted with each annual compliance test. The calculation will exclude periods of startup and shutdown when determining the ammonia slip ppmv limit.

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- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Robert Callery
General Manager
Calpine Corporation
1501 West Derby Avenue
Auburndale, FL 33823

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by *(Printed Name)*

C. Date of Delivery 3-13

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from se* 7005 1160 0004 3034 3656

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Sent To
Robert Callery
Street, Apt. No.; or PO Box No. 1501 W. Derby Ave.
City, State, ZIP+4 Auburndale, FL 33823

PS Form 3800, June 2002 See Reverse for Instructions