



June 21, 2007

CC-1446

Ms. Connie Bruins
Compliance Project Manager
California Energy Commission
1516 Ninth Street (MS-2000)
Sacramento, CA 95814

**Subject: Midway Sunset Cogeneration Project 85-AFC-3C Post Certification
Amendment to Increase Ammonia Slip Limit for Units with NOx Limits <5ppm.**

Dear Ms. Bruins,

Please find attached three (3) hard copies and one (1) soft copy of a request for a post certification amendment to Midway Sunset Cogeneration Project 85-AFC-3C. The request also includes three (3) copies and one (1) soft copy each of the current SJVAPCD Permit to Operate for Unit A and the District's Unit A Authority to Construct for the Evolution Rotor that incorporates the lower NOx (2ppm) and CO (6ppm) limits. MSCC respectfully requests the post certification amendment not be Unit specific as the Evolution Rotor may be installed in other units in the future.

Thanks for your help and consideration in this matter. If you have any questions or comments concerning the requested amendment please contact me at (661)768-3020 or Ray Smith at (661)768-3016.

Sincerely,

A handwritten signature in blue ink that reads "E R Western".

E. R. Western
Executive Director

Cc: File CC-1446
G Jans
J Alvidres

This petition for a post-certification amendment for MSCC is being submitted under the provisions of Section 1769 of Title 20, California Administrative Code (CEC Rules of Practice and Procedure and Power Plant Site Certification Regulations) to seek modifications to the Air Quality Conditions of Certification. The petition is organized to address the informational requirements of Section 1769 in the order they appear in that section. The requirement appears in ***bold italics*** followed by a narrative response.

(A) A complete description of the proposed modifications, including new language or any conditions that will be affected.

MSCC respectively petitions the CEC to modify existing condition AQ-48, which reads “The emission of unreacted ammonia slip from any exhaust stack shall not exceed 5 ppm @ 15 percent O₂ averaged over 24 hours.” MSCC’s proposed modification reads “The emission of unreacted ammonia slip from any combustion turbine unit with a NO_x emission limit \geq 5 ppm shall not exceed 5 ppm @ 15 percent O₂ averaged over 24 hours. The emission of unreacted ammonia slip from any combustion turbine unit with a NO_x emission limit $<$ 5 ppm shall not exceed 10 ppm @ 15 percent O₂ averaged over 24 hours.” The verification of AQ-48 remains unchanged.

(B) A discussion for the necessity for the Proposed Modification.

At a September 9, 2003 California Energy Commission (CEC) business meeting, MSCC received approval of a petition (Docket No. 85-AFC- 3C; Order No. 03-0909-02) to add Selective Catalytic Reduction (SCR) systems to each of their units, Unit A, Unit B, and Unit C. The addition of SCR to the MSCC units was required to meet the San Joaquin Valley Air Pollution Control District’s (District) revised Rule 4703 NO_x compliance limit of 5 ppm at 15 percent O₂. As a result of the installed ammonia injected SCR systems, a small amount of unreacted ammonia (ammonia slip) is emitted into the stack emissions. The District, using their Best Available Control Technology (BACT) determination procedures, stipulated an ammonia slip emission limit of 10 ppm as a condition on MSCC’s revised air permits. Since California Air Resources Board (CARB) staff guidelines recommend an ammonia slip limit of 5 ppm @ 15 percent O₂ averaged over 24 hours; and MSCC included with the petition a manufacturer’s performance guarantee of 5 ppm ammonia slip @ 15 percent O₂, CEC staff recommended; and MSCC agreed to a 5 ppm ammonia slip.

At an October 30, 2006 CEC business meeting, MSCC received approval of a petition (Docket No. 85-AFC-3C; Order No. 06-1030-3) to install an Evolution Rotor into one of MSCC’s units. The Evolution Rotor will increase unit output and lower unit thermal heat rate, but because of the increased output and the potential of increased emissions, the District required MSCC to meet BACT requirements for new turbines of 2.0 ppm NO_x and 6.0 ppm CO (at 15 percent O₂) for any unit receiving the Evolution Rotor. MSCC agreed that the BACT requirements could be met and CEC staff included the limits as conditions for the post certification amendment.

The post certification amendment for the Evolution Rotor did not address the ammonia slip emission limit. While the manufacturer's ammonia slip guarantee of 5 ppm was based on a NOx emission limit \geq to 5 ppm, MSCC was hopeful that the lower NOx limit of 2 ppm could still be obtained with an ammonia slip limit of $<$ 5 ppm. Subsequent field tests have shown that MSCC can not maintain a NOx emission of $<$ 2 ppm and hold the ammonia slip under CEC's 5 ppm limit. MSCC can maintain NOx emissions $<$ 2 ppm and meet the District's BACT ammonia slip limit of 10 ppm.

(C) If the modification is based on information that was known by the petitioner during the certification proceeding, an explanation why the issue was not raised at that time.

MSCC's original design for NOx emission control was water injection. As NOx limits were reduced, water injection was replaced by multiple generations of dry low NOx combustion, then, as the District continued to reduce the NOx limits, the use of SCR was required. The advent of ammonia slip only occurred with the use of SCR.

(D) If the modification is based on new information that changes or undermines the assumptions, rational findings, or other bases of the final decision, an explanation of why the changes should be permitted.

This modification does not change or undermine the assumptions, rational findings, or other bases of the final decision.

(E) An analysis of the impacts the modification may have on the environment, and proposed measures to mitigate any significant adverse impacts.

The increase in the ammonia slip emission limit has the potential of increasing the annual ammonia slip emissions by approximately 29 metric tons per unit. The increase in the potential to emit limit of ammonia slip is offset by the approximately 45 tons per unit annual decrease in the potential to emit limit of NOx achieved by reducing the NOx limit from 5 ppm to 2 ppm. Because the ammonia slip emissions will meet the District's BACT requirement, and because the increase of ammonia slip emissions is more than offset by the decrease in NOx emissions, MSCC does not feel any significant adverse impact will occur; and MSCC does not propose any mitigation measures.

(F) A discussion of the impact of the modification on the facilities ability to comply with applicable laws, ordinances, regulations and standards.

This modification will not impact MSCC's ability to comply with applicable laws, ordinances, regulations and standards.

(G) A discussion of how the modification affects the public.

The modification to the ammonia slip still meets the District's permit condition. Except for a very small increase of ammonia slip, there will be no affect on the public.

(H) A list of property owners potentially affected by the modification.

The offset property owners are:

West-Bidart Brothers-Ranching.
North-Chevron-Oilfield operations.
South-Aera Energy-Oilfield Operations.
East-Plains Oil-Oilfield Operations

The nearest residences (3 of them) are two miles away, located in the heart of the oilfield, and occupied by oil field workers. The nearest town is approximately four miles away and the nearest school is approximately six miles away.

(I) A discussion of the potential effect on nearby property owners, the public and the parties in the application proceedings.

MSCC does not foresee any adverse potential effect of ammonia slip that meets the District's permit conditions on nearby property owners, the public or the parties in the application proceedings.



San Joaquin Valley
Air Pollution Control District

ORIGINAL

OCT 02 2006
MIDWAY-SUNSET
COGENERATION

SEP 25 2006

FILE COPY

Mr. Edmond Western
Aera Energy, LLC
PO Box 457
Fellows, CA 93224-0457

**Re: Final - Authority to Construct / Certificate of Conformity (Minor Mod)
Project # 1055604**

Dear Mr. Western:

The Air Pollution Control Officer has issued an Authority to Construct (S-1135-224-23) with a Certificate of Conformity to Aera Energy, LLC. The modification consists of replacing the compressor and compressor housing on one 75 MW combustion turbine engine and increasing the power output rating to 82 MW: -

Enclosed is the Authority to Construct and invoice. The application and proposal were sent to US EPA Region IX on August 30, 2006. No comments were received following the District's preliminary decision on this project.

Prior to operating with modifications authorized by the Authority to Construct, you must submit an application to modify the Title V permit as an administrative amendment in accordance with District Rule 2520, Section 11.5.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Thomas Goff, Permit Services Manager, at (661) 326-6900.

Sincerely,

for David Warner
Director of Permit Services

Enclosures
CBE

cc: ERW
GWS
RTS
File
AIP

Seyed Sadredin
Executive Director / Air Pollution Control Officer

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4800 Enterprise Way
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(209) 557-6400 • FAX (209) 557-6475

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