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Scott

CALPINE CORPORATION

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Federal Express No.: 7945 8889 4088

Project 1050334-011-AC

Mr. Scott Sheplak
Florida Department of Environmental Protection
Division of Air Resource Management
Office of Permitting and Compliance
2600 Blair Stone Road, M.S. 5500
Tallahassee, Florida 32399-2400

Yes, I need a project # 5.4 02/12/2013 A case-by-case exemption.

RE: Osprey Energy Center - Facility ID: 1050334
Notification of Change in Pre-Startup Procedures

Dear Mr. Sheplak:

Calpine Operating Services Company, Inc. (COSCI) operates the Osprey Energy Center (OEC) located in Auburndale, Polk County, Florida. The OEC is a nominal 540 megawatt natural gas combined cycle electrical generating facility comprised of two combustion turbine generators (CTGs), two heat recovery steam generators (HRSGs) equipped with duct burners, and one steam turbine generator (STG). Operation of the OEC is currently authorized by Title V Air Operation Permit No. 1050334-008-AV. This permit was issued with an effective date of January 1, 2011 and an expiration date of December 31, 2015.

COSCI plans to change pre-startup procedures for the OEC CTG/HRSG units, including revisions to the CTG/HRSG natural gas fuel supply piping systems, in order to implement National Fire Protection Association (NFPA) 85 Boiler and Combustion Systems Hazards Code Purge Credit provisions. The Purge Credit provisions were added to NFPA 85 during a recent update in 2011 to allow combustion sources to establish and maintain a "purged condition" for an extended period of time between starts. The planned changes will reduce the duration of CTG/HRSG startups following short shutdown periods.

The planned changes to the CTG/HRSG pre-startup procedures and natural gas fuel supply piping systems do not qualify as a modification or reconstruction as defined by the New Source Performance Standard (NSPS) rules, nor do they constitute a modification as defined by the Prevention of Significant Deterioration (PSD) New Source Review (NSR) permitting program regulations.

Descriptions of the current and planned CTG/HRSG pre-startup procedures and natural gas fuel supply piping systems, and assessments of PSD NSR and NSPS applicability are provided as follows.

> "Any physical change in, change in the method of operation of, or addition to a facility which would result in an increase in the actual emissions of any air pollutant subject to regulation under the Act, including any not previously emitted, from any emissions unit or facility.
> (a) A physical change or change in the method of operation shall not include:
> 1. Routine maintenance, repair, or replacement of component parts of an emissions unit; or
> 2. A change in ownership of an emissions unit or facility.
> (b) For any pollutant that is specifically regulated by the EPA under the Clean Air Act, a change in the method of operation shall not include an increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975.
> (c) For any pollutant that is not specifically regulated by the EPA under the Clean Air Act, a change in the method of operation shall not include an increase in the hours of operation or in the production rate, unless such change would exceed any restriction on hours of operation or production rate included in any applicable Department air construction or air operation permit."

The planned changes to the OEC CTG/HRSG pre-startup procedures take place prior to the commencement of fuel combustion and therefore do not constitute a change in the method of operation. In addition the planned changes to the OEC CTG/HRSG pre-startup procedures and natural gas fuel supply piping systems will not result in an increase in an increase of emissions of any air pollutant due to the changes occurring prior to combustion These changes simply eliminate potential safety hazards associated with CTG/HRSG startups using the FMPA 85 Purge Credit option. The planned changes will not increase the frequency of CTG/HRSG startups that would have occurred absent these changes. The planned changes will also not increase the design capacity or utilization (i.e., capacity factor) of the OEC CTG/HRSG units.

COSCI would appreciate your review of the planned changes to the OEC CTG/HRSG pre-startup procedures and natural gas fuel supply piping systems and concurrence that these planned changes do not constitute a "modification" or "reconstruction" under the NSPS regulatory program nor a "modification" under the PSD NSR permitting program.

Please contact me at (713) 570-4829 or by email at hwhidden@calpine.com if you have any questions or need any additional information.

Sincerely,

Heidi M. Whidden
Director, Environmental Services – Southeast Region

> modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere."

Emission rates for the purpose of determining whether a project results in an increase in emissions are based on hourly emission rates. NSPS Subpart KKKK includes emission standards for NO_x and SO_2. The planned changes to the OEC CTG/HRSG pre-startup procedures take place prior to the commencement of fuel combustion and therefore do not constitute an operational change. In addition the planned changes to the OEC CTG/HRSG pre-startup procedures and natural gas fuel supply piping systems will not result in an increase in hourly NO_x or SO_2 emission rates due to the changes occurring prior to combustion. Therefore these changes do not constitute a modification as defined by the NSPS rules.

NSPS requirements regarding reconstructions are also addressed in the NSPS Subpart A General Provisions. Per §60.15, "reconstruction" is defined as follows:

> "the replacement of components of an existing facility to such an extent that:
>
> (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
>
> (2) It is technologically and economically feasible to meet the applicable standards set forth in this part.
>
> (c) "Fixed capital cost" means the capital needed to provide all the depreciable components."

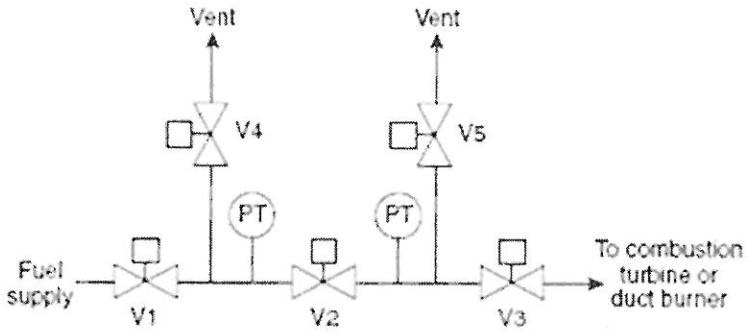
The planned changes to the OEC CTG/HRSG natural gas fuel supply piping are not replacing existing components but rather adding new components; i.e., an additional natural gas block valves and vents. Accordingly, the planned changes to the OEC CTG/HRSG natural gas fuel supply piping do not constitute a NSPS reconstruction. In addition, these minor changes will have a fixed capital cost far below the cost of a comparable entirely new facility.

In summary, the planned changes to the OEC CTG/HRSG pre-startup procedures and natural gas fuel supply piping do not constitute a modification or reconstruction as defined by the NSPS regulatory program. The OEC CTGs will therefore remain subject to the applicable provisions of NSPS Subpart GG, and the OEC HRSG duct burners will remain subject to the applicable provisions of NSPS Subpart Da.

D. PSD NSR Applicability

The existing OEC is a major PSD source and therefore modifications that result in net emission increases exceeding the PSD significant emission rate (SER) thresholds (e.g., 40 tons per year for SO_2 and NO_x) will be subject to PSD NSR review. "Modification" is defined by Rule 62-210.200(205) as follows:

Planned Natural Gas Supply Line Configuration



Implementation of the Purge Credit option will minimize internal stresses and maximize stored heat in the HRSGs during short shutdown periods. While the additional stored heat in the HRSGs will potentially allow the STG to be brought online faster following a startup of the CTG/HRSG units, the startup profile of the CTG/HRSG units will not change.

C. NSPS Applicability

The two OEC CT/HSRG units are currently subject to the applicable requirements of NSPS Subpart GG, Standards of Performance for Stationary Gas Turbines, and NSPS Subpart Da, Standards of Performance for Electric Utility Steam Generating Units for Units Constructed After September 18, 1978. On July 6, 2006, EPA promulgated NSPS Subpart KKKK, Standards of Performance for Stationary Combustion Turbines. Subpart KKKK establishes emission limits for CTG/HRSG units that commenced construction, modification, or reconstruction after February 18, 2005, and that have a heat input at peak load equal to greater than 10.7 gigajoules (10 MMBtu/hr) based on the HHV of the fuel.

The *affected facility* under Subpart KKKK is a "stationary combustion turbine" defined as follows:

> "all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), heat recovery system, and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, any combined cycle combustion turbine, and any combined heat and power combustion turbine based system. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. It may, however, be mounted on a vehicle for portability.

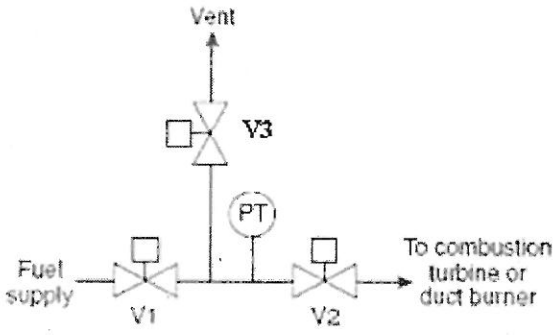
NSPS requirements regarding modifications are addressed in the NSPS Subpart A General Provisions. Per §60.14, a "modification" is defined as follows:

> "any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon

A. Current Pre-Startup Procedures and Natural Gas Fuel Supply Piping Systems

In accordance with NFPA 85 requirements, the OEC CTG/HRSG units are purged using ambient air is conducted before initial fuel ignition (i.e., "light-off") and commencement of fuel combustion. The current natural gas fuel supply piping system for each CTG/HRSG unit employs two block valves (V1 and V2) and a single vent (V3) as illustrated in the diagram below.

Current Natural Gas Supply Line Configuration



This natural gas fuel supply piping system design, in conjunction with an air purge though the CTG/HRSG unit, eliminates potential startup safety hazards by ensuring that no explosive gases are present inside the CTG/HRSG unit prior to fuel ignition. The CTG/HRSG startup process is only allowed to continue following a successful purge in accordance with the NFPA 85 requirements.

B. Planned Pre-Startup Procedures and Natural Gas Fuel Supply Piping Systems

Per the 2011 Edition of NFPA 85, operators of combustion systems may forgo the air purge if certain parameters are met prior to a startup – this option is known as the Purge Credit.

The NFPA 85 Purge Credit option requires triple block valves and double vents on the fuel supply piping system, with valve proving logic (pre-startup and post-shutdown checks), and continuous valve position and pressure monitoring. If all NFPA 85 criteria are met and all valve proving logic passes, the pre-start CTG/HRSG unit air purges can be avoided which will expedite the startup process. To ensure that the NFPA 85 Purge Credit parameters are met, the current OEC natural gas fuel supply piping for each CTG and HRSG will be modified by the adding a third block valve (V3) and second vent (V5) as illustrated in the diagram below: