MIDWAY SUNSET
Cogeneration Company

November 19, 2013 CC: 1814

Ms. Mary Dyas
Compliance Project Manager
California Energy Commission
Energy Facilities Siting Division
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: CEC Docket 85-AFC-3C Post Certification Amendment to replace the Unit A and Unit B Combustion systems with DLN1+ Turndown Enhance (DLN1+TE) combustion systems.

Dear Ms. Dyas

Thank you for taking the time to meet with us to discuss our request for the following Post Certification Amendment. MSCC previously requested, and the California Energy Commission (CEC) previously approved, a similar Post Certification Amendment (please see attached staff analysis). The previous amendment was for one unit, Unit B, and included upgrading its combustion system to a DLN1+ combustion system. Due to circumstances outside of MSCC's control, the upgrade of the combustion system approved by the previous amendment was never implemented and now the current Post Certification Amendment is being submitted for two units, Unit A and Unit B. The current Post Certification Amendment will update their combustion systems to the latest revision DLN1+TE combustion systems.

MSCC is licensed by the California Energy Commission as a cogeneration facility comprised of three GE Frame 7E combustion turbine generators (CTGs). The CTGs produce electricity for sale through the CAISO and across the fence to one of MSCC's partners. Waste heat for each CTG is routed through its heat recovery steam generator (HRSG) to produce steam used in the adjoining oil field for thermally enhanced oil recovery (TEOR). In order to accommodate the declining steam demands of the steam host, MSCC is proposing to operate Units A & B (SJVAPCD permitted units S-1135-224 and S-1135-225) in the future as either cogeneration units or peaking units. (Please see the attached San Joaquin Valley Air Pollution Control District Authority to Construct Application Review for the upgrade to the DLN1+TE combustion systems.)

3466 W. Crocker Springs Road • P.O. Box 457 • Fellows, CA 93224-0457 • (661) 768-3000 • Fax (661) 768-4570

MSCC's permitted 5ppm NOx emission limit is currently met through the use of GE's DLN9 combustion system (NOx emission not to exceed 9ppm) in conjunction with ammonia injected SCR grid that reduces the NOx emissions to 5ppm or less. The SCR grid is installed internal to the HRSG and is bypassed when the units are operated as peaking units. NOx emissions released through the bypass stack are controlled only by the DLN9 combustion system and the permitted 5ppm limit cannot be met.

GE has recently developed a DLN1+TE combustion system that can meet MSCC's permitted 5ppm NOx emission limit without the use of the SCR and allow more flexibility to operate at reduced loads. MSCC is proposing an amendment to upgrade Unit A's and Unit B's existing DLN9 combustion system with the recently developed DLN1+TE combustion system, thereby continuing to meet the permitted NOx emission limit of 5ppm when operated in bypass as peaking units. The proposed amendment includes leaving the SCR grid and ammonia injection system intact for use if needed when either unit is required as a cogeneration unit. If or when the SCR system is used, MSCC will meet all the SCR conditions, including the calculation and recording of ammonia slip.

This request for a Post Certification Amendment is for conversion of Unit A's and Unit B's DLN-9 dry low NOx emission control Systems to DLN1+TE control systems.

The following is in response to the California Energy Commission's Rule of Practice and Procedure & Power Plant Site Certification Regulations Section 1769 (a) (1);

(A) A Complete description of the proposed modifications, including new language for any conditions that will be affected:

Existing DLN-9 combustion chambers, liners and burner heads in Unit A and Unit B will be replaced with DLN1+TE combustion chambers, liners, transition pieces and burner heads including fuel nozzels. The end result will be two Units, Unit A and Unit B, that will meet the permitted NOx emission limits while bypassing the HRSG and SCR grid to operate as peaking units. No modification is required to any approved emission limit.

Modification to the Midway Sunset Cogeneration Project Decision is shown as **bold** and <u>underlined</u>.

AQ-53 **<u>When SCR is operated</u>**, ammonia shall be injected whenever the selective catalytic reduction system catalyst exceeds the minimum ammonia injection temperature recommended by the manufacturer.

Verification: The owner shall report the ammonia injection rate as part of the quarterly emission report required by Condition of Certification AQ-21.

(B) A discussion of the necessity for the proposed modification.

The proposed modification will accommodate the declining steam demands of MSCC's steam host while maintaining the availability of electric power to the grid with Unit A and Unit B as peaking Units.

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

DLN1+TE technology was not available during the certification process.

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

This modification does not change or undermine the assumption, rationale finding 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 only impact this modification will have on the environment is a reduction of ammonia slip whenever Unit A and Unit B are operated.

(F) A discussion of the impact of modification on the facility's ability to comply with applicable laws, ordinances, and standards;

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

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

This modification would allow MSCC to operate Unit A and Unit B as peaking or cogeneration units to supply electric power to the grid with the attendant reduction of ammonia slip.

(H) A list of property owner's potential affected by the modification;

No property owners will be affected by this modification.

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

Since there is no change in the permitted emissions limits, there will be no potential effect on nearby property owners other than a slight reduction of ammonia slip.

If you have any questions or comments, please call me at (661) 768-3020 or Ray Smith at (661) 768-3016.

Sincerely,

Dave Faiella
Executive Director

Attachments

CC: File CC-1814
G. Jans
S. Henriksen

STATE OF CALIFORNIA — THE RESOURCES AGENCY

JERRY BROWN, Governor

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
WWW.ENERGY.CA.GOV

DOCKET
85-AFC-3C
DATE JAN 20 2011
RECD. JAN 20 2011

DATE: January 20, 2011

TO: Interested Parties

FROM: Christina Snow, Compliance Office

SUBJECT: Midway Sunset Cogeneration Company (85-AFC-3C) Staff Analysis of Proposed Modification

On October 25, 2010, the Midway Sunset Cogeneration Company (MSCC) filed a petition with the California Energy Commission requesting to modify the Midway Sunset Cogeneration Project. The 225-megawatt project was certified by the Energy Commission on May 14, 1987, and began commercial operation on May 1, 1989. The facility is located in Fellows in Kern County, California and uses cogeneration steam to aid in the enhanced oil recovery process.

Air Quality technical staff reviewed the petition to amend and requested additional revisions for consistency with the San Joaquin Valley Air Pollution Control District (SJVAPCD) Authority to Construct (ATC) permit. A modification of the petition to amend was submitted and posted online and docketed on November 19, 2010.

The proposed amendment requests administrative modifications to Units A, B and C and revision of unit B's DLN9 Combustion System to a DLN1+ Combustion System.

Energy Commission staff reviewed the petition and assessed the impacts of this proposal on environmental quality, public health and safety, and proposes the modifications to the Air Quality Conditions of Certification as noted in the attached analysis. It is staff's opinion that, with the implementation of the revised air quality condition, the project will remain in compliance with applicable laws, ordinances, regulations, and standards and that the proposed modifications will not result in a significant adverse direct or cumulative impact to the environment (Title 20, California Code of Regulations, Section 1769).

The amendment petition and staff's analysis have been posted on the Energy Commission's webpage at:

http://www.energy.ca.gov/sitingcases_pre-1999/index.html

The Energy Commission's Order (if approved) will also be posted on the webpage. Energy Commission staff intends to recommend approval of the petition at the March 9, 2011, Business Meeting of the Energy Commission. If you have comments on this proposed modification, please submit them to me at the address below prior to February 21, 2011.

Christina Snow, Compliance Unit
California Energy Commission
1516 9th Street, MS-2000
Sacramento, CA 95814

Comments and questions may be submitted by fax to (916) 654-3882, or by e-mail to csnow@energy.state.ca.us.

For further information on how to participate in this proceeding, please contact the Energy Commission Public Adviser's Office, at (916) 654-4489, or toll free in California at (800) 822-6228, or by e-mail at publicadviser@energy.state.ca.us. News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail at mediaoffice@energy.state.ca.us.

Enclosure: Staff Analysis

MIDWAY SUNSET COGENERATION COMPANY (85-AFC-3C)

Petition to Amend to Upgrade Unit B Combustion System
Joseph Hughes
January 6, 2011

INTRODUCTION

Midway Sunset Cogeneration Company (MSCC) was licensed May 14th, 1987 and came online May 1st, 1989. Since this time MSCC has undergone several amendments to ensure project reliability and maintain compliance with San Joaquin Valley Air Pollution Control District (SJVAPCD) rules and regulations.

MSCC's most recent requested amendment, dated November 8, 2010, requests modifications to Units A, B and C. The petition proposes minor administrative changes to Unit A, B and C, plus revising unit B's dry low NOx (DLN) technology from a DLN9 Combustion System to a DLN1+ Combustion System.

LAWS, ORDINANCES, REGULATION, AND STANDARDS (LORS) - COMPLIANCE

The SJVAPCD released an Authority to Construct (ATC) on October 26, 2010, to allow administrative changes to Unit A, B and C, plus revising unit B's DLN9 Combustion System to a DLN1+ Combustion System. The ATC ensures compliance with applicable federal, state, and local air quality requirements.

Air Quality Table 1 summarizes the applicable LORS for the facility.

Air Quality Table 1
Laws, Ordinances, Regulations, and Standards

Applicable LORS	Description
Federal	
42 U.S.C. §7401 et eq.	Federal Clean Air Act: New Source Review
State	
Health and Safety Code §41700	"... no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."
Local	
Rule 2201	New and Modified Stationary Source Review
Rule 2520	Federally Mandated Operating Permits

Rule 4001	New Source Performance Standards Subparts GG & KKKK
Rule 4002	National Emissions Standards For Hazardous Air Pollutants
Rule 4101	Visible Emissions
Rule 4102	Nuisance
Rule 4201	Particulate Matter Concentration
Rule 4301	Fuel Burning Equipment
Rule 4703	Stationary Gas Turbines
Rule 4801	Sulfur Compounds

SETTING

The setting and surrounding environment will not be affected by the project change as there will be no change to project permitted emissions and the MSCC will continue to operate in compliance with the Energy Commission Decision.

ANALYSIS

Revising Unit B's Dry Low NOx Technology

MSCC is licensed by the California Energy Commission as a cogeneration facility comprised of three GE Frame 7E combustion turbine Generators (CTGs). Waste heat from each CTG is routed through its heat recovery steam generator (HRSG) to produce steam used in the adjoining oil field for thermally enhanced oil recovery. In order to accommodate the declining steam demands of the steam host, MSCC is proposing to operate Unit B as a peaking unit when the steam demand is low and as a cogeneration unit when the steam demand requires it.

MSCC's initial District emission limit for NOx was 25 ppm and was achieved by injecting water into the combustion system of the units to cool the flame. In 1999 the Energy Commission approved an order allowing MSCC to delete the water injection and install the DLN15 combustion system to meet the new District imposed emission limit of 22 ppm NOx. In 2000 the Energy Commission approved an order to allow MSCC to replace the DLN15 combustion system with the DLN9 to meet a further reduction to 10 ppm NOx. The latest NOx emission reduction for MSCC was to 5 ppm. At that time, GE had no commercially available technology better than the DLN9 so in 2003 the Energy Commission approved MSCC's request to install an SCR grid in the HRSG of each unit to control the NOx emissions to 5 ppm. CEC lbs/hr and EPA lbs/MMBtu NOx emission limits were adjusted each time the District limit was lowered.

Since 2003 the units have been unable to bypass the HRSG (and SCR) and operate in simple cycle mode and still maintain the 5 ppm NOx emission limits. However, GE has recently developed a DLN1+ combustion system that can meet MSCC's permitted 5 ppm NOx emission limit without the use of the SCR. MSCC is proposing an amendment to upgrade Unit B's existing DLN9 combustion system with the recently developed DLN1+ combustion system, thereby continuing to meet the permitted NOx emission of 5 ppm and all other emission limits, including the carbon monoxide (CO) emission limits of

25 ppm, and reduce ammonia slip emissions when Unit B is operated in bypass as a peaking unit. The proposed amendment includes leaving the SCR grid and ammonia injection system intact for use when Unit B is required as a cogeneration unit. If or when the SCR system is used, MSCC will meet all the SCR conditions, including the calculation and recording of ammonia slip. MSCC will require the installation of two new ports, one sampling port and one test port, in the bypass stack to remain in compliance with all applicable LORS. The proper placement of the ports will be coordinated with MSCC's testing consultants and approved by the District as required by verification in condition of certification (CoC) **AQ-18**.

The installation of the DNL1+ in Unit B would be executed during annual routine maintenance and would not result in any additional impacts.

Administrative Changes

The first administrative change requested by MSCC is to revise the equipment description for each CTG from 75 MW to 78.2 MW in the SJVAPCD Permit to Operate (PTO). This is not a physical increase in the units' ratings but reflects a revision from the nominal rating used during the permitting process compared to the actual nominal rating of the final purchased equipment. This revision would help avoid future confusion and regulatory scrutiny. This change does not affect any CoCs.

The second administrative change requested by MSCC would extend the submittal period for source test results for emission limits in **AQ-18** from 30 days to 60 days. Testing for VOCs and ammonia slip require samples to be sent offsite for lab tests. It has proven difficult for the testing service to be submitted it in 30 days. The District has recognized the difficulty and revised Rule 1081, Section 7.3 to allow 60 days. The District has agreed to revise their condition on MSCC's PTO to agree with District Rule 1081.

MSCC's last application for an amendment to AQ-18 was not in response to a District requirement and was never implemented. The application was for the installation of an Evolution Rotor being developed by GE. The Evolution Rotor, as envisioned by GE, would reduce emission limits for NOx and CO. GE ran into technical difficulties during factory tests of the Evolution Rotor and elected not to offer it commercially. Since this is the most recent amendment to MSCC's AQ-18, the proposed changes are provided in Energy Commission order number 06-1030-3 as shown below. The new proposed emission limits shown below are the same limits approved in Energy Commission order 03-0909-02 "Petition to Add Selective Catalytic Reduction System" which have been the ongoing current permitted emission limits regulated by the District since the Evolution Rotor was never installed.

CONCLUSIONS AND RECOMMENDATIONS

Staff recommends approval of the requested administrative changes and installation of the DLN1+ to allow MSCC's unit B to operate as either a peaker or cogeneration unit. There will be no change in permitted emissions at the MSCC. With the minor

modifications to the Conditions of Certification, the project would continue to comply with all applicable LORS.

PROPOSED MODIFICATIONS TO CONDITIONS OF CERTIFICATION

The following conditions of certification would be amended in the Final Commission Decision for the Midway Sunset Cogeneration Company to ensure compliance with all applicable LORS. ~~Strikethrough~~ is used to indicate deleted language and **underline** for new language.

AQ-18

Pollutant emissions from the Stack of each combustion turbine shall not exceed the following limits (in pounds mass per hour, lbm/hr) except during times of start-up or shutdown (as described in Condition of Certification AQ-44):

Particulate	**9.98**	**lbm/hr**
Sulfur Compounds	**0.92**	**lbm/hr as SO2**
Oxides of Nitrogen	**17.66**	**lbm/hr as NO2**
Hydrocarbons (nonmethane)	**9.00**	**lbm/hr**
Carbon Monoxide	**54.91**	**lbm/hr**

~~Pollutant emissions from each combustion turbine with the Evolution Rotor installed, shall not exceed the following limits (in pounds mass per hour) with the exceptions given below.~~

~~Gas-Fired Case:~~

~~Particulate~~	~~9.98~~	~~lbm/hr~~
~~Sulfur Compounds~~	~~0.92~~	~~lbm/hr as SO2~~
~~Oxides of Nitrogen~~	~~7.06~~	~~lbm/hr as NO2~~
~~Hydrocarbons (nonmethane)~~	~~9.00~~	~~lbm/hr~~
~~Carbon Monoxide~~	~~13.18~~	~~lbm/hr~~

~~1. NOx emission concentrations during steady state operation shall not exceed 7.06 lbs/hr over a one-hour average (clock-hour basis). Steady state operation refers to any period that is not a startup or shutdown (as described in Condition of Certification AQ-44). A clock hour in a one-hour average will commence at the top of the hour.~~

~~2. Compliance with the NOx emission limitations during steady-state operation shall not be required during short-term excursions limited to a cumulative total of 10 hours per rolling 12-month period.~~

~~3. Short-term excursions are defined as 15-minute periods designated by the owner/operator (and approved by the CPM) that are the direct result of transient load conditions, not to exceed four consecutive 15-minute periods when the 15-minute average NOX concentration exceeds 2.0 ppmvd @ 15 percent O2. The maximum three-hour average NOx concentration for periods that include short-term excursions shall not exceed 5 ppmvd @ 15 percent O2. The maximum three-hour CO concentration for periods that include short-term excursions shall not exceed 25 ppmvd @ 15 percent O2.~~

~~4. Examples of transient load conditions include, but are not limited to the following: initiation or shutdown of combustion turbine inlet air cooling, or rapid combustion turbine load changes. All emissions during short-term excursions shall accrue towards the daily and annual emissions limitations of this permit and shall be included in all calculations of daily and annual mass emission rates as required by this permit.~~

~~5. All emissions during short-term excursions shall accrue towards the hourly, daily and annual emissions limitations of these conditions and shall be included in all calculations of hourly, daily, and annual mass emission rates as required herein.~~

Verification: To demonstrate compliance with the emission limits provided, the owner/operator shall provide initial and on-going performance tests as follows:

a. At least 60 days before commercial operation date of the power cogeneration facility, or 60 days before the permit to operate anniversary date, the owners shall submit to the SJVUAPCD, CARB and the CEC a detailed performance test plan for the power plant's AECS. The performance test will be funded by the owners and conducted by a third party approved by the SJVUAPCD and CARB. The SJVUAPCD will notify the owners and the CEC of its approval, disapproval, or proposed modifications to the plan within 30 days of receipt of the plan. The owners shall incorporate the SJVUAPCD and the Commission's comments or modifications to the plan.

b. The owners shall notify the SJVUAPCD and the CEC, within five days, before the facility begins commercial operation. The owners shall also notify the SJVUAPCD one week prior to the beginning of testing to allow the SJVUAPCD to observe and/or conduct concurrent sampling.

c. Compliance with emission limits shall be demonstrated by a SJVUAPCD witnessed sample collection performed by an independent testing laboratory within 60 days after startup of this equipment and annually within 60 days prior to permit anniversary date.

d. The owners shall submit the results of the compliance test within ~~30~~**60** days of completion of the tests. The owners shall submit to the

SJVUAPCD, its application for a Permit to Operate via registered mail. The owners shall submit a copy of the application to the CEC within 10 days of its submittal to the SJVUAPCD. The SJVUAPCD shall approve or disapprove the application as prescribed in the SJVUAPCD rules.

e. The owners shall include all Excursions in the Quarterly Emissions Report as a separate section (such as "breakdowns" or "excess emissions") as well as including them in all daily and annual emission calculations.

REFERENCES

CEC(a) – California Energy Commission, Order Approving a Petition to Amend Air Quality Conditions of Certification, Order No. 99-1117-03.

CEC(b) – California Energy Commission, Order Approving a Petition to Amend Air Quality Conditions of Certification, Order No. 00-1011-10.

CEC(c) – California Energy Commission, Order Approving a Petition to Add Selective Catalytic Reduction System, Order No. 03-0909-02.

CEC(d) – California Energy Commission, Order Approving a Petition to Install Evolution Rotor, Order No. 06-1030-3.

MSCC(a) – Midway Sunset Cogeneration Company, Petition to Amend to Upgrade Unit B Combustion System and Modify AQ Condition of Certification, October 2010.

MSCC(b) – Midway Sunset Cogeneration Company, Modification of Petition to Amend Units A, B and C, November 2010.

SJVAPCD – San Joaquin Valley Air Pollution Control District, Proposed Authority to Construct, August 2010.

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

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MIDWAY-SUNSET
COGENERATION

Mr. Dave Faiella
Aera Energy, LLC (dba Midway Sunset Cogeneration Co.)
P.O. Box 457
Fellows, CA 93224-0457

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # S-1135
Project # S-1133758

Dear Mr. Faiella:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. Midway Sunset Cogeneration Co. (MSCC) is proposing to allow the gas turbine engines to operate as peaking units. MSCC is proposing to bypass the selective catalytic reduction system when the turbines are operated as peaking units by replacing the combustor cans with Ultra Dry Low-NOx (DLN1+ Turndown Enhance) cans that are capable of achieving the 5 ppm-NOx requirement of Rule 4703 without SCR.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
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Central Region (Main Office)
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Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

Printed on recycled paper.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW:KK/st

Enclosures

cc: Mike Tollstrup, CARB (w/enclosure) via email
cc: Gerardo C. Rios, EPA (w/enclosure) via email

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Replace Combustor Cans and Authorize Turbines for Peaker Operation

Facility Name:	Aera Energy, LLC (dba Midway Sunset Cogeneration Company)	Date:	October 9, 2013
Mailing Address:	P.O. Box 457 Fellows, CA 93224-0457	Engineer: Lead Engineer:	Kris Rickards Rich Karrs RWK 10/15/13
Contact Person:	Dave Faiella	Doug McCormick (Consultant)	
Telephone:	661-768-3020	661-282-2200	
Fax:	661-768-4570		
E-Mail:	dfaiella@aeraenergy.com	dwmccorm@insenv.com	
Application #(s):	S-1135-224-27 and '-225-26		
Project #:	S-1133758		
Deemed Complete:	September 30, 2013		

I. Proposal

Aera Energy, LLC doing business as the Midway Sunset Cogeneration Company (hereafter referred to as MSCC) operates a cogeneration facility to produce electricity and steam used in Aera Energy's thermally enhanced oil recovery (TEOR) operations.

Due to declining steam demands for the adjacent oil fields MSCC is proposing to allow Units A and B, permit units S-1135-224 and '-225 respectively, to operate as either peaking (high-demand production of electricity) or cogeneration units (producing steam and electricity). The turbines currently exhaust through heat recovery steam generators (HRSG) and then to selective catalytic reduction (SCR). MSCC is proposing to bypass the HRSG and SCR system when steam is not needed by replacing the combustor cans with Ultra Dry Low-NO_X (DLN1+ Turndown Enhance) cans that are capable of achieving the 5 ppm-NO_X requirement of Rule 4703 without SCR.

When the SCR system is bypassed MSCC is proposing to relax monitoring and recordkeeping requirements of the SCR and oxidation catalyst inlets.

Disposition of Outstanding ATCs
ATC S-1135-225-24 authorized the installation of a different type of dry low NO_X burners and will be replaced with the ATC issued in this project.

MSCC facility S-1135 received their Title V Permit on August 31, 2002. This modification can be classified as a Title V significant modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. MSCC must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4703	Stationary Gas Turbines (9/20/07)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

These gas turbine engines (GTEs) are located in the North Midway Sunset Oilfield within Aera's Heavy Oil Western Stationary Source, Section 17, Township 31S, Range 22E (see Appendix C for location map). The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

The gas turbine engines are configured for cogeneration operations. The turbines power electrical generators and the waste heat from the exhaust is recovered in HRSGs, producing high quality steam for use in thermally enhanced oil recovery (TEOR) operations.

This oilfield equipment is expected to operate 24 hrs/day, 365 days/yr.

See facility diagram in Appendix D.

V. Equipment Listing

Pre-Project Equipment Description:

S-1135-224-26: NOMINALLY RATED 78.2 MW COGENERATION UNIT A WITH GE MODEL G7111E FRAME 7E GAS TURBINE ENGINE WITH DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR), AND UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG)

S-1135-225-25: NOMINALLY RATED 78.2 MW COGENERATION UNIT B WITH GE MODEL G7111E FRAME 7E GAS TURBINE ENGINE WITH DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR), AND UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG)

Proposed Modification:

S-1135-224-27: MODIFICATION OF NOMINALLY RATED 78.2 MW COGENERATION UNIT A WITH GE MODEL G7111E FRAME 7E GAS TURBINE ENGINE WITH DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR), AND UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG): RETROFIT WITH GE ULTRA DRY LOW-NOX COMBUSTOR CANS (DLN1+ TURNDOWN ENHANCE) AND ALLOWING OPTIONAL USE EXHAUST GAS BYPASS OF HEAT RECOVERY STEAM GENERATOR AND SCR UNIT FOR OPERATION AS EITHER A COGENERATION UNIT OR PEAKING UNIT

S-1135-225-26: MODIFICATION OF NOMINALLY RATED 78.2 MW COGENERATION UNIT B WITH GE MODEL G7111E FRAME 7E GAS TURBINE ENGINE WITH DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR), AND UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG): RETROFIT WITH GE ULTRA DRY LOW-NOX COMBUSTOR CANS (DLN1+ TURNDOWN ENHANCE) AND ALLOWING OPTIONAL USE EXHAUST GAS BYPASS OF HEAT RECOVERY STEAM GENERATOR AND SCR UNIT FOR OPERATION AS EITHER A COGENERATION UNIT OR PEAKING UNIT

Post Project Equipment Description:

S-1135-224-27: 78.2 MW COGENERATION UNIT A WITH GE MODEL G7111E FRAME 7E GAS TURBINE ENGINE WITH DRY LOW NOX COMBUSTORS (DLN1+ TURNDOWN ENHANCE) OR EQUIVALENT, SELECTIVE CATALYTIC REDUCTION (SCR), AND UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG)

S-1135-225-26: 78.2 MW COGENERATION UNIT A WITH GE MODEL G7111E FRAME 7E GAS TURBINE ENGINE WITH DRY LOW NOX COMBUSTORS (DLN1+ TURNDOWN ENHANCE) OR EQUIVALENT, SELECTIVE CATALYTIC REDUCTION (SCR), AND UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG)

VI. Emission Control Technology Evaluation

NO_X is the pollutant of concern with natural gas-fired turbines.

NO_X formation is either due to thermal fixation of atmospheric nitrogen in the combustion air during the combustion process (thermal NO_X) or due to the conversion of chemically bound nitrogen in the fuel (fuel NO_X). Due to the low fuel nitrogen content of natural gas, nearly all NO_X emissions from natural gas-fired turbines are thermal NO_X. Formation of thermal NO_X is affected by four furnace zone factors: (1) nitrogen concentration, (2) oxygen concentration, (3) peak temperature, and (4) time of exposure at peak temperature.

As stated previously, the cogeneration system includes a natural gas-fired turbine and selective catalytic reduction (SCR). The SCR system injects ammonia (cogeneration units are connected to a 16,000 gallon aqueous ammonia tank for ammonia injection with a maximum of 10 ppm slip)

upstream of a NO_X reduction catalyst. In the catalyst section the ammonia, oxygen and NO_X react to form nitrogen gas, and water. The amount of ammonia which is injected is directly dependent on the concentration of NO_X in the exhaust. Slightly more ammonia than is theoretically required is injected in order to allow for incomplete mixing and non-uniform flow. A certain amount of ammonia will not be used in the reaction and is emitted as "ammonia slip" with the stack gas. The efficiency of the SCR system depends on such parameters as ammonia injection rate, contact time, and reaction temperature.

The proposed combustors will thoroughly mix air and fuel prior to combustion to achieve the same 5 ppm-NO_X limit without the use of SCR (see Appendix F for manufacturer guarantee).

VII. General Calculations

A. Assumptions

- There are no changes to any pollutants for the units addressed in this project
- Emissions from the following equipment are included in a Specific Limiting Condition (SLC): Steam Generators listed on PTOs S-1135-115, '-119, '-122, '-123 and GTEs listed on PTOs '-224, '-225, and '-226

B. Emission Factors

Annual emissions from the three gas turbine cogenerators together with emissions from four steam generators are combined into a Specific Limiting Condition (SLC). Compliance with the SLC is demonstrated by monitoring fuel use and emissions concentrations from the units included in the SLC and is not dependent on the megawatt rating of the units.

Since there are no proposed modifications to the emission factors, throughput, or operating schedule, emissions will not change. Therefore, emission factors are not required.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since there are no proposed modifications to the emission factors, throughput, or operating schedule, emissions will not change. Pre-project potential to emit is listed as a SLC on all units and is summarized in the following table:

Pollutant	Annual PE1 [lb/yr]
	SLC for units S-1135-115, '-119, '-122, '-123, '-224, '-225, and '-226
NO_X	464,170
SO_X	24,200
PM_{10}	262,360
CO	1,443,101
VOC	236,520

2. Post Project Potential to Emit (PE2)

Since there are no proposed modifications to the emission factors, throughput, or operating schedule, emissions will not change; therefore, PE2 = PE1 for all modifications as shown in the following table:

Pollutant	Annual PE2 [lb/yr]
	SLC for units S-1135-115, -119, -122, -123, -224, -225, and -226
NO_X	464,170
SO_X	24,200
PM_{10}	262,360
CO	1,443,101
VOC	236,520

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for all criteria pollutants emissions; therefore, SSPE1 calculations are not necessary.

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for all criteria pollutants emissions; therefore, SSPE2 calculations are not necessary.

5. Major Source Determination

<u>Rule 2201 Major Source Determination:</u>

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

This source is an existing Major Source for all pollutants and will remain a Major Source for all pollutants.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

CO_2e emitted is assumed to be emitted from combustion equipment and is calculated using the ARB GHG emission factor for natural gas (116.67 lb-CO_2e/MMBtu) as follows for the two 949.345 MMBtu/hr GTEs (heat input rating provided by applicant):

(1,898.69 MMBtu/hr) x (116.67 lb-CO_2e/MMBtu) x (8,760 hrs/yr)
= 1,940,516,621 lb-CO_2e/yr

PSD Major Source Determination (tons/year)							
	NO_2	VOC	SO_2	CO	PM	PM_{10}	CO_2e
Estimated Facility PE before Project Increase	NA	NA	NA	NA	NA	NA	970,258
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	NA	NA	NA	NA	NA	NA	Y

As shown above, the facility is an existing major source for PSD for at least one pollutant. Therefore the facility is an existing major source for PSD.

6. Baseline Emissions (BE)

The BE calculation (in lbs/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

a. BE NO_X, SO_X, PM_{10}, and VOC:

Pursuant to Rule 2201 Section 3.8.1.3 baseline emissions (BE) are equal to the pre-project potential to emit (PE1) for fully offset emission units located at a major stationary source. For units subject to a specific limiting condition (SLC) to be considered fully offset, the potential to emit of the SLC must be fully offset.

An SLC exists, which includes units S-1135-115, '-119, '-122, '-123, '-224, '-225, and '-226.

According to the original project evaluation for construction and operation of the MSCC facility (Determination of Compliance application numbers 4014800 through –807) all emissions except CO were fully offset for the SLC. (For CO, modeling was performed which demonstrated that the ambient air quality standards would not be exceeded as allowed by Rule 2201 Section 4.6.1).

The reductions used to provide the offsets were provided by shutting down other emissions units at the stationary source. The quantity of offsets provided was calculated based on the actual historical emissions from the units shut down.

These units (previously permitted by Kern County APCD as permit numbers 4014800, '801, and '802) qualify as Fully Offset for NO_X, SO_X, PM_{10}, and VOC; therefore, BE = PE1 for NO_X, SO_X, PM_{10}, and VOC.

b. BE CO:

For CO emissions, the emission units are not Highly Utilized, Fully Offset, nor Clean; therefore, BE=HAE.

However Rule 2201 Section 4.6.1 exempts increases in CO in attainment areas from offsets if Ambient Air Quality Standards are not violated, such emissions will be consistent with Reasonable Further Progress, and will not cause or contribute to a violation of Ambient Air Quality Standards. There is no increase in permitted CO emissions for this project; therefore modeling is not required to show that standards will not be violated (modeling for the full potential to emit was performed for the initial approval of this equipment) and this project will not require CO emissions to be offset.

Since CO offsets will not be required for this project, baseline actual emissions will not be required and historical actual calculations are not needed.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is a major source for NO_X, SO_X, PM_{10}, and VOC the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO_x	>50,000	50,000	Yes
SO_x	24,200	80,000	No*
PM_{10}	>30,000	30,000	Yes
VOC	>50,000	50,000	Yes

*Since the combined SLC for all units is less than the threshold the PE2 for the two GTEs in this project cannot exceed 80,000.

Since the project's PE2 surpasses the SB 288 Major Modification Thresholds for NO_X, PM_{10}, and VOC, the Net Emissions Increase (NEI) will be compared to the SB 288 Major Modification thresholds in order to determine if this project constitutes an SB 288 Major Modification.

The NEI is the total of emission increases for every permit unit addressed in this project and is calculated as follows:

NEI = PE2 – BAE

Where: PE2 = the sum of all the PE2s for each permit unit in this project
BAE = for units that are fully offset, the BAE = the PE1 for every unit, otherwise, the BAE is the actual annual emissions averaged over the baseline period for every unit.

The PE2 is used to calculate the NEI and make the SB 288 Major Modification determination in the following table (SLCs for all units shown).

SB 288 Major Modification Calculation and Determination					
Pollutant	PE2 (lb/yr)	PE1 (lb/yr)	NEI (lb/yr)	Thresholds (lb/yr)	SB 288 Major Modification?
NO_x	464,170	464,170	0	50,000	No
PM_{10}	262,360	262,360	0	30,000	No
VOC	236,520	236,520	0	50,000	No

As demonstrated in the preceding table, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Significant is defined under Part 51.165(x) as a net emissions increase in the potential of a source to emit any affected pollutant equal to or exceeding any applicable thresholds.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

Step 1

For existing emissions units, the increase in emissions is calculated as follows.

Emission Increase = PAE – BAE

Where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions

Since these units are fully offset, the actual emissions are equal to the potential emissions. There is no increase in potential emissions proposed or expected as a result of this project; therefore, there cannot be an actual to potential emissions increase and the Emissions Increase for this project is equal to zero for all pollutants.

The project's combined total emission increases are compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO_x*	0	0	No
VOC*	0	0	No
PM_{10}	0	30,000	No
$PM_{2.5}$	0	20,000	No
SO_x	0	80,000	No

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since none of the Federal Major Modification Thresholds are being surpassed with this project, this project does not constitute a Federal Major Modification and no further analysis is required.

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to pollutants for which the District is in attainment or for unclasssified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO_2 (as a primary pollutant)
- SO_2 (as a primary pollutant)
- CO
- PM
- PM_{10}
- Greenhouse gases (GHG): CO_2, N_2O, and CH_4

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

In the case the facility is NOT an existing PSD Major Source but is an existing source, the second step of the PSD evaluation is to determine if the project, by itself, would be a PSD major source.

In the case the facility is new source, the second step of the PSD evaluation is to determine if this new facility will become a new PSD major Source as a result of the project and if so, to determine which pollutant will result in a PSD significant increase.

I. Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be a existing major source for PSD. Because the project is not located within 10 km of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Significance of Project Emission Increase Determination

a. Potential to Emit of attainment/unclassified pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if total potential to emit from all new and modified units is below this threshold, no futher analysis will be needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)						
	NO_2	SO_2	CO	PM	PM_{10}	CO_2e
Total PE from New and Modified Units	NA	NA	NA	NA	NA	970,258
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	N	Y

As demonstrated above, because the project has a total potential to emit from all new and modified emission units greater than PSD significant emission increase thresholds, further analysis is required to determine if the project has an emission increase greater than the PSD significant emission increase thresholds, see step below.

b. Emission Increase for Each Attainment/Unclassified Pollutant with a Significant Emission Increase vs PSD Significant Emission Increase Thresholds

In this step, the emission increase for each attainment/unclassified pollutant is compared to the PSD significant emission increase thresholds, and if emission increase for each attainment pollutant is below this threshold, no futher analysis is needed.

For existing emissions units, the increase in emissions is calculated as follows:

Emission Increase = PAE – BAE

Where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions

The applicant has provided the historical actual fuel use for a 24 month period for each turbine (see **Appendix G**). MSCC does not expect any change in the fuel use compared to the 24 month fuel use periods provided. Furthermore, no change in emissions is proposed or expected as a result of this project; therefore, PAE = BAE and the emission increase for all pollutants is equal to zero.

Since the project emission increase for all new and modified emission units does not exceed any of the PSD significant emission increase thresholds the project does not result in a PSD major modification due to a significant emission increase and no further discussion is required.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

As discussed in Section I above, there are no new emissions units associated with this project. Therefore BACT for new units with PE > 2 lb/day purposes is not triggered.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

AIPE = PE2 – HAPE

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)
PE2 = Post-Project Potential to Emit, (lb/day)
HAPE = Historically Adjusted Potential to Emit, (lb/day)

HAPE = PE1 x (EF2/EF1)

Where,

PE1 = The emissions unit's PE prior to modification or relocation, (lb/day)
EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1
EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

AIPE = PE2 – (PE1 * (EF2 / EF1))

For the GTEs in this project EF2 = EF1 and PE2 = PE1; therefore, AIPE = 0 for all pollutants.

The AIPE is not greater than 2.0 lb/day for any emissions. Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 and/or Federal Major Modification for any pollutant. Therefore BACT is not triggered for any pollutant.

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2	>20,000	>54,750	>29,200	>200,000	>20,000
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	Yes	Yes	Yes	Yes

2. Quantity of Offsets Required

As seen above, the facility is an existing Major Source for all pollutants and the SSPE2 is greater than the offset thresholds. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,
PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)
ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = HAE

Post project potential to emit (covered with an SLC as discussed previously) and baseline emissions (previously calculated) are summarized in the following tables:

Permit No.	Annual PE2 [lbs per year]				
	NO_X	SO_X	PM_{10}	CO	VOC
S-1135-224-25 S-1135-226-24	464,170	24,200	262,360	1,443,101	236,520

Permit No.	Baseline Emissions (BE) [lbs per year]				
	NO_X	SO_X	PM_{10}	CO	VOC
S-1135-224-25 S-1135-225-23	464,170	24,200	262,360	1,443,101	236,520

There are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

For all units:

	Offset Requirements (PE2 - BE)				
	NO_X	SO_X	PM_{10}	CO	VOC
[lb/year]	0	0	0	0	0
[lb/qtr]	0	0	0	0	0

As demonstrated in the calculation above, the amount of offsets is zero; therefore, offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed, and/or
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in Sections VII.C.7 and VII.C.8, this project does not constitute an SB 288 or Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is not required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project. Therefore public noticing is not required for this project for PE > 100 lb/day.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO_X	>20,000	>20,000	20,000 lb/year	No
SO_X	>54,750	>54,750	54,750 lb/year	No
PM_{10}	>29,200	>29,200	29,200 lb/year	No
CO	>200,000	>200,000	200,000 lb/year	No
VOC	>20,000	>20,000	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_X	NA*	NA*	0	20,000 lb/year	No
SO_X	NA*	NA*	0	20,000 lb/year	No
PM_{10}	NA*	NA*	0	20,000 lb/year	No
CO	NA*	NA*	0	20,000 lb/year	No
VOC	NA*	NA*	0	20,000 lb/year	No

*Since no difference in the facility-wide potential to emit will result from this project there can be no difference in the SSIPE and stationary source potentials are irrelevant.

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

2. Public Notice Action

As discussed above, this project will not result in emissions, for any pollutant, which would subject the project to any of the noticing requirements listed above. Therefore, public notice will not be required for this project.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

The following conditions have been modified and added to the ATCs:

- When SCR is operated, ammonia shall be injected whenever the selective catalytic reduction system catalyst temperature exceeds the minimum ammonia injection temperature recommended by the manufacturer. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

These units are subject to District Rule 4703, *Stationary Gas Turbines*. Source testing requirements, in accordance with District Rule 4703 will be discussed in Section VIII, *District Rule 4703*, of this evaluation.

2. Monitoring

As required by District Rule 4703, *Stationary Gas Turbines* these units are subject to monitoring requirements. Monitoring requirements, in accordance with District Rule 4703 will be discussed in Section VIII, District Rule 4703, of this evaluation.

The following condition has been modified for the ATCs:

- When SCR is operated, permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201]

3. Recordkeeping

As required by District Rule 4703, *Stationary Gas Turbines*, the units are subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rule 4703 will be discussed in Section VIII, District Rule 4703, of this evaluation.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2410 Prevention of Significant Deterioration

As discussed in Section VII. C.9, this modification is not considered a significant modification and this rule is not applicable. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. A significant permit modification is defined as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

Section 3.20.2 states that a minor permit modifications "Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions". The monitoring and recordkeeping requirement for SCR and oxidation inlet temperature will not be required when the SCR is bypassed, which is considered a relaxation in monitoring and recordkeeping conditions. As a result, the proposed project constitutes a Significant Modification to the Title V Permit pursuant to Section 3.29.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

40 CFR Part 60, Subpart A, Section 14, defines the meaning of modification to which the the standards are applicable. §60.14, paragraph (e)(5) states that the following will not be considered as a modification: *"the addition or use of any system or device whose primary funtion is the reduction of air pollutants, except when an emission control system is removed or replaced by a system which the Administrator determines to be less environmentally beneficial".*

No newly constructed or reconstructed units are proposed in this project, nor are these units being modified (as defined above). The modification involves the retrofit of GTEs with an equivalent size burner that will allow the unit to alternatively comply with District Rule 4703; therefore, the requirements of 40 CFR Part 60 do not apply to the units.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to these operations.

Rule 4101 Visible Emissions

Rule 4101 states that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). As the turbines are fired solely on natural gas, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. Also, based on past inspections of the facility continued compliance is expected.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – *Risk Management Policy for Permitting New and Modified Sources* specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

As demonstrated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. These units are currently in compliance with this rule and nothing proposed would alter the particulate matter emissions from these units. Therefore, continued compliance with this rule is expected.

Rule 4301 Fuel Burning Equipment

Rule 4301 applies to any fuel burning equipment except air pollution control equipment which is exempted according to Section 4.0.

Section 3.1 of this Rule defines fuel burning equipment as:

> *Fuel Burning Equipment: any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.*

The stationary combustion turbines primarily produce power through mechanical means where the combustion of gas is passed across the turbine blades to drive the turbine shaft, which, in turn, drives an electrical generator shaft to produce electricity. Therefore, the turbines do not meet the definition of fuel burning equipment and this rule does not apply

Rule 4703 Stationary Gas Turbines

The provisions of this rule apply to all stationary gas turbine systems, which are subject to District permitting requirements, and with ratings equal to or greater than 0.3 megawatt (MW) or a maximum heat input rating of more than 3,000,000 Btu per hour, except as provided in Section 4.0. The turbines in this project are all subject to District permitting with maximum heat input ratings above 3 MMBtu/hr; therefore, these turbines are subject to the provisions of this rule.

Section 5.1.3 requires the owner or operator to meet 5 ppmvd NO_X @ 15% O_2. These units currently meet 5 ppmvd NO_X @ 15% O_2 and will continue to meet this limit.

Section 5.2 requires the owner or operator to meet 200 ppmvd CO @ 15% O_2. The applicant has previously met and will continue to meet 200 ppmvd CO @ 15% O_2. The following condition will continue to be listed on the permits to ensure compliance:

- Permittee shall comply with the following emission limit at all times except during periods of start-up, shutdown, or reduced load ~~as defined in Rule 4703~~: NOx (as NO2): 5.0 ppmv, and CO: 25 ppmv, dry @ 15% O2 corrected to ISO conditions. [40 CFR 60.332(a)(1) & 60.332(a)(2) and District Rule 4703]

- CEC emission rates, except during periods of startup, shutdown, or reduced load shall not exceed PM10: 9.98 lb/hr, SOx (as SO2): 0.92 lb/hr, NOx (as NO2): 17.66 lb/hr, VOC: 9.00 lb/hr, and CO: 54.91 lb/hr. [District Rules 2080 and 4703, and 40 CFR 60]

Section 5.3 specifies requirements for transitional periods. The following conditions will be listed on the permit to ensure compliance:

- Gas turbine engine start-up is that period of time not exceeding two hours in duration during which the unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rules 2201 and 4703]

- Gas turbine engine shutdown it that period of time not exceeding two hours in duration during which the unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703]

- Gas turbine reduced load period is that period not exceeding one hour in duration during which the unit is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. [District Rules 2201 and 4703]

Section 6.2.1 requires the owner or operator to either install, operate, and maintain continuous emissions monitoring equipment for NO_X and oxygen or install and maintain APCO-approved alternate monitoring.

These units are currently equipped with a continuous emission monitoring system as enforced by the following condition, which will remain on the permits:

- CTG exhaust after the SCR unit shall be equipped with continuously recording emissions monitors dedicated to this unit for NOx, CO, and O2. Continuous emissions monitors shall meet the requirements of 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. If relative accuracy of CEM(s) cannot be demonstrated during startup conditions, CEM results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits. [District Rules 2201 and 4703]

  **SCR system for these units will be bypassed only when operating as a peaker; CEMs will still be required and operational during this time*

- CTG shall be equipped with a continuously recording emission monitor preceding the SCR module measuring NOx concentration for the purposes of calculating ammonia slip. Permittee shall check, record, and quantify the calibration drift (CD) at two concentration values at least once daily (approximately 24 hours) when SCR is operated. The calibration shall be adjusted whenever the daily zero or high-level CD exceeds 5%. If either the zero or high-level CD exceeds 5% for five consecutive daily periods, the analyzer shall be deemed out-of-control. If either the zero or high-level CD exceeds 10% during any CD check, analyzer shall be deemed out-of-control. If the analyzer is out-of-control, the permittee shall take appropriate corrective action and then repeat the CD check. [District Rules 2201 and 4703]

Section 6.2.4 requires the owner or operator to maintain all records for a period of five years from the date of data entry and shall make such records available to the APCO upon request. Conditions will be included to satisfy compliance with this section.

- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4703]

Section 6.2.6 requires the owner or operator to maintain a daily log that includes local start-up time and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used.

Section 6.2.8 requires that the operator performing start-up or shutdown of a unit shall keep records of the duration of start-up or shutdown.

Section 6.2.9 requires that the operator of a unit subject to Section 5.1.3.3 shall also keep additional records. The turbine is not subject to section 5.1.3.3.

Section 6.2.10 requires that the operator of a unit subject to Section 6.5.2 shall identify in the stationary gas turbine system operating log the date and start time and end time that the unit was operated pursuant to Section 6.5.2 and keep a copy of the emergency declaration. The turbine is not subject to section 6.5.2.

Section 6.2.11 requires the operator of a unit to keep records of the date, time and duration of each bypass transition period and each primary re-ignition period. The following condition will be included on the ATCs:

- Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [Kern County Rule 108; District Rules 1080 and 4703; 40 CFR 60.7 (b)]

Section 6.2.12 requires the operator of a unit subject to subsection (b) of Table 5-3 to keep records of the date, time and duration of each steady state period and non-steady state period and the quantity of fuel used during each period. These turbines are not pipeline gas turbines; therefore this section is not applicable.

Section 6.3 and 6.3.3 requires the owner or operator to perform annual source test to measure NO_X and CO emissions. The following source testing condition will remain on the permit to satisfy compliance with this section.

- The permittee shall maintain hourly average records of NOx and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by the CO CEM data and the VOC/CO relationship determined by annual CO and VOC source tests of NOx, CO, and ammonia emission concentrations (ppmv @ 15% O2), and hourly, daily, and twelve month rolling. [District Rules 2201 and 4703]

- Compliance with NOx, CO and ammonia emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory within 60 days of initial start-up and on an annual basis thereafter. [District Rules 4703 and 1081]

Section 6.4 identifies various test methods to measure NO_X, CO, O_2, HHV and LHV of gaseous fuels. The turbine will be fired on gaseous fuel and the following conditions will remain on the permit:

- The following test methods shall be used PM10: EPA method 5 (front half and back half), NOx: EPA Method 7E or 20, CO: EPA method 10 (or 10B) or CARB Method 100, O2: EPA Method 3, 3A, or 20, VOC: EPA method 18 or 25, ammonia: BAAQMD ST-1B, and fuel gas sulfur content: ASTM D3246. Alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rule 1081, 40 CFR 60.335 (b), and District Rule 4703, 6.4]

- HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [40 CFR 60.332 (a),(b) and District Rule 4703, 6.4.5]

Compliance is expected with this Rule.

Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO_2) shall not exceed 0.2% by volume. Using the ideal gas equation and the turbine's sulfur emissions limit of 0.92 lb-SO_X/hr, the sulfur compound emissions are calculated as follows:

Volume SO_2 = (n x R x T) ÷ P
n = moles SO_2
T (standard temperature) = 60 °F or 520 °R
R (universal gas constant) = $\frac{10.73\,\text{psi}\cdot\text{ft}^3}{\text{lb}\cdot\text{mol}\cdot°\text{R}}$

$$\frac{0.92\ lb\cdot SOx}{78{,}200\ kWhr}x\frac{1\ kWh}{11{,}650\ Btu}x\frac{1{,}000{,}000\ Btu}{MMBtu}=0.001\left(\frac{lb\cdot SO_X}{MMBtu}\right)$$

$$\frac{0.001\ lb\cdot SOx}{MMBtu}\times\frac{MMBtu}{8{,}578\,dscf}\times\frac{1\ lb\cdot mol}{64\,lb}\times\frac{10.73\ psi\cdot ft^3}{lb\cdot mol\cdot°R}\times\frac{520°R}{14.7\,psi}\times\frac{1{,}000{,}000\ parts}{million}=0.7\frac{parts}{million}$$

This is in compliance with the 2,000 ppm limit.

The following conditions will remain on the permit to ensure compliance:

- Unit shall be fired on a natural gas which has a sulfur content of less than or equal to 0.017% by weight. [40 CFR 60.333 (a) & (b); 40 CFR 60.334 (c)(2); Kern County Rule 407; and District Rule 4801]
- CEC emission rates, except during periods of startup, shutdown, or reduced load shall not exceed PM10: 9.98 lb/hr, SOx (as SO2): 0.92 lb/hr, NOx (as NO2): 17.66 lb/hr, VOC: 9.00 lb/hr, and CO: 54.91 lb/hr. [District Rules 2080 and 4703, and 40 CFR 60]

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and

- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful EPA review and Public Noticing period, issue ATCs S-1135-224-27 and '-225-26 subject to the permit conditions on the attached draft ATCs in **Appendix A**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1135-224-27	3020-08A-G	78,200 kW	$10,215.00
S-1135-225-26	3020-08A-G	78,200 kW	$10,215.00

Appendices

A: Draft ATCs
B: Current PTOs
C: Location Map
D: Facility Diagram
E: Compliance Certification (TVFORM-009)
F: Manufacturer Guarantee
G: Historical Fuel Use

APPENDIX A

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1135-224-27 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: 17 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF NOMINALLY RATED 78.2 MW COGENERATION UNIT A WITH GE MODEL G7111E FRAME 7E GAS TURBINE ENGINE WITH DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR), AND UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG): RETROFIT WITH GE ULTRA DRY LOW-NOX COMBUSTOR CANS (DLN1+ TURNDOWN ENHANCE) AND ALLOWING OPTIONAL USE EXHAUST GAS BYPASS OF HEAT RECOVERY STEAM GENERATOR AND SCR UNIT FOR OPERATION AS EITHER A COGENERATION UNIT OR PEAKING UNIT

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District of the approved burner to be installed prior to or concurrently with implementation of this ATC. [District Rule 2080] Federally Enforceable Through Title V Permit
4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment.. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services
S-1135-224-27 : Oct 31 2013 10:28AM -- RICKARDK : Joint Inspection Required with RICKARDK

5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

8. CTG exhaust after the SCR unit shall be equipped with continuously recording emissions monitors dedicated to this unit for NOx, CO, and O2. Continuous emissions monitors shall meet the requirements of 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. If relative accuracy of CEM(s) cannot be demonstrated during startup conditions, CEM results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

9. CTG shall be equipped with a continuously recording emission monitor preceding the SCR module measuring NOx concentration for the purposes of calculating ammonia slip. Permittee shall check, record, and quantify the calibration drift (CD) at two concentration values at least once daily (approximately 24 hours) when SCR is operated. The calibration shall be adjusted whenever the daily zero or high-level CD exceeds 5%. If either the zero or high-level CD exceeds 5% for five consecutive daily periods, the analyzer shall be deemed out-of-control. If either the zero or high-level CD exceeds 10% during any CD check, analyzer shall be deemed out-of-control. If the analyzer is out-of-control, the permittee shall take appropriate corrective action and then repeat the CD check. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

10. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NOx and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit

12. When SCR is operated, permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit

13. When SCR is operated, ammonia shall be injected whenever the selective catalytic reduction system catalyst temperature exceeds the minimum ammonia injection temperature recommended by the manufacturer. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Gas turbine engine shall be equipped with fuel consumption monitor recorder accurate to +/- 3%. [District Rule 2201] Federally Enforceable Through Title V Permit

15. CEM for NOx (as NO2) and CO shall conform to Rule 1080 specifications. [District Rules 1080 and 4703] Federally Enforceable Through Title V Permit

16. HRSG exhaust stack shall be equipped with permanent stack sampling provisions adequate to facilitate testing consistent with EPA test methods. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Flue gas ducting from engine to HRSG shall have no provisions for introduction of dilution air. [District Rule 1110] Federally Enforceable Through Title V Permit

18. Lube oil cooler/accumulation vent shall be equipped with control device(s) approved by the APCO sufficient to prevent emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Lube oil cooler/accumulator vent(s) shall not have detectable emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Natural gas sulfur content shall not exceed 0.31 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

21. Facility shall operate as a cogeneration facility pursuant to Public Resources Code section 25134 for TEOR operations unless prior District and CEC approval is granted to operate otherwise. [District Rule 2080] Federally Enforceable Through Title V Permit

22. All CEM's shall be calibrated and operated according to EPA guidelines as specified in 40 CFR 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit

23. Quarterly CEM reports shall be submitted to the APCO according to EPA regulations as specified in 40 CFR 60 Appendix B. [District Rule 4001 and District rule 1080, 8.0] Federally Enforceable Through Title V Permit

24. Audits of all monitors shall be conducted by independent laboratory in accordance with EPA guidelines and witnessed by District. Reports shall be submitted to District within 60 days of audits. [District Rule 1080] Federally Enforceable Through Title V Permit

25. All notification, recordkeeping, performance tests, reporting requirements, and compliance testing requirements of Rule 4001 NSPS shall be satisfied. [District Rule 4001] Federally Enforceable Through Title V Permit

26. Operational records including fuel type, fuel characteristics, and consumption shall be maintained and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

27. Accurate records of NOx (as NO2) and CO flue gas concentration corrected to 15% O2 and fuel gas sulfur content shall be maintained and shall be reported as described in Rule 1080 upon request. [District Rule 1080] Federally Enforceable Through Title V Permit

28. Emission rates shall not exceed the following: PM10: 0.010 lb/MMBtu, SOx (as SO2): 0.001 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu, VOC: 0.009 lb/MMBtu, CO: 0.057 lb/MMBtu, and ammonia - 10 ppmvd @ 15%O2. [District Rules 2201, 4201; and Kern County Rule 404] Federally Enforceable Through Title V Permit

29. Permittee shall comply with the following emission limit at all times except during periods of start-up, shutdown, or reduced load: NOx (as NO2): 5.0 ppmv, and CO: 25 ppmv, dry @ 15% O2 corrected to ISO conditions. [40 CFR 60.332(a)(1) & 60.332(a)(2) and District Rule 4703] Federally Enforceable Through Title V Permit

30. Gas turbine engine start-up is that period of time not exceeding two hours in duration during which the unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

31. Gas turbine engine shutdown it that period of time not exceeding two hours in duration during which the unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

32. Gas turbine reduced load period is that period not exceeding one hour in duration during which the unit is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

33. Compliance with NOx and CO emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory within 60 days of initial start-up and on an annual basis thereafter. Compliance with NOx, CO and ammonia emissions limits shall demonstrated by District-witnessed sample collection by independent testing laboratory within 60 days of any use of the SCR system, unless compliance with emissions limitations has been demonstrated with the SCR system in operation within the preceding 12 month period. [District Rule 4703 and 1081] Federally Enforceable Through Title V Permit

34. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The following test methods shall be used PM10: EPA method 5 (front half and back half), NOx: EPA Method 7E or 20, CO: EPA method 10 (or 10B) or CARB Method 100, O2: EPA Method 3, 3A, or 20, VOC: EPA method 18 or 25, ammonia: BAAQMD ST-1B, and fuel gas sulfur content: ASTM D3246. Alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rule 1081, 40 CFR 60.335 (b), and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

36. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O2 = ((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 exhaust gas flow rate (lb/hr)/(29(lb/lb. mol), c = change in measured NOx concentration ppmv at 15% O2 across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102] Federally Enforceable Through Title V Permit

37. Official test results and field data shall be submitted within 60 days after collection. [District Rule 4703 and District Rule 1081] Federally Enforceable Through Title V Permit

38. Combined annual emissions from units S-1135-115, S-1135-119, S-1135-122, S1135-123, S-1135-224, S-1135-225, S-1135-226 shall not exceed any of the following: PM10 - 262,360 lb/yr, SOx (as SO2) - 24,200 lb/yr, NOx (as NO2) - 464,170 lb/yr, VOC - 236,520 lb/yr, or CO - 1,443,101 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

39. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. For units equipped with continuous emissions monitors (CEMs), CEM data may be used in place of calculated emissions. If CEM shows a violation, CEM data shall be used. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

40. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District Rule 2201] Federally Enforceable Through Title V Permit

41. When three gas turbine engines S-1135-224, '-225, and '-226 are operating, four steam generators S-1135-115, '-119, '-122, and '-123 shall be shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

42. When up to two gas turbine engines S-1135-224, '-225, or '-226 are operating, four steam generators S-1135-115, '-119, '-122, and '-123 may be operated. [District Rule 2201] Federally Enforceable Through Title V Permit

43. The permittee shall maintain records of operational status of units S-1135-115, S-1135-119, S-1135-122, S1135-123, S-1135-224, S-1135-225, and S-1135-226 on a daily basis. [District Rule 2201] Federally Enforceable Through Title V Permit

44. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4703] Federally Enforceable Through Title V Permit

45. CEC emission rates, except during periods of startup, shutdown, or reduced load shall not exceed PM10: 9.98 lb/hr, SOx (as SO2): 0.92 lb/hr, NOx (as NO2): 17.66 lb/hr, VOC: 9.00 lb/hr, and CO: 54.91 lb/hr. [District Rules 2080 and 4703, and 40 CFR 60] Federally Enforceable Through Title V Permit

46. For CEC purposes, emissions during periods of startup and shutdown shall not exceed the following values average over 2 hours: NOx: 140 lb/hr, and CO: 94 lb/hr. [District Rule 2080] Federally Enforceable Through Title V Permit

47. The CEC shall be notified of any changes to the combined annual emission limits for steam generators S-1135-115, -119, -122, and -123, and cogeneration units S-1135-224, -225, and -226, only to the extent to be informed of their impact on the Midway-Sunset Cogeneration Facility. [District Rule 2080] Federally Enforceable Through Title V Permit

48. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [Kern County Rule 108 and District Rule 1080] Federally Enforceable Through Title V Permit

49. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [Kern County Rule 108; District Rules 1080 and 4703; 40 CFR 60.7 (b)] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

50. The permittee shall maintain hourly average records of NOx and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by the CO CEM data and the VOC/CO relationship determined by annual CO and VOC source tests of NOx, CO, and ammonia emission concentrations (ppmv @ 15% O2), and hourly, daily, and twelve month rolling. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

51. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [Kern County Rule 108 and District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

52. Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [Kern County Rule 108 and District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

53. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 1081] Federally Enforceable Through Title V Permit

54. Unit shall be fired on a natural gas which has a sulfur content of less than or equal to 0.017% by weight. [40 CFR 60.333 (a) & (b); 40 CFR 60.334 (c)(2); Kern County Rule 407; and District Rule 4801] Federally Enforceable Through Title V Permit

55. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

56. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using method(s) specified on this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

57. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246, or double GC for H2S and mercaptans. [40 CFR 60.335 (d)] Federally Enforceable Through Title V Permit

58. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334 (b)(2)] Federally Enforceable Through Title V Permit

59. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(a)(2)] Federally Enforceable Through Title V Permit

60. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [40 CFR 60.332 (a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

61. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332 (a),(b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

62. Results of continuous emission monitoring must be averaged in accordance with the requirements of 40 CFR 60.13. [40 CFR 60.334 (a),(b),(c) and District Rule 4703, 5.0] Federally Enforceable Through Title V Permit

63. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332 (a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

64. This unit is a simple combustion turbine as defined in 40 CFR 72.6 (b)(1) and shall not be subject to the requirements of 40 CFR Part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

65. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rules 404, 108, and 108.1. A permit shield is granted from these requirements. [SJVUAPCD Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

66. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: Kern County Rule 407; District Rules 4801, 4201, 1081, and 1080, Sections 6.5, 7.2, 8.0, 9.0, and 10.0; 40 CFR 60.332 (c) and (d); 60.334 (b), (c)(2); 60.335(d). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

67. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: District Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, and 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

68. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: District Rules 1080, 7.3 and 4703, 6.2.2; 40 CFR 60.332(a), (b); 60.333(a) and (b), 60.334(a), (b), and (c)(1); 60.335(a), (b) and (c)(2). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

69. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

70. The Permittee (MSCC) must notify EPA by telephone, facsimile, or electronic mail transmission within two (2) working days following the discovery of any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in any conditions where PSD is cited as the basis of the condition. In addition, the Permittee (MSCC) must notify EPA in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in any conditions where PSD is cited as the basis of the condition, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or of any law or regulation that such malfunction may cause, except as provided for in the conditions where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

71. A malfunction means a sudden and unavoidable breakdown of equipment or of a process beyond the reasonable control of the source. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

72. Emissions in excess of the limits specified in any conditions where PSD is cited as the basis of the condition shall constitute a violation of this permit and may be the subject of enforcement proceedings. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

73. Affirmative defense: In the context of an enforcement proceeding, emissions which are below the limits set forth in any condition where PSD is cited as the basis of the condition shall not be subject to penalty if the Permittee (MSCC) retains properly signed, contemporaneous operating logs or other relevant evidence and can demonstrate all of the following: i.) A malfunction caused the emissions in excess of the limits in any condition where PSD is cited as the basis of the condition; ii.) The permitted facility, including the air pollution control equipment and process equipment, was being properly operated at the time of the malfunction; iii.) Preventative maintenance was regularly performed in a manner consistent with good practice for minimizing emissions; iv.) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; v.) During the period of the malfunction, the permittee (MSCC) took all reasonable steps to minimize the amount and duration of emissions (including any bypass) that exceeded the emission limits provided in any condition where PSD is cited as the basis of the condition. Reasonable steps to minimize emissions could include, but are not limited to, reducing production to the lowest level practicable, reducing the material feed that results in the increased emissions, and switching to alternative, less polluting fuels. Where repairs were required, repairs were made in an expeditious fashion when the operator knew or should have known that applicable emission limitations were being exceeded. Off-shift labor and overtime must have been utilized, to the extent practicable, to ensure that such repairs were made as expeditiously as possible; and vi.) The permittee (MSCC) complied with the malfunction reporting requirements as specified in the condition where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

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74. All emissions, including those associated with a malfunction which may be eligible for an affirmative defense, must be included in all emissions calculations and demonstrations of compliance with mass emission limits (e.g., daily, monthly, and annual emission limits) specified in this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

75. This provision is in addition to any emergency or malfunction provision contained in any applicable requirement or elsewhere in this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

76. The EPA Regional Administrator, and/or their authorized representative, upon the presentation of credential, must be permitted: (1) to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of the PSD permit SJ-87-01; and (2) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of PSD permit SJ 87-01; and (3) to inspect any equipment, operation, or method required in the PSD permit SJ-87-01; and (4) to sample emissions from source(s). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

77. In the event of any changes in control or ownership of facilities to be constructed or modified, this permit shall be binding on all subsequent owners and operators. The Permittee (MSCC) shall notify the succeeding owner and operator of the existence of the PSD permit SJ-87-01 and its conditions by letter, a copy of which shall be forwarded to the EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

78. The provisions of the PSD permit SJ-87-01 are severable, and , if any provisions of the permit is held invalid, the remainder of the permit must not be affected thereby. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

79. The permittee (MSCC) must construct and operate the proposed power plant in compliance with all other applicable provisions of 40 CFR Parts 52, 60, 62, and 63 and all other applicable Federal, State, and local air quality regulations. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

80. On or before the date of startup (as defined in 40 C.F.R. 60.2) of the Western Midway Sunset Cogeneration Project (WMSCP; PSD Permit No. SJ-00-01) and thereafter the Permittee (MSCC) must install, continuously operate, and maintain the Dry Low NOx (DLN) combustion systems to reduce NOx emissions from each of its three turbines. The Permittee (MSCC) shall also use proper combustion techniques for the control of CO emissions from the equipment at MSCP. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

81. Within 60 days after achieving the base load, but no later than 180 days after initial startup of all three modified turbines (as defined in 40 C.F.R. 60.2), and annually thereafter (at about the anniversary of the initial performance test), the Permittee (MSCC) must conduct performance tests (as described in 40 C.F.R. 60.8) for NOx, and CO on the exhaust stack gases. The Permittee (MSCC) must furnish the District, the California Air Resources Board (CARB), and the EPA a written report of the results of such tests. Upon written request from the Permittee (MSCC), and adequate justification, EPA may waive a specific annual test and/or allow for testing to be done at less than maximum operating capacity. [PSD SJ 87-01] Federally Enforceable Through Title V Permit

82. Performance tests for the emissions of NOx, and CO must be conducted and the results reported in accordance with the test methods set forth in 40 C.F.R. 60.8 and 40 C.F.R. 60, Appendix A. The following test methods must be used: a.) Performance tests for the emissions of NOx must be conducted using EPA Method 1-4 and 7E. b.) Performance tests for the emissions of CO must be conducted using the EPA Methods 1-4 and 10. In lieu of the above-mentioned test methods, equivalent methods may be used with prior written approval from EPA. The Permittee (MSCC) must notify EPA in writing at least 30 days prior to such tests to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. [PSD SJ 87-01] Federally Enforceable Through Title V Permit

83. For performance test purposes, sampling ports, platforms, and access must be provided by the Permittee on the emission unit exhaust system in accordance with 40 C.F.R. 60.8(e). [PSD SJ 87-01] Federally Enforceable Through Title V Permit

84. On and after the date of startup of the WMSCP (PSD Permit No. SJ-00-01), the Permittee (MSCC) must not discharge or cause the discharge of CO into the atmosphere in excess of the following emission limits per turbine: The more stringent of 25 ppmvd @ 15% O2 or 55 pounds per hour, based on 3-hour rolling average. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

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85. This condition applies prior to the startup of the WMSCP: On and after the date of start up any of the three turbines at MSCP must not discharge (per turbine, and based on 3-hour rolling average) into the atmosphere CO in excess of the following of any of: 1.) The more stringent of 52.0 ppmvd @ 15% O2 or 94 pounds for loads greater than or equal to 75%. 2.) The more stringent of 62.0 ppmvd @ 15% O2 or 94 pounds for loads greater than or equal to 35% but less than 75%. 3.) 94 pounds per hour for loads less than 35%. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

86. On and after the date of startup of the WMSCP (PSD Permit No. SJ-00-01), the Permittee (MSCC) must not discharge or cause the discharge of NOx into the atmosphere in excess of the following emission limits per turbine: The more stringent of 10 ppmvd @ 15% O2 or 36.1 pounds per hour, based on 3-hour rolling average. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

87. This condition applies prior to the startup of the WMSCP: On and after the date of start-up of any of the three turbines, MSCC must not discharge (per turbine, based on 3-hour rolling average) into the atmosphere NOx (as NO2) in excess of the following: 1.) The more stringent of 25.0 ppmvd @ 15% O2 or 85.0 pounds per hour for loads greater than or equal to 75%; 2.) The more stringent of 42.0 ppmvd @ 15% O2 or 85 pounds per hour for loads greater than or equal to 35% but less than 75%; 3.) 85 pounds per hour for loads less than 35%. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

88. The hourly (3-hour averaging) emissions must not exceed: 1.) 94 pounds of CO and 85 pounds of NOx; 2.) All CEMs must be operating during startups and shut downs; 3.) The time, date and duration of each startup and shutdown event must be recorded. The records must include the lbs/hour calculations based on the CEM data. These records must be kept for five years following the date of such events. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

89. Prior to the date of startup and thereafter, the Permittee (MSCC) must install, maintain and operate the following continuous monitoring systems (CEMs) in the exhaust stacks: a.) Continuous monitoring systems to measure stack gas NOx , CO and O2 concentrations. The systems must meet EPA monitoring performance specification (40 C.F.R. 60.13 and 40 C.F.R. 60, Appendix B, Performance Specifications 2, 3 and 4); b.) A continuous monitoring system to measure stack gas and natural gas volumetric flow rates. The stack gas flow measurement system must meet EPA Performance Specifications for (40 C.F.R. Part 52, Appendix E). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

90. The Permittee (MSCC) must maintain a file of all measurements, including continuous monitoring systems evaluations; all continuous monitoring systems or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; performance and all other information required by 40 C.F.R. 60 Appendices A-B recorded in a permanent form suitable for inspection. The file must be retained for five years following the date of such measurements, maintenance, reports and records. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

91. The Permittee (MSCC) must notify EPA of the date on which demonstration for the continuous monitoring system performance commences (40 C.F.R. 60.13). This date must be no later than 60 days after full load operation but not later than 180 days after startup. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

92. The Permittee (MSCC) must submit a written report of all excess emissions to EPA for every calendar quarter. The quarterly report must include the following: a.) The magnitude of the excess emissions computed in accordance with 40 C.F.R. 60.13(h), any conversion factors used, and the date and time of commencement and compilation of each time period of excess emissions; b.) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of any equipment. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted must also be reported; c.) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks, and the nature of the system repairs or adjustments; d.) When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information must be stated in the report; and e.) Excess emissions must be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM exceeds the maximum emission limits set forth in the condition with a CO emission limit, where PSD is cited as the basis of the condition or any 3-hour period during which the average emissions of NOx exceed the maximum emission limits set forth in the condition with a NOx emission limit, where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

93. Excess emissions indicated by the CEM system must be considered violations of the applicable emission limit for the purpose of this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

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94. The quality assurance project plan used by the Permittee (MSCC) for the certification and operation of the continuous emissions monitors, which meets the requirements of 40 C.F.R. Part 60, Appendix F, must be available upon request to EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

95. The Permittee (MSCC) must keep a monthly record of all fuel uses. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

96. The proposed power plant is subject to the federal regulations entitled Standards of Performance for New Stationary Sources (40 C.F.R. 60). The owner or operator must meet all applicable requirements of 40 C.F.R. 60 Subparts A and GG of this regulation. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

97. All three turbines will fire natural gas only. The Permittee (MSCC) must only combust pipeline quality natural gas with sulfur content (as S) below 0.75 grains per 100 dry standard cubic feet (dscf). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

98. MSCC shall have legal and operational responsibility and control of all air pollutant emitting activities of the MSCP. This responsibility shall include, but shall not be limited to the following: 1.) Operating and maintaining the project to comply with all federal, state, and local air pollution laws, regulations, orders, and other requirements; 2.) Ensuring the emissions offsets, tradeoffs, or other emission reductions required for this project under permits issued by the U.S. EPA, the District, and/or the California Energy Commission are obtained as required; or 3.) Any violations of any air pollution requirements are the legal responsibility of MSCC, in addition to any other legal responsible entity. Any proposed change to this condition shall require prior written concurrence of the US EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

99. In accordance with the emissions offset plan proposed by the applicant for the District (dated November 12, 1987) and the emissions offset plan for the U.S. EPA (dated July 21, 1987), Aera Energy LLC must not operate the following four steam generators (listed by District permit numbers S-1135-119, S-1135-122, S-1135-123, and S-1135-115) simultaneously with the firing of the MSCP turbines unless one or more of the MSCP turbines is shutdown: Andersen-Goodwin Lease: S-1135-119, S-1135-122, S-1135-123 and Neely Lease: S-1135-115 [PSD SJ-87-01] Federally Enforceable Through Title V Permit

100. MSCC shall maintain a record of the date(s), time(s), and duration(s) of the shutdown of any of the above mentioned steam generators. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

101. Aera Energy LLC shall not lease or modify the permit conditions for any of the above generators for use in the Midway Sunset Oil field, unless creditable emissions reductions (as defined in 40 C.F.R. 52.21), at a ratio of at least 1:1, are provided for emissions from those generators. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

102. Aera Energy LLC shall not modify any of the District Permit to Operate numbers. If any of the above steam generators are issued new Permit to Operate numbers by the District, Aera Energy LLC shall notify the U.S. EPA in writing of this action and shall make such notification upon issuance of a new Permit to Operate number. This letter shall include the original District Permit to Operate number(s) of the subject generator(s) and a copy of the new Permit to Operate issued by the District. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

103. Aera Energy LLC shall notify the U.S. EPA in writing of the intention to sell, or potential sale, of any of the above generators and shall make such notification prior to the District's final action of the re-permitting process associated with the sale of a generators. This letter shall include the following: a.) The subject steam generator as identified by its District Permit to Operate number; b.) The name of the buyer (as identified by the company name) of the steam generator; and c.) An estimated date of the final action of the re-permitting process by the District. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

104. The allowable incidental taking (killing, harming, or harassment) of San Joaquin kit foxes, blunt-nosed leopard lizards, and giant kangaroo rats is confined to the proposed cogeneration plant site one half mile radius around this site (on lands owned or leased by Aera Energy LLC), and associated subject cogeneration plant facilities (including pipelines, transmission lines, temporary equipment stockpiling areas, and access roads) as discussed in the project Application for Certification report (Sun Cogeneration Company and Southern Sierra Energy Company 1985). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

105. MSCC is required to implement the "Agreement on Conditions for Mitigation of the Biological Impacts of the Midway-Sunset Project" as required by the U.S. Fish and Wildlife Service (USFWS) (Memorandum dated March 16, 1987 from the USFWS to the US EPA). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

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106. Any endangered species found dead should be turned in to the California Department of Fish and Game for Analysis. MSCC must also report this event to the USFWS. The USFWS may recommend amendment to the existing project actions pending results of the analysis. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

107. All correspondence as required by this permit shall be forwarded to: 1.) Director, Air Division (Attn: Air-3) EPA Region IX 75 Hawthorne Street San Francisco, CA 94105-3901 Tel: (415) 744-1291 Fax: (415) 744-1076; 2.) Chief, Stationary Source Division, California Air Resource Board P.O. Box 2815 Sacramento, CA 95812; and 3.) Air Pollution Control Officer, San Joaquin Valley Unified APCD 2700 M Street, Suite 275 Bakersfield, CA 93301-2370. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

108. Aera Energy LLC is the legal owner of the subject steam generators and of the leases on which the steam generators are located. MSCC is the legal owner of the gas turbine cogeneration facility. MSCC is jointly owned by Sun Cogeneration Limited Partnership (Sun Cogen LP) and San Joaquin Energy Company. Sun Cogen LP is managed and controlled by a wholly owned subsidiary of Aera Energy LLC. (See Condition 104) [PSD SJ-87-01] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

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PERMIT NO: S-1135-225-26 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
MIDWAY-SUNSET
KERN COUNTY, CA

SECTION: 17 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF NOMINALLY RATED 78.2 MW COGENERATION UNIT B WITH GE MODEL G7111E FRAME 7E GAS TURBINE ENGINE WITH DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR), AND UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG): RETROFIT WITH GE ULTRA DRY LOW-NOX COMBUSTOR CANS (DLN1+ TURNDOWN ENHANCE) AND ALLOWING OPTIONAL USE EXHAUST GAS BYPASS OF HEAT RECOVERY STEAM GENERATOR AND SCR UNIT FOR OPERATION AS EITHER A COGENERATION UNIT OR PEAKING UNIT

CONDITIONS

1. Authority to Construct (ATC) S-1135-225-24 shall be cancelled upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
3. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
4. The permittee shall notify the District of the approved burner to be installed prior to or concurrently with implementation of this ATC. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services
S-1135-225-26 : Oct 31 2013 10:28AM -- RICKARDK : Joint Inspection Required with RICKARDK

5. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment.. [District Rule 2201] Federally Enforceable Through Title V Permit

6. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

7. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

8. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

9. CTG exhaust after the SCR unit shall be equipped with continuously recording emissions monitors dedicated to this unit for NOx, CO, and O2. Continuous emissions monitors shall meet the requirements of 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. If relative accuracy of CEM(s) cannot be demonstrated during startup conditions, CEM results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

10. CTG shall be equipped with a continuously recording emission monitor preceding the SCR module measuring NOx concentration for the purposes of calculating ammonia slip. Permittee shall check, record, and quantify the calibration drift (CD) at two concentration values at least once daily (approximately 24 hours) when SCR is operated. The calibration shall be adjusted whenever the daily zero or high-level CD exceeds 5%. If either the zero or high-level CD exceeds 5% for five consecutive daily periods, the analyzer shall be deemed out-of-control. If either the zero or high-level CD exceeds 10% during any CD check, analyzer shall be deemed out-of-control. If the analyzer is out-of-control, the permittee shall take appropriate corrective action and then repeat the CD check. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

11. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NOx and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit

13. When SCR is operated, permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit

14. When SCR is operated, ammonia shall be injected whenever the selective catalytic reduction system catalyst temperature exceeds the minimum ammonia injection temperature recommended by the manufacturer. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Gas turbine engine shall be equipped with fuel consumption monitor recorder accurate to +/- 3%. [District Rule 2201] Federally Enforceable Through Title V Permit

16. CEM for NOx (as NO2) and CO shall conform to Rule 1080 specifications. [District Rules 1080 and 4703] Federally Enforceable Through Title V Permit

17. HRSG exhaust stack shall be equipped with permanent stack sampling provisions adequate to facilitate testing consistent with EPA test methods. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Flue gas ducting from engine to HRSG shall have no provisions for introduction of dilution air. [District Rule 1110] Federally Enforceable Through Title V Permit

19. Lube oil cooler/accumulation vent shall be equipped with control device(s) approved by the APCO sufficient to prevent emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

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20. Lube oil cooler/accumulator vent(s) shall not have detectable emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Natural gas sulfur content shall not exceed 0.31 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Facility shall operate as a cogeneration facility pursuant to Public Resources Code section 25134 for TEOR operations unless prior District and CEC approval is granted to operate otherwise. [District Rule 2080] Federally Enforceable Through Title V Permit

23. All CEM's shall be calibrated and operated according to EPA guidelines as specified in 40 CFR 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit

24. Quarterly CEM reports shall be submitted to the APCO according to EPA regulations as specified in 40 CFR 60 Appendix B. [District Rule 4001 and District rule 1080, 8.0] Federally Enforceable Through Title V Permit

25. Audits of all monitors shall be conducted by independent laboratory in accordance with EPA guidelines and witnessed by District. Reports shall be submitted to District within 60 days of audits. [District Rule 1080] Federally Enforceable Through Title V Permit

26. All notification, recordkeeping, performance tests, reporting requirements, and compliance testing requirements of Rule 4001 NSPS shall be satisfied. [District Rule 4001] Federally Enforceable Through Title V Permit

27. Operational records including fuel type, fuel characteristics, and consumption shall be maintained and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

28. Accurate records of NOx (as NO2) and CO flue gas concentration corrected to 15% O2 and fuel gas sulfur content shall be maintained and shall be reported as described in Rule 1080 upon request. [District Rule 1080] Federally Enforceable Through Title V Permit

29. Emission rates shall not exceed the following: PM10: 0.010 lb/MMBtu, SOx (as SO2): 0.001 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu, VOC: 0.009 lb/MMBtu, CO: 0.057 lb/MMBtu, and ammonia - 10 ppmvd @ 15%O2. [District Rules 2201, 4201; and Kern County Rule 404] Federally Enforceable Through Title V Permit

30. Permittee shall comply with the following emission limit at all times except during periods of start-up, shutdown, or reduced load: NOx (as NO2): 5.0 ppmv, and CO: 25 ppmv, dry @ 15% O2 corrected to ISO conditions. [40 CFR 60.332(a)(1) & 60.332(a)(2) and District Rule 4703] Federally Enforceable Through Title V Permit

31. Gas turbine engine start-up is that period of time not exceeding two hours in duration during which the unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

32. Gas turbine engine shutdown it that period of time not exceeding two hours in duration during which the unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

33. Gas turbine reduced load period is that period not exceeding one hour in duration during which the unit is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

34. Compliance with NOx and CO emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory within 60 days of initial start-up and on an annual basis thereafter. Compliance with NOx, CO and ammonia emissions limits shall demonstrated by District-witnessed sample collection by independent testing laboratory within 60 days of any use of the SCR system, unless compliance with emissions limitations has been demonstrated with the SCR system in operation within the preceding 12 month period. [District Rule 4703 and 1081] Federally Enforceable Through Title V Permit

35. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

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36. The following test methods shall be used PM10: EPA method 5 (front half and back half), NOx: EPA Method 7E or 20, CO: EPA method 10 (or 10B) or CARB Method 100, O2: EPA Method 3, 3A, or 20, VOC: EPA method 18 or 25, ammonia: BAAQMD ST-1B, and fuel gas sulfur content: ASTM D3246. Alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rule 1081, 40 CFR 60.335 (b), and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

37. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O2 = ((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 exhaust gas flow rate (lb/hr)/(29(lb/lb. mol), c = change in measured NOx concentration ppmv at 15% O2 across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102] Federally Enforceable Through Title V Permit

38. Official test results and field data shall be submitted within 60 days after collection. [District Rule 4703 and District Rule 1081] Federally Enforceable Through Title V Permit

39. Combined annual emissions from units S-1135-115, S-1135-119, S-1135-122, S1135-123, S-1135-224, S-1135-225, S-1135-226 shall not exceed any of the following: PM10 - 262,360 lb/yr, SOx (as SO2) - 24,200 lb/yr, NOx (as NO2) - 464,170 lb/yr, VOC - 236,520 lb/yr, or CO - 1,443,101 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. For units equipped with continuous emissions monitors (CEMs), CEM data may be used in place of calculated emissions. If CEM shows a violation, CEM data shall be used. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

41. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District Rule 2201] Federally Enforceable Through Title V Permit

42. When three gas turbine engines S-1135-224, '-225, and '-226 are operating, four steam generators S-1135-115, '-119, '-122, and '-123 shall be shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

43. When up to two gas turbine engines S-1135-224, '-225, or '-226 are operating, four steam generators S-1135-115, '-119, '-122, and '-123 may be operated. [District Rule 2201] Federally Enforceable Through Title V Permit

44. The permittee shall maintain records of operational status of units S-1135-115, S-1135-119, S-1135-122, S1135-123, S-1135-224, S-1135-225, and S-1135-226 on a daily basis. [District Rule 2201] Federally Enforceable Through Title V Permit

45. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4703] Federally Enforceable Through Title V Permit

46. CEC emission rates, except during periods of startup, shutdown, or reduced load shall not exceed PM10: 9.98 lb/hr, SOx (as SO2): 0.92 lb/hr, NOx (as NO2): 17.66 lb/hr, VOC: 9.00 lb/hr, and CO: 54.91 lb/hr. [District Rules 2080 and 4703, and 40 CFR 60] Federally Enforceable Through Title V Permit

47. For CEC purposes, emissions during periods of startup and shutdown shall not exceed the following values average over 2 hours: NOx: 140 lb/hr, and CO: 94 lb/hr. [District Rule 2080] Federally Enforceable Through Title V Permit

48. The CEC shall be notified of any changes to the combined annual emission limits for steam generators S-1135-115, -119, -122, and -123, and cogeneration units S-1135-224, -225, and -226, only to the extent to be informed of their impact on the Midway-Sunset Cogeneration Facility. [District Rule 2080] Federally Enforceable Through Title V Permit

49. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [Kern County Rule 108 and District Rule 1080] Federally Enforceable Through Title V Permit

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50. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [Kern County Rule 108; District Rules 1080 and 4703; 40 CFR 60.7 (b)] Federally Enforceable Through Title V Permit

51. The permittee shall maintain hourly average records of NOx and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by the CO CEM data and the VOC/CO relationship determined by annual CO and VOC source tests of NOx, CO, and ammonia emission concentrations (ppmv @ 15% O2), and hourly, daily, and twelve month rolling. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

52. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [Kern County Rule 108 and District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

53. Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [Kern County Rule 108 and District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

54. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 1081] Federally Enforceable Through Title V Permit

55. Unit shall be fired on a natural gas which has a sulfur content of less than or equal to 0.017% by weight. [40 CFR 60.333 (a) & (b); 40 CFR 60.334 (c)(2); Kern County Rule 407; and District Rule 4801] Federally Enforceable Through Title V Permit

56. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

57. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using method(s) specified on this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

58. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246, or double GC for H2S and mercaptans. [40 CFR 60.335 (d)] Federally Enforceable Through Title V Permit

59. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334 (b)(2)] Federally Enforceable Through Title V Permit

60. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(a)(2)] Federally Enforceable Through Title V Permit

61. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [40 CFR 60.332 (a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

62. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332 (a),(b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

63. Results of continuous emission monitoring must be averaged in accordance with the requirements of 40 CFR 60.13. [40 CFR 60.334 (a),(b),(c) and District Rule 4703, 5.0] Federally Enforceable Through Title V Permit

64. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332 (a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

65. This unit is a simple combustion turbine as defined in 40 CFR 72.6 (b)(1) and shall not be subject to the requirements of 40 CFR Part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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66. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rules 404, 108, and 108.1. A permit shield is granted from these requirements. [SJVUAPCD Rule 2520, 13.2] Federally Enforceable Through Title V Permit

67. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: Kern County Rule 407; District Rules 4801, 4201, 1081, and 1080, Sections 6.5, 7.2, 8.0, 9.0, and 10.0; 40 CFR 60.332 (c) and (d); 60.334 (b), (c)(2); 60.335(d). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

68. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: District Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, and 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

69. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: District Rules 1080, 7.3 and 4703, 6.2.2; 40 CFR 60.332(a), (b); 60.333(a) and (b), 60.334(a), (b), and (c)(1); 60.335(a), (b) and (c)(2). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

70. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

71. The Permittee (MSCC) must notify EPA by telephone, facsimile, or electronic mail transmission within two (2) working days following the discovery of any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in any conditions where PSD is cited as the basis of the condition. In addition, the Permittee (MSCC) must notify EPA in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in any conditions where PSD is cited as the basis of the condition, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or of any law or regulation that such malfunction may cause, except as provided for in the conditions where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

72. A malfunction means a sudden and unavoidable breakdown of equipment or of a process beyond the reasonable control of the source. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

73. Emissions in excess of the limits specified in any conditions where PSD is cited as the basis of the condition shall constitute a violation of this permit and may be the subject of enforcement proceedings. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

74. Affirmative defense: In the context of an enforcement proceeding, emissions which are below the limits set forth in any condition where PSD is cited as the basis of the condition shall not be subject to penalty if the Permittee (MSCC) retains properly signed, contemporaneous operating logs or other relevant evidence and can demonstrate all of the following: i.) A malfunction caused the emissions in excess of the limits in any condition where PSD is cited as the basis of the condition; ii.) The permitted facility, including the air pollution control equipment and process equipment, was being properly operated at the time of the malfunction; iii.) Preventative maintenance was regularly performed in a manner consistent with good practice for minimizing emissions; iv.) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; v.) During the period of the malfunction, the permittee (MSCC) took all reasonable steps to minimize the amount and duration of emissions (including any bypass) that exceeded the emission limits provided in any condition where PSD is cited as the basis of the condition. Reasonable steps to minimize emissions could include, but are not limited to, reducing production to the lowest level practicable, reducing the material feed that results in the increased emissions, and switching to alternative, less polluting fuels. Where repairs were required, repairs were made in an expeditious fashion when the operator knew or should have known that applicable emission limitations were being exceeded. Off-shift labor and overtime must have been utilized, to the extent practicable, to ensure that such repairs were made as expeditiously as possible; and vi.) The permittee (MSCC) complied with the malfunction reporting requirements as specified in the condition where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

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75. All emissions, including those associated with a malfunction which may be eligible for an affirmative defense, must be included in all emissions calculations and demonstrations of compliance with mass emission limits (e.g., daily, monthly, and annual emission limits) specified in this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

76. This provision is in addition to any emergency or malfunction provision contained in any applicable requirement or elsewhere in this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

77. The EPA Regional Administrator, and/or their authorized representative, upon the presentation of credential, must be permitted: (1) to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of the PSD permit SJ-87-01; and (2) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of PSD permit SJ 87-01; and (3) to inspect any equipment, operation, or method required in the PSD permit SJ-87-01; and (4) to sample emissions from source(s). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

78. In the event of any changes in control or ownership of facilities to be constructed or modified, this permit shall be binding on all subsequent owners and operators. The Permittee (MSCC) shall notify the succeeding owner and operator of the existence of the PSD permit SJ-87-01 and its conditions by letter, a copy of which shall be forwarded to the EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

79. The provisions of the PSD permit SJ-87-01 are severable, and , if any provisions of the permit is held invalid, the remainder of the permit must not be affected thereby. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

80. The permittee (MSCC) must construct and operate the proposed power plant in compliance with all other applicable provisions of 40 CFR Parts 52, 60, 62, and 63 and all other applicable Federal, State, and local air quality regulations. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

81. On or before the date of startup (as defined in 40 C.F.R. 60.2) of the Western Midway Sunset Cogeneration Project (WMSCP; PSD Permit No. SJ-00-01) and thereafter the Permittee (MSCC) must install, continuously operate, and maintain the Dry Low NOx (DLN) combustion systems to reduce NOx emissions from each of its three turbines. The Permittee (MSCC) shall also use proper combustion techniques for the control of CO emissions from the equipment at MSCP. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

82. Within 60 days after achieving the base load, but no later than 180 days after initial startup of all three modified turbines (as defined in 40 C.F.R. 60.2), and annually thereafter (at about the anniversary of the initial performance test), the Permittee (MSCC) must conduct performance tests (as described in 40 C.F.R. 60.8) for NOx, and CO on the exhaust stack gases. The Permittee (MSCC) must furnish the District, the California Air Resources Board (CARB), and the EPA a written report of the results of such tests. Upon written request from the Permittee (MSCC), and adequate justification, EPA may waive a specific annual test and/or allow for testing to be done at less than maximum operating capacity. [PSD SJ 87-01] Federally Enforceable Through Title V Permit

83. Performance tests for the emissions of NOx, and CO must be conducted and the results reported in accordance with the test methods set forth in 40 C.F.R. 60.8 and 40 C.F.R. 60, Appendix A. The following test methods must be used: a.) Performance tests for the emissions of NOx must be conducted using EPA Method 1-4 and 7E. b.) Performance tests for the emissions of CO must be conducted using the EPA Methods 1-4 and 10. In lieu of the above-mentioned test methods, equivalent methods may be used with prior written approval from EPA. The Permittee (MSCC) must notify EPA in writing at least 30 days prior to such tests to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. [PSD SJ 87-01] Federally Enforceable Through Title V Permit

84. For performance test purposes, sampling ports, platforms, and access must be provided by the Permittee on the emission unit exhaust system in accordance with 40 C.F.R. 60.8(e). [PSD SJ 87-01] Federally Enforceable Through Title V Permit

85. On and after the date of startup of the WMSCP (PSD Permit No. SJ-00-01), the Permittee (MSCC) must not discharge or cause the discharge of CO into the atmosphere in excess of the following emission limits per turbine: The more stringent of 25 ppmvd @ 15% O2 or 55 pounds per hour, based on 3-hour rolling average. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

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86. This condition applies prior to the startup of the WMSCP: On and after the date of start up any of the three turbines at MSCP must not discharge (per turbine, and based on 3-hour rolling average) into the atmosphere CO in excess of the following of any of: 1.) The more stringent of 52.0 ppmvd @ 15% O2 or 94 pounds for loads greater than or equal to 75%. 2.) The more stringent of 62.0 ppmvd @ 15% O2 or 94 pounds for loads greater than or equal to 35% but less than 75%. 3.) 94 pounds per hour for loads less than 35%. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

87. On and after the date of startup of the WMSCP (PSD Permit No. SJ-00-01), the Permittee (MSCC) must not discharge or cause the discharge of NOx into the atmosphere in excess of the following emission limits per turbine: The more stringent of 10 ppmvd @ 15% O2 or 36.1 pounds per hour, based on 3-hour rolling average. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

88. This condition applies prior to the startup of the WMSCP: On and after the date of start-up of any of the three turbines, MSCC must not discharge (per turbine, based on 3-hour rolling average) into the atmosphere NOx (as NO2) in excess of the following: 1.) The more stringent of 25.0 ppmvd @ 15% O2 or 85.0 pounds per hour for loads greater than or equal to 75%; 2.) The more stringent of 42.0 ppmvd @ 15% O2 or 85 pounds per hour for loads greater than or equal to 35% but less than 75%; 3.) 85 pounds per hour for loads less than 35%. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

89. The hourly (3-hour averaging) emissions must not exceed: 1.) 94 pounds of CO and 85 pounds of NOx; 2.) All CEMs must be operating during startups and shut downs; 3.) The time, date and duration of each startup and shutdown event must be recorded. The records must include the lbs/hour calculations based on the CEM data. These records must be kept for five years following the date of such events. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

90. Prior to the date of startup and thereafter, the Permittee (MSCC) must install, maintain and operate the following continuous monitoring systems (CEMs) in the exhaust stacks: a.) Continuous monitoring systems to measure stack gas NOx , CO and O2 concentrations. The systems must meet EPA monitoring performance specification (40 C.F.R. 60.13 and 40 C.F.R. 60, Appendix B, Performance Specifications 2, 3 and 4); b.) A continuous monitoring system to measure stack gas and natural gas volumetric flow rates. The stack gas flow measurement system must meet EPA Performance Specifications for (40 C.F.R. Part 52, Appendix E). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

91. The Permittee (MSCC) must maintain a file of all measurements, including continuous monitoring systems evaluations; all continuous monitoring systems or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; performance and all other information required by 40 C.F.R. 60 Appendices A-B recorded in a permanent form suitable for inspection. The file must be retained for five years following the date of such measurements, maintenance, reports and records. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

92. The Permittee (MSCC) must notify EPA of the date on which demonstration for the continuous monitoring system performance commences (40 C.F.R. 60.13). This date must be no later than 60 days after full load operation but not later than 180 days after startup. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

93. The Permittee (MSCC) must submit a written report of all excess emissions to EPA for every calendar quarter. The quarterly report must include the following: a.) The magnitude of the excess emissions computed in accordance with 40 C.F.R. 60.13(h), any conversion factors used, and the date and time of commencement and compilation of each time period of excess emissions; b.) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of any equipment. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted must also be reported; c.) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks, and the nature of the system repairs or adjustments; d.) When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information must be stated in the report; and e.) Excess emissions must be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM exceeds the maximum emission limits set forth in the condition with a CO emission limit, where PSD is cited as the basis of the condition or any 3-hour period during which the average emissions of NOx exceed the maximum emission limits set forth in the condition with a NOx emission limit, where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

94. Excess emissions indicated by the CEM system must be considered violations of the applicable emission limit for the purpose of this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

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95. The quality assurance project plan used by the Permittee (MSCC) for the certification and operation of the continuous emissions monitors, which meets the requirements of 40 C.F.R. Part 60, Appendix F, must be available upon request to EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

96. The Permittee (MSCC) must keep a monthly record of all fuel uses. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

97. The proposed power plant is subject to the federal regulations entitled Standards of Performance for New Stationary Sources (40 C.F.R. 60). The owner or operator must meet all applicable requirements of 40 C.F.R. 60 Subparts A and GG of this regulation. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

98. All three turbines will fire natural gas only. The Permittee (MSCC) must only combust pipeline quality natural gas with sulfur content (as S) below 0.75 grains per 100 dry standard cubic feet (dscf). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

99. MSCC shall have legal and operational responsibility and control of all air pollutant emitting activities of the MSCP. This responsibility shall include, but shall not be limited to the following: 1.) Operating and maintaining the project to comply with all federal, state, and local air pollution laws, regulations, orders, and other requirements; 2.) Ensuring the emissions offsets, tradeoffs, or other emission reductions required for this project under permits issued by the U.S. EPA, the District, and/or the California Energy Commission are obtained as required; or 3.) Any violations of any air pollution requirements are the legal responsibility of MSCC, in addition to any other legal responsible entity. Any proposed change to this condition shall require prior written concurrence of the US EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

100. In accordance with the emissions offset plan proposed by the applicant for the District (dated November 12, 1987) and the emissions offset plan for the U.S. EPA (dated July 21, 1987), Aera Energy LLC must not operate the following four steam generators (listed by District permit numbers S-1135-119, S-1135-122, S-1135-123, and S-1135-115) simultaneously with the firing of the MSCP turbines unless one or more of the MSCP turbines is shutdown: Andersen-Goodwin Lease: S-1135-119, S-1135-122, S-1135-123 and Neely Lease: S-1135-115 [PSD SJ-87-01] Federally Enforceable Through Title V Permit

101. MSCC shall maintain a record of the date(s), time(s), and duration(s) of the shutdown of any of the above mentioned steam generators. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

102. Aera Energy LLC shall not lease or modify the permit conditions for any of the above generators for use in the Midway Sunset Oil field, unless creditable emissions reductions (as defined in 40 C.F.R. 52.21), at a ratio of at least 1:1, are provided for emissions from those generators. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

103. Aera Energy LLC shall not modify any of the District Permit to Operate numbers. If any of the above steam generators are issued new Permit to Operate numbers by the District, Aera Energy LLC shall notify the U.S. EPA in writing of this action and shall make such notification upon issuance of a new Permit to Operate number. This letter shall include the original District Permit to Operate number(s) of the subject generator(s) and a copy of the new Permit to Operate issued by the District. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

104. Aera Energy LLC shall notify the U.S. EPA in writing of the intention to sell, or potential sale, of any of the above generators and shall make such notification prior to the District's final action of the re-permitting process associated with the sale of a generators. This letter shall include the following: a.) The subject steam generator as identified by its District Permit to Operate number; b.) The name of the buyer (as identified by the company name) of the steam generator; and c.) An estimated date of the final action of the re-permitting process by the District. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

105. The allowable incidental taking (killing, harming, or harassment) of San Joaquin kit foxes, blunt-nosed leopard lizards, and giant kangaroo rats is confined to the proposed cogeneration plant site one half mile radius around this site (on lands owned or leased by Aera Energy LLC), and associated subject cogeneration plant facilities (including pipelines, transmission lines, temporary equipment stockpiling areas, and access roads) as discussed in the project Application for Certification report (Sun Cogeneration Company and Southern Sierra Energy Company 1985). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

106. MSCC is required to implement the "Agreement on Conditions for Mitigation of the Biological Impacts of the Midway-Sunset Project" as required by the U.S. Fish and Wildlife Service (USFWS) (Memorandum dated March 16, 1987 from the USFWS to the US EPA). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

107. Any endangered species found dead should be turned in to the California Department of Fish and Game for Analysis. MSCC must also report this event to the USFWS. The USFWS may recommend amendment to the existing project actions pending results of the analysis. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

108. All correspondence as required by this permit shall be forwarded to: 1.) Director, Air Division (Attn: Air-3) EPA Region IX 75 Hawthorne Street San Francisco, CA 94105-3901 Tel: (415) 744-1291 Fax: (415) 744-1076; 2.) Chief, Stationary Source Division, California Air Resource Board P.O. Box 2815 Sacramento, CA 95812; and 3.) Air Pollution Control Officer, San Joaquin Valley Unified APCD 2700 M Street, Suite 275 Bakersfield, CA 93301-2370. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

109. Aera Energy LLC is the legal owner of the subject steam generators and of the leases on which the steam generators are located. MSCC is the legal owner of the gas turbine cogeneration facility. MSCC is jointly owned by Sun Cogeneration Limited Partnership (Sun Cogen LP) and San Joaquin Energy Company. Sun Cogen LP is managed and controlled by a wholly owned subsidiary of Aera Energy LLC. (See Condition 104) [PSD SJ-87-01] Federally Enforceable Through Title V Permit

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APPENDIX B

Current PTOs

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1135-224-26 **EXPIRATION DATE:** 05/31/2016

SECTION: 17 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
NOMINALLY RATED 78.2 MW COGENERATION UNIT A WITH GE MODEL G7111E FRAME 7E GAS TURBINE ENGINE WITH DRY LOW NOX COMBUSTORS AND SELECTIVE CATALYTIC REDUCTION (SCR) AND UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG)

PERMIT UNIT REQUIREMENTS

1. CTG exhaust after the SCR unit shall be equipped with continuously recording emissions monitors dedicated to this unit for NOx, CO, and O2. Continuous emissions monitors shall meet the requirements of 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. If relative accuracy of CEM(s) cannot be demonstrated during startup conditions, CEM results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
2. CTG shall be equipped with a continuously recording emission monitor preceding the SCR module measuring NOx concentration for the purposes of calculating ammonia slip. Permittee shall check, record, and quantify the calibration drift (CD) at two concentration values at least once daily (approximately 24 hours). The calibration shall be adjusted whenever the daily zero or high-level CD exceeds 5%. If either the zero or high-level CD exceeds 5% for five consecutive daily periods, the analyzer shall be deemed out-of-control. If either the zero or high-level CD exceeds 10% during any CD check, analyzer shall be deemed out-of-control. If the analyzer is out-of-control, the permittee shall take appropriate corrective action and then repeat the CD check. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
3. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NOx and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Ammonia shall be injected whenever the selective catalytic reduction system catalyst temperature exceeds the minimum ammonia injection temperature recommended by the manufacturer. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Gas turbine engine shall be equipped with fuel consumption monitor recorder accurate to +/- 3%. [District Rule 2201] Federally Enforceable Through Title V Permit
8. CEM for NOx (as NO2) and CO shall conform to Rule 1080 specifications. [District Rules 1080 and 4703] Federally Enforceable Through Title V Permit
9. HRSG exhaust stack shall be equipped with permanent stack sampling provisions adequate to facilitate testing consistent with EPA test methods. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Flue gas ducting from engine to HRSG shall have no provisions for introduction of dilution air. [District Rule 1110] Federally Enforceable Through Title V Permit

11. Lube oil cooler/accumulation vent shall be equipped with control device(s) approved by the APCO sufficient to prevent emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Lube oil cooler/accumulator vent(s) shall not have detectable emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Natural gas sulfur content shall not exceed 0.31 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Facility shall operate as a cogeneration facility pursuant to Public Resources Code section 25134 for TEOR operations unless prior District and CEC approval is granted to operate otherwise. [District Rule 2080] Federally Enforceable Through Title V Permit

15. All CEM's shall be calibrated and operated according to EPA guidelines as specified in 40 CFR 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit

16. Quarterly CEM reports shall be submitted to the APCO according to EPA regulations as specified in 40 CFR 60 Appendix B. [District Rule 4001 and District rule 1080, 8.0] Federally Enforceable Through Title V Permit

17. Audits of all monitors shall be conducted by independent laboratory in accordance with EPA guidelines and witnessed by District. Reports shall be submitted to District within 60 days of audits. [District Rule 1080] Federally Enforceable Through Title V Permit

18. All notification, recordkeeping, performance tests, reporting requirements, and compliance testing requirements of Rule 4001 NSPS shall be satisfied. [District Rule 4001] Federally Enforceable Through Title V Permit

19. Operational records including fuel type, fuel characteristics, and consumption shall be maintained and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Accurate records of NOx (as NO2) and CO flue gas concentration corrected to 15% O2 and fuel gas sulfur content shall be maintained and shall be reported as described in Rule 1080 upon request. [District Rule 1080] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed the following: PM10: 0.010 lb/MMBtu, SOx (as SO2): 0.001 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu, VOC: 0.009 lb/MMBtu, CO: 0.057 lb/MMBtu, and ammonia - 10 ppmvd @ 15%O2. [District NSR Rule; District Rule 4201; and Kern County Rule 404] Federally Enforceable Through Title V Permit

22. Permittee shall comply with the following emission limit at all times except during periods of start-up, shutdown, or reduced load as defined in Rule 4703: NOx (as NO2): 5.0 ppmv, and CO: 25 ppmv, dry @ 15% O2 corrected to ISO conditions. [40 CFR 60.332(a)(1) & 60.332(a)(2) and District Rule 4703] Federally Enforceable Through Title V Permit

23. Gas turbine engine start-up is that period of time not exceeding two hours in duration during which the unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

24. Gas turbine engine shutdown it that period of time not exceeding two hours in duration during which the unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

25. Gas turbine reduced load period is that period not exceeding one hour in duration during which the unit is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

26. Compliance with NOx, CO and ammonia emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory annually. [District Rules 4703 and 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used PM10: EPA method 5 (front half and back half), NOx: EPA Method 7E or 20, CO: EPA method 10 (or 10B) or CARB Method 100, O2: EPA Method 3, 3A, or 20, VOC: EPA method 18 or 25, ammonia: BAAQMD ST-1B, and fuel gas sulfur content: ASTM D3246. Alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rule 1081, 40 CFR 60.335 (b), and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

29. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O2 = ((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 exhaust gas flow rate (lb/hr)/(29(lb/lb. mol), c = change in measured NOx concentration ppmv at 15% O2 across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102] Federally Enforceable Through Title V Permit

30. Official test results and field data shall be submitted within 60 days after collection. [District Rule 4703 and District Rule 1081] Federally Enforceable Through Title V Permit

31. Combined annual emissions from units S-1135-115, S-1135-119, S-1135-122, S1135-123, S-1135-224, S-1135-225, S-1135-226 shall not exceed any of the following: PM10 - 262,360 lb/yr, SOx (as SO2) - 24,200 lb/yr, NOx (as NO2) - 464,170 lb/yr, VOC - 236,520 lb/yr, or CO - 1,443,101 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

32. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. For units equipped with continuous emissions monitors (CEMs), CEM data may be used in place of calculated emissions. If CEM shows a violation, CEM data shall be used. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

33. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District NSR Rule] Federally Enforceable Through Title V Permit

34. When three gas turbine engines S-1135-224, '-225, and '-226 are operating, four steam generators S-1135-115, '-119, '-122, and '-123 shall be shut down. [District NSR Rule] Federally Enforceable Through Title V Permit

35. When up to two gas turbine engines S-1135-224, '-225, or '-226 are operating, four steam generators S-1135-115, '-119, '-122, and '-123 may be operated. [District NSR Rule] Federally Enforceable Through Title V Permit

36. The permittee shall maintain records of operational status of units S-1135-115, S-1135-119, S-1135-122, S1135-123, S-1135-224, S-1135-225, and S-1135-226 on a daily basis. [District Rule 2201] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4703] Federally Enforceable Through Title V Permit

38. CEC emission rates, except during periods of startup, shutdown, or reduced load shall not exceed PM10: 9.98 lb/hr, SOx (as SO2): 0.92 lb/hr, NOx (as NO2): 17.66 lb/hr, VOC: 9.00 lb/hr, and CO: 54.91 lb/hr. [District Rules 2080 and 4703, and 40 CFR 60] Federally Enforceable Through Title V Permit

39. For CEC purposes, emissions during periods of startup and shutdown shall not exceed the following values average over 2 hours: NOx: 140 lb/hr, and CO: 94 lb/hr. [District Rule 2080] Federally Enforceable Through Title V Permit

40. The CEC shall be notified of any changes to the combined annual emission limits for steam generators S-1135-115, -119, -122, and -123, and cogeneration units S-1135-224, -225, and -226, only to the extent to be informed of their impact on the Midway-Sunset Cogeneration Facility. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [Kern County Rule 108 and District Rule 1080] Federally Enforceable Through Title V Permit

42. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [Kern County Rule 108; District Rules 1080 and 4703; 40 CFR 60.7 (b)] Federally Enforceable Through Title V Permit

43. The permittee shall maintain hourly average records of NOx and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by the CO CEM data and the VOC/CO relationship determined by annual CO and VOC source tests of NOx, CO, and ammonia emission concentrations (ppmv @ 15% O2), and hourly, daily, and twelve month rolling. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

44. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [Kern County Rule 108 and District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

45. Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [Kern County Rule 108 and District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

46. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 1081] Federally Enforceable Through Title V Permit

47. Unit shall be fired on a natural gas which has a sulfur content of less than or equal to 0.017% by weight. [40 CFR 60.333 (a) & (b); 40 CFR 60.334 (c)(2); Kern County Rule 407; and District Rule 4801] Federally Enforceable Through Title V Permit

48. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

49. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using method(s) specified on this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

50. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246, or double GC for H2S and mercaptans. [40 CFR 60.335 (d)] Federally Enforceable Through Title V Permit

51. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334 (b)(2)] Federally Enforceable Through Title V Permit

52. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(a)(2)] Federally Enforceable Through Title V Permit

53. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [40 CFR 60.332 (a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

54. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332 (a),(b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

55. Results of continuous emission monitoring must be averaged in accordance with the requirements of 40 CFR 60.13. [40 CFR 60.334 (a),(b),(c) and District Rule 4703, 5.0] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

56. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332 (a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

57. This unit is a simple combustion turbine as defined in 40 CFR 72.6 (b)(1) and shall not be subject to the requirements of 40 CFR Part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

58. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rules 404, 108, and 108.1. A permit shield is granted from these requirements. [SJVUAPCD Rule 2520, 13.2] Federally Enforceable Through Title V Permit

59. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: Kern County Rule 407; District Rules 4801, 4201, 1081, and 1080, Sections 6.5, 7.2, 8.0, 9.0, and 10.0; 40 CFR 60.332 (c) and (d); 60.334 (b), (c)(2); 60.335(d). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

60. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: District Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, and 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

61. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: District Rules 1080, 7.3 and 4703, 6.2.2; 40 CFR 60.332(a), (b); 60.333(a) and (b), 60.334(a), (b), and (c)(1); 60.335(a), (b) and (c)(2). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

62. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

63. The Permittee (MSCC) must notify EPA by telephone, facsimile, or electronic mail transmission within two (2) working days following the discovery of any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in any conditions where PSD is cited as the basis of the condition. In addition, the Permittee (MSCC) must notify EPA in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in any conditions where PSD is cited as the basis of the condition, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or of any law or regulation that such malfunction may cause, except as provided for in the conditions where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

64. A malfunction means a sudden and unavoidable breakdown of equipment or of a process beyond the reasonable control of the source. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

65. Emissions in excess of the limits specified in any conditions where PSD is cited as the basis of the condition shall constitute a violation of this permit and may be the subject of enforcement proceedings. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

66. Affirmative defense: In the context of an enforcement proceeding, emissions which are below the limits set forth in any condition where PSD is cited as the basis of the condition shall not be subject to penalty if the Permittee (MSCC) retains properly signed, contemporaneous operating logs or other relevant evidence and can demonstrate all of the following: i.) A malfunction caused the emissions in excess of the limits in any condition where PSD is cited as the basis of the condition; ii.) The permitted facility, including the air pollution control equipment and process equipment, was being properly operated at the time of the malfunction; iii.) Preventative maintenance was regularly performed in a manner consistent with good practice for minimizing emissions; iv.) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; v.) During the period of the malfunction, the permittee (MSCC) took all reasonable steps to minimize the amount and duration of emissions (including any bypass) that exceeded the emission limits provided in any condition where PSD is cited as the basis of the condition. Reasonable steps to minimize emissions could include, but are not limited to, reducing production to the lowest level practicable, reducing the material feed that results in the increased emissions, and switching to alternative, less polluting fuels. Where repairs were required, repairs were made in an expeditious fashion when the operator knew or should have known that applicable emission limitations were being exceeded. Off-shift labor and overtime must have been utilized, to the extent practicable, to ensure that such repairs were made as expeditiously as possible; and vi.) The permittee (MSCC) complied with the malfunction reporting requirements as specified in the condition where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

67. All emissions, including those associated with a malfunction which may be eligible for an affirmative defense, must be included in all emissions calculations and demonstrations of compliance with mass emission limits (e.g., daily, monthly, and annual emission limits) specified in this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

68. This provision is in addition to any emergency or malfunction provision contained in any applicable requirement or elsewhere in this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

69. The EPA Regional Administrator, and/or their authorized representative, upon the presentation of credential, must be permitted: (1) to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of the PSD permit SJ-87-01; and (2) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of PSD permit SJ 87-01; and (3) to inspect any equipment, operation, or method required in the PSD permit SJ-87-01; and (4) to sample emissions from source(s). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

70. In the event of any changes in control or ownership of facilities to be constructed or modified, this permit shall be binding on all subsequent owners and operators. The Permittee (MSCC) shall notify the succeeding owner and operator of the existence of the PSD permit SJ-87-01 and its conditions by letter, a copy of which shall be forwarded to the EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

71. The provisions of the PSD permit SJ-87-01 are severable, and , if any provisions of the permit is held invalid, the remainder of the permit must not be affected thereby. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

72. The permittee (MSCC) must construct and operate the proposed power plant in compliance with all other applicable provisions of 40 CFR Parts 52, 60, 62, and 63 and all other applicable Federal, State, and local air quality regulations. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

73. On or before the date of startup (as defined in 40 C.F.R. 60.2) of the Western Midway Sunset Cogeneration Project (WMSCP; PSD Permit No. SJ-00-01) and thereafter the Permittee (MSCC) must install, continuously operate, and maintain the Dry Low NOx (DLN) combustion systems to reduce NOx emissions from each of its three turbines. The Permittee (MSCC) shall also use proper combustion techniques for the control of CO emissions from the equipment at MSCP. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

74. Within 60 days after achieving the base load, but no later than 180 days after initial startup of all three modified turbines (as defined in 40 C.F.R. 60.2), and annually thereafter (at about the anniversary of the initial performance test), the Permittee (MSCC) must conduct performance tests (as described in 40 C.F.R. 60.8) for NOx, and CO on the exhaust stack gases. The Permittee (MSCC) must furnish the District, the California Air Resources Board (CARB), and the EPA a written report of the results of such tests. Upon written request from the Permittee (MSCC), and adequate justification, EPA may waive a specific annual test and/or allow for testing to be done at less than maximum operating capacity. [PSD SJ 87-01] Federally Enforceable Through Title V Permit

75. Performance tests for the emissions of NOx, and CO must be conducted and the results reported in accordance with the test methods set forth in 40 C.F.R. 60.8 and 40 C.F.R. 60, Appendix A. The following test methods must be used: a.) Performance tests for the emissions of NOx must be conducted using EPA Method 1-4 and 7E. b.) Performance tests for the emissions of CO must be conducted using the EPA Methods 1-4 and 10. In lieu of the above-mentioned test methods, equivalent methods may be used with prior written approval from EPA. The Permittee (MSCC) must notify EPA in writing at least 30 days prior to such tests to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. [PSD SJ 87-01] Federally Enforceable Through Title V Permit

76. For performance test purposes, sampling ports, platforms, and access must be provided by the Permittee on the emission unit exhaust system in accordance with 40 C.F.R. 60.8(e). [PSD SJ 87-01] Federally Enforceable Through Title V Permit

77. On and after the date of startup of the WMSCP (PSD Permit No. SJ-00-01), the Permittee (MSCC) must not discharge or cause the discharge of CO into the atmosphere in excess of the following emission limits per turbine: The more stringent of 25 ppmvd @ 15% O2 or 55 pounds per hour, based on 3-hour rolling average. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

78. This condition applies prior to the startup of the WMSCP: On and after the date of start up any of the three turbines at MSCP must not discharge (per turbine, and based on 3-hour rolling average) into the atmosphere CO in excess of the following of any of: 1.) The more stringent of 52.0 ppmvd @ 15% O2 or 94 pounds for loads greater than or equal to 75%. 2.) The more stringent of 62.0 ppmvd @ 15% O2 or 94 pounds for loads greater than or equal to 35% but less than 75%. 3.) 94 pounds per hour for loads less than 35%. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

79. On and after the date of startup of the WMSCP (PSD Permit No. SJ-00-01), the Permittee (MSCC) must not discharge or cause the discharge of NOx into the atmosphere in excess of the following emission limits per turbine: The more stringent of 10 ppmvd @ 15% O2 or 36.1 pounds per hour, based on 3-hour rolling average. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

80. This condition applies prior to the startup of the WMSCP: On and after the date of start-up of any of the three turbines, MSCC must not discharge (per turbine, based on 3-hour rolling average) into the atmosphere NOx (as NO2) in excess of the following: 1.) The more stringent of 25.0 ppmvd @ 15% O2 or 85.0 pounds per hour for loads greater than or equal to 75%; 2.) The more stringent of 42.0 ppmvd @ 15% O2 or 85 pounds per hour for loads greater than or equal to 35% but less than 75%; 3.) 85 pounds per hour for loads less than 35%. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

81. The hourly (3-hour averaging) emissions must not exceed: 1.) 94 pounds of CO and 85 pounds of NOx; 2.) All CEMs must be operating during startups and shut downs; 3.) The time, date and duration of each startup and shutdown event must be recorded. The records must include the lbs/hour calculations based on the CEM data. These records must be kept for five years following the date of such events. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

82. Prior to the date of startup and thereafter, the Permittee (MSCC) must install, maintain and operate the following continuous monitoring systems (CEMs) in the exhaust stacks: a.) Continuous monitoring systems to measure stack gas NOx , CO and O2 concentrations. The systems must meet EPA monitoring performance specification (40 C.F.R. 60.13 and 40 C.F.R. 60, Appendix B, Performance Specifications 2, 3 and 4); b.) A continuous monitoring system to measure stack gas and natural gas volumetric flow rates. The stack gas flow measurement system must meet EPA Performance Specifications for (40 C.F.R. Part 52, Appendix E). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

83. The Permittee (MSCC) must maintain a file of all measurements, including continuous monitoring systems evaluations; all continuous monitoring systems or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; performance and all other information required by 40 C.F.R. 60 Appendices A-B recorded in a permanent form suitable for inspection. The file must be retained for five years following the date of such measurements, maintenance, reports and records. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

84. The Permittee (MSCC) must notify EPA of the date on which demonstration for the continuous monitoring system performance commences (40 C.F.R. 60.13). This date must be no later than 60 days after full load operation but not later than 180 days after startup. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

85. The Permittee (MSCC) must submit a written report of all excess emissions to EPA for every calendar quarter. The quarterly report must include the following: a.) The magnitude of the excess emissions computed in accordance with 40 C.F.R. 60.13(h), any conversion factors used, and the date and time of commencement and compilation of each time period of excess emissions; b.) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of any equipment. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted must also be reported; c.) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks, and the nature of the system repairs or adjustments; d.) When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information must be stated in the report; and e.) Excess emissions must be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM exceeds the maximum emission limits set forth in the condition with a CO emission limit, where PSD is cited as the basis of the condition or any 3-hour period during which the average emissions of NOx exceed the maximum emission limits set forth in the condition with a NOx emission limit, where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

86. Excess emissions indicated by the CEM system must be considered violations of the applicable emission limit for the purpose of this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

87. The quality assurance project plan used by the Permittee (MSCC) for the certification and operation of the continuous emissions monitors, which meets the requirements of 40 C.F.R. Part 60, Appendix F, must be available upon request to EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

88. The Permittee (MSCC) must keep a monthly record of all fuel uses. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

89. The proposed power plant is subject to the federal regulations entitled Standards of Performance for New Stationary Sources (40 C.F.R. 60). The owner or operator must meet all applicable requirements of 40 C.F.R. 60 Subparts A and GG of this regulation. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

90. All three turbines will fire natural gas only. The Permittee (MSCC) must only combust pipeline quality natural gas with sulfur content (as S) below 0.75 grains per 100 dry standard cubic feet (dscf). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

91. MSCC shall have legal and operational responsibility and control of all air pollutant emitting activities of the MSCP. This responsibility shall include, but shall not be limited to the following: 1.) Operating and maintaining the project to comply with all federal, state, and local air pollution laws, regulations, orders, and other requirements; 2.) Ensuring the emissions offsets, tradeoffs, or other emission reductions required for this project under permits issued by the U.S. EPA, the District, and/or the California Energy Commission are obtained as required; or 3.) Any violations of any air pollution requirements are the legal responsibility of MSCC, in addition to any other legal responsible entity. Any proposed change to this condition shall require prior written concurrence of the US EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

92. In accordance with the emissions offset plan proposed by the applicant for the District (dated November 12, 1987) and the emissions offset plan for the U.S. EPA (dated July 21, 1987), Aera Energy LLC must not operate the following four steam generators (listed by District permit numbers S-1135-119, S-1135-122, S-1135-123, and S-1135-115) simultaneously with the firing of the MSCP turbines unless one or more of the MSCP turbines is shutdown: Andersen-Goodwin Lease: S-1135-119, S-1135-122, S-1135-123 and Neely Lease: S-1135-115 [PSD SJ-87-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

93. MSCC shall maintain a record of the date(s), time(s), and duration(s) of the shutdown of any of the above mentioned steam generators. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

94. Aera Energy LLC shall not lease or modify the permit conditions for any of the above generators for use in the Midway Sunset Oil field, unless creditable emissions reductions (as defined in 40 C.F.R. 52.21), at a ratio of at least 1:1, are provided for emissions from those generators. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

95. Aera Energy LLC shall not modify any of the District Permit to Operate numbers. If any of the above steam generators are issued new Permit to Operate numbers by the District, Aera Energy LLC shall notify the U.S. EPA in writing of this action and shall make such notification upon issuance of a new Permit to Operate number. This letter shall include the original District Permit to Operate number(s) of the subject generator(s) and a copy of the new Permit to Operate issued by the District. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

96. Aera Energy LLC shall notify the U.S. EPA in writing of the intention to sell, or potential sale, of any of the above generators and shall make such notification prior to the District's final action of the re-permitting process associated with the sale of a generators. This letter shall include the following: a.) The subject steam generator as identified by its District Permit to Operate number; b.) The name of the buyer (as identified by the company name) of the steam generator; and c.) An estimated date of the final action of the re-permitting process by the District. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

97. The allowable incidental taking (killing, harming, or harassment) of San Joaquin kit foxes, blunt-nosed leopard lizards, and giant kangaroo rats is confined to the proposed cogeneration plant site one half mile radius around this site (on lands owned or leased by Aera Energy LLC), and associated subject cogeneration plant facilities (including pipelines, transmission lines, temporary equipment stockpiling areas, and access roads) as discussed in the project Application for Certification report (Sun Cogeneration Company and Southern Sierra Energy Company 1985). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

98. MSCC is required to implement the "Agreement on Conditions for Mitigation of the Biological Impacts of the Midway-Sunset Project" as required by the U.S. Fish and Wildlife Service (USFWS) (Memorandum dated March 16, 1987 from the USFWS to the US EPA). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

99. Any endangered species found dead should be turned in to the California Department of Fish and Game for Analysis. MSCC must also report this event to the USFWS. The USFWS may recommend amendment to the existing project actions pending results of the analysis. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

100. All correspondence as required by this permit shall be forwarded to: 1.) Director, Air Division (Attn: Air-3) EPA Region IX 75 Hawthorne Street San Francisco, CA 94105-3901 Tel: (415) 744-1291 Fax: (415) 744-1076; 2.) Chief, Stationary Source Division, California Air Resource Board P.O. Box 2815 Sacramento, CA 95812; and 3.) Air Pollution Control Officer, San Joaquin Valley Unified APCD 2700 M Street, Suite 275 Bakersfield, CA 93301-2370. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

101. Aera Energy LLC is the legal owner of the subject steam generators and of the leases on which the steam generators are located. MSCC is the legal owner of the gas turbine cogeneration facility. MSCC is jointly owned by Sun Cogeneration Limited Partnership (Sun Cogen LP) and San Joaquin Energy Company. Sun Cogen LP is managed and controlled by a wholly owned subsidiary of Aera Energy LLC. (See Condition 104) [PSD SJ-87-01] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1135-225-25 **EXPIRATION DATE:** 05/31/2016

SECTION: 17 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
NOMINALLY RATED 78.2 MW COGENERATION UNIT B WITH GE MODEL G7111E FRAME 7E GAS TURBINE ENGINE WITH DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR), AND UNFIRED HEAT RECOVERY STEAM GENERATOR (HRSG)

PERMIT UNIT REQUIREMENTS

1. CTG exhaust after the SCR unit shall be equipped with continuously recording emissions monitors dedicated to this unit for NOx, CO, and O2. Continuous emissions monitors shall meet the requirements of 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. If relative accuracy of CEM(s) cannot be demonstrated during startup conditions, CEM results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
2. CTG shall be equipped with a continuously recording emission monitor preceding the SCR module measuring NOx concentration for the purposes of calculating ammonia slip. Permittee shall check, record, and quantify the calibration drift (CD) at two concentration values at least once daily (approximately 24 hours). The calibration shall be adjusted whenever the daily zero or high-level CD exceeds 5%. If either the zero or high-level CD exceeds 5% for five consecutive daily periods, the analyzer shall be deemed out-of-control. If either the zero or high-level CD exceeds 10% during any CD check, analyzer shall be deemed out-of-control. If the analyzer is out-of-control, the permittee shall take appropriate corrective action and then repeat the CD check. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
3. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NOx and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Ammonia shall be injected whenever the selective catalytic reduction system catalyst temperature exceeds the minimum ammonia injection temperature recommended by the manufacturer. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Gas turbine engine shall be equipped with fuel consumption monitor recorder accurate to +/- 3%. [District Rule 2201] Federally Enforceable Through Title V Permit
8. CEM for NOx (as NO2) and CO shall conform to Rule 1080 specifications. [District Rules 1080 and 4703] Federally Enforceable Through Title V Permit
9. HRSG exhaust stack shall be equipped with permanent stack sampling provisions adequate to facilitate testing consistent with EPA test methods. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Flue gas ducting from engine to HRSG shall have no provisions for introduction of dilution air. [District Rule 1110] Federally Enforceable Through Title V Permit
11. Lube oil cooler/accumulation vent shall be equipped with control device(s) approved by the APCO sufficient to prevent emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Lube oil cooler/accumulator vent(s) shall not have detectable emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Natural gas sulfur content shall not exceed 0.31 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Facility shall operate as a cogeneration facility pursuant to Public Resources Code section 25134 for TEOR operations unless prior District and CEC approval is granted to operate otherwise. [District Rule 2080] Federally Enforceable Through Title V Permit
15. All CEM's shall be calibrated and operated according to EPA guidelines as specified in 40 CFR 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
16. Quarterly CEM reports shall be submitted to the APCO according to EPA regulations as specified in 40 CFR 60 Appendix B. [District Rule 4001 and District rule 1080, 8.0] Federally Enforceable Through Title V Permit
17. Audits of all monitors shall be conducted by independent laboratory in accordance with EPA guidelines and witnessed by District. Reports shall be submitted to District within 60 days of audits. [District Rule 1080] Federally Enforceable Through Title V Permit
18. All notification, recordkeeping, performance tests, reporting requirements, and compliance testing requirements of Rule 4001 NSPS shall be satisfied. [District Rule 4001] Federally Enforceable Through Title V Permit
19. Operational records including fuel type, fuel characteristics, and consumption shall be maintained and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
20. Accurate records of NOx (as NO2) and CO flue gas concentration corrected to 15% O2 and fuel gas sulfur content shall be maintained and shall be reported as described in Rule 1080 upon request. [District Rule 1080] Federally Enforceable Through Title V Permit
21. Emission rates shall not exceed the following: PM10: 0.010 lb/MMBtu, SOx (as SO2): 0.001 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu, VOC: 0.009 lb/MMBtu, CO: 0.057 lb/MMBtu, and ammonia - 10 ppmvd @ 15%O2. [District NSR Rule; District Rule 4201; and Kern County Rule 404] Federally Enforceable Through Title V Permit
22. Permittee shall comply with the following emission limit at all times except during periods of start-up, shutdown, or reduced load as defined in Rule 4703: NOx (as NO2): 5.0 ppmv, and CO: 25 ppmv, dry @ 15% O2 corrected to ISO conditions. [40 CFR 60.332(a)(1) & 60.332(a)(2) and District Rule 4703] Federally Enforceable Through Title V Permit
23. Gas turbine engine start-up is that period of time not exceeding two hours in duration during which the unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
24. Gas turbine engine shutdown it that period of time not exceeding two hours in duration during which the unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
25. Gas turbine reduced load period is that period not exceeding one hour in duration during which the unit is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
26. Compliance with NOx, CO and ammonia emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory annually. [District Rules 4703 and 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used PM10: EPA method 5 (front half and back half), NOx: EPA Method 7E or 20, CO: EPA method 10 (or 10B) or CARB Method 100, O2: EPA Method 3, 3A, or 20, VOC: EPA method 18 or 25, ammonia: BAAQMD ST-1B, and fuel gas sulfur content: ASTM D3246. Alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rule 1081, 40 CFR 60.335 (b), and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

29. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O2 = ((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 exhaust gas flow rate (lb/hr)/(29(lb/lb. mol), c = change in measured NOx concentration ppmv at 15% O2 across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102] Federally Enforceable Through Title V Permit

30. Official test results and field data shall be submitted within 60 days after collection. [District Rule 4703 and District Rule 1081] Federally Enforceable Through Title V Permit

31. Combined annual emissions from units S-1135-115, S-1135-119, S-1135-122, S1135-123, S-1135-224, S-1135-225, S-1135-226 shall not exceed any of the following: PM10 - 262,360 lb/yr, SOx (as SO2) - 24,200 lb/yr, NOx (as NO2) - 464,170 lb/yr, VOC - 236,520 lb/yr, or CO - 1,443,101 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

32. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. For units equipped with continuous emissions monitors (CEMs), CEM data may be used in place of calculated emissions. If CEM shows a violation, CEM data shall be used. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit

33. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District NSR Rule] Federally Enforceable Through Title V Permit

34. When three gas turbine engines S-1135-224, '-225, and '-226 are operating, four steam generators S-1135-115, '-119, '-122, and '-123 shall be shut down. [District NSR Rule] Federally Enforceable Through Title V Permit

35. When up to two gas turbine engines S-1135-224, '-225, or '-226 are operating, four steam generators S-1135-115, '-119, '-122, and '-123 may be operated. [District NSR Rule] Federally Enforceable Through Title V Permit

36. The permittee shall maintain records of operational status of units S-1135-115, S-1135-119, S-1135-122, S1135-123, S-1135-224, S-1135-225, and S-1135-226 on a daily basis. [District Rule 2201] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4703] Federally Enforceable Through Title V Permit

38. CEC emission rates, except during periods of startup, shutdown, or reduced load shall not exceed PM10: 9.98 lb/hr, SOx (as SO2): 0.92 lb/hr, NOx (as NO2): 17.66 lb/hr, VOC: 9.00 lb/hr, and CO: 54.91 lb/hr. [District Rules 2080 and 4703, and 40 CFR 60] Federally Enforceable Through Title V Permit

39. For CEC purposes, emissions during periods of startup and shutdown shall not exceed the following values average over 2 hours: NOx: 140 lb/hr, and CO: 94 lb/hr. [District Rule 2080] Federally Enforceable Through Title V Permit

40. The CEC shall be notified of any changes to the combined annual emission limits for steam generators S-1135-115, -119, -122, and -123, and cogeneration units S-1135-224, -225, and -226, only to the extent to be informed of their impact on the Midway-Sunset Cogeneration Facility. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [Kern County Rule 108 and District Rule 1080] Federally Enforceable Through Title V Permit

42. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [Kern County Rule 108; District Rules 1080 and 4703; 40 CFR 60.7 (b)] Federally Enforceable Through Title V Permit

43. The permittee shall maintain hourly average records of NOx and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by the CO CEM data and the VOC/CO relationship determined by annual CO and VOC source tests of NOx, CO, and ammonia emission concentrations (ppmv @ 15% O2), and hourly, daily, and twelve month rolling. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

44. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [Kern County Rule 108 and District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

45. Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [Kern County Rule 108 and District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

46. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rule 1081] Federally Enforceable Through Title V Permit

47. Unit shall be fired on a natural gas which has a sulfur content of less than or equal to 0.017% by weight. [40 CFR 60.333 (a) & (b); 40 CFR 60.334 (c)(2); Kern County Rule 407; and District Rule 4801] Federally Enforceable Through Title V Permit

48. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

49. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using method(s) specified on this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

50. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246, or double GC for H2S and mercaptans. [40 CFR 60.335 (d)] Federally Enforceable Through Title V Permit

51. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334 (b)(2)] Federally Enforceable Through Title V Permit

52. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(a)(2)] Federally Enforceable Through Title V Permit

53. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [40 CFR 60.332 (a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

54. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332 (a),(b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

55. Results of continuous emission monitoring must be averaged in accordance with the requirements of 40 CFR 60.13. [40 CFR 60.334 (a),(b),(c) and District Rule 4703, 5.0] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

56. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332 (a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

57. This unit is a simple combustion turbine as defined in 40 CFR 72.6 (b)(1) and shall not be subject to the requirements of 40 CFR Part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

58. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rules 404, 108, and 108.1. A permit shield is granted from these requirements. [SJVUAPCD Rule 2520, 13.2] Federally Enforceable Through Title V Permit

59. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: Kern County Rule 407; District Rules 4801, 4201, 1081, and 1080, Sections 6.5, 7.2, 8.0, 9.0, and 10.0; 40 CFR 60.332 (c) and (d); 60.334 (b), (c)(2); 60.335(d). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

60. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: District Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, and 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

61. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: District Rules 1080, 7.3 and 4703, 6.2.2; 40 CFR 60.332(a), (b); 60.333(a) and (b), 60.334(a), (b), and (c)(1); 60.335(a), (b) and (c)(2). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

62. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

63. The Permittee (MSCC) must notify EPA by telephone, facsimile, or electronic mail transmission within two (2) working days following the discovery of any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in any conditions where PSD is cited as the basis of the condition. In addition, the Permittee (MSCC) must notify EPA in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in any conditions where PSD is cited as the basis of the condition, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or of any law or regulation that such malfunction may cause, except as provided for in the conditions where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

64. A malfunction means a sudden and unavoidable breakdown of equipment or of a process beyond the reasonable control of the source. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

65. Emissions in excess of the limits specified in any conditions where PSD is cited as the basis of the condition shall constitute a violation of this permit and may be the subject of enforcement proceedings. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

66. Affirmative defense: In the context of an enforcement proceeding, emissions which are below the limits set forth in any condition where PSD is cited as the basis of the condition shall not be subject to penalty if the Permittee (MSCC) retains properly signed, contemporaneous operating logs or other relevant evidence and can demonstrate all of the following: i.) A malfunction caused the emissions in excess of the limits in any condition where PSD is cited as the basis of the condition; ii.) The permitted facility, including the air pollution control equipment and process equipment, was being properly operated at the time of the malfunction; iii.) Preventative maintenance was regularly performed in a manner consistent with good practice for minimizing emissions; iv.) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; v.) During the period of the malfunction, the permittee (MSCC) took all reasonable steps to minimize the amount and duration of emissions (including any bypass) that exceeded the emission limits provided in any condition where PSD is cited as the basis of the condition. Reasonable steps to minimize emissions could include, but are not limited to, reducing production to the lowest level practicable, reducing the material feed that results in the increased emissions, and switching to alternative, less polluting fuels. Where repairs were required, repairs were made in an expeditious fashion when the operator knew or should have known that applicable emission limitations were being exceeded. Off-shift labor and overtime must have been utilized, to the extent practicable, to ensure that such repairs were made as expeditiously as possible; and vi.) The permittee (MSCC) complied with the malfunction reporting requirements as specified in the condition where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

67. All emissions, including those associated with a malfunction which may be eligible for an affirmative defense, must be included in all emissions calculations and demonstrations of compliance with mass emission limits (e.g., daily, monthly, and annual emission limits) specified in this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

68. This provision is in addition to any emergency or malfunction provision contained in any applicable requirement or elsewhere in this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

69. The EPA Regional Administrator, and/or their authorized representative, upon the presentation of credential, must be permitted: (1) to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of the PSD permit SJ-87-01; and (2) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of PSD permit SJ 87-01; and (3) to inspect any equipment, operation, or method required in the PSD permit SJ-87-01; and (4) to sample emissions from source(s). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

70. In the event of any changes in control or ownership of facilities to be constructed or modified, this permit shall be binding on all subsequent owners and operators. The Permittee (MSCC) shall notify the succeeding owner and operator of the existence of the PSD permit SJ-87-01 and its conditions by letter, a copy of which shall be forwarded to the EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

71. The provisions of the PSD permit SJ-87-01 are severable, and , if any provisions of the permit is held invalid, the remainder of the permit must not be affected thereby. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

72. The permittee (MSCC) must construct and operate the proposed power plant in compliance with all other applicable provisions of 40 CFR Parts 52, 60, 62, and 63 and all other applicable Federal, State, and local air quality regulations. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

73. On or before the date of startup (as defined in 40 C.F.R. 60.2) of the Western Midway Sunset Cogeneration Project (WMSCP; PSD Permit No. SJ-00-01) and thereafter the Permittee (MSCC) must install, continuously operate, and maintain the Dry Low NOx (DLN) combustion systems to reduce NOx emissions from each of its three turbines. The Permittee (MSCC) shall also use proper combustion techniques for the control of CO emissions from the equipment at MSCP. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

74. Within 60 days after achieving the base load, but no later than 180 days after initial startup of all three modified turbines (as defined in 40 C.F.R. 60.2), and annually thereafter (at about the anniversary of the initial performance test), the Permittee (MSCC) must conduct performance tests (as described in 40 C.F.R. 60.8) for NOx, and CO on the exhaust stack gases. The Permittee (MSCC) must furnish the District, the California Air Resources Board (CARB), and the EPA a written report of the results of such tests. Upon written request from the Permittee (MSCC), and adequate justification, EPA may waive a specific annual test and/or allow for testing to be done at less than maximum operating capacity. [PSD SJ 87-01] Federally Enforceable Through Title V Permit

75. Performance tests for the emissions of NOx, and CO must be conducted and the results reported in accordance with the test methods set forth in 40 C.F.R. 60.8 and 40 C.F.R. 60, Appendix A. The following test methods must be used: a.) Performance tests for the emissions of NOx must be conducted using EPA Method 1-4 and 7E. b.) Performance tests for the emissions of CO must be conducted using the EPA Methods 1-4 and 10. In lieu of the above-mentioned test methods, equivalent methods may be used with prior written approval from EPA. The Permittee (MSCC) must notify EPA in writing at least 30 days prior to such tests to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. [PSD SJ 87-01] Federally Enforceable Through Title V Permit

76. For performance test purposes, sampling ports, platforms, and access must be provided by the Permittee on the emission unit exhaust system in accordance with 40 C.F.R. 60.8(e). [PSD SJ 87-01] Federally Enforceable Through Title V Permit

77. On and after the date of startup of the WMSCP (PSD Permit No. SJ-00-01), the Permittee (MSCC) must not discharge or cause the discharge of CO into the atmosphere in excess of the following emission limits per turbine: The more stringent of 25 ppmvd @ 15% O2 or 55 pounds per hour, based on 3-hour rolling average. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

78. This condition applies prior to the startup of the WMSCP: On and after the date of start up any of the three turbines at MSCP must not discharge (per turbine, and based on 3-hour rolling average) into the atmosphere CO in excess of the following of any of: 1.) The more stringent of 52.0 ppmvd @ 15% O2 or 94 pounds for loads greater than or equal to 75%. 2.) The more stringent of 62.0 ppmvd @ 15% O2 or 94 pounds for loads greater than or equal to 35% but less than 75%. 3.) 94 pounds per hour for loads less than 35%. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

79. On and after the date of startup of the WMSCP (PSD Permit No. SJ-00-01), the Permittee (MSCC) must not discharge or cause the discharge of NOx into the atmosphere in excess of the following emission limits per turbine: The more stringent of 10 ppmvd @ 15% O2 or 36.1 pounds per hour, based on 3-hour rolling average. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

80. This condition applies prior to the startup of the WMSCP: On and after the date of start-up of any of the three turbines, MSCC must not discharge (per turbine, based on 3-hour rolling average) into the atmosphere NOx (as NO2) in excess of the following: 1.) The more stringent of 25.0 ppmvd @ 15% O2 or 85.0 pounds per hour for loads greater than or equal to 75%; 2.) The more stringent of 42.0 ppmvd @ 15% O2 or 85 pounds per hour for loads greater than or equal to 35% but less than 75%; 3.) 85 pounds per hour for loads less than 35%. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

81. The hourly (3-hour averaging) emissions must not exceed: 1.) 94 pounds of CO and 85 pounds of NOx; 2.) All CEMs must be operating during startups and shut downs; 3.) The time, date and duration of each startup and shutdown event must be recorded. The records must include the lbs/hour calculations based on the CEM data. These records must be kept for five years following the date of such events. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

82. Prior to the date of startup and thereafter, the Permittee (MSCC) must install, maintain and operate the following continuous monitoring systems (CEMs) in the exhaust stacks: a.) Continuous monitoring systems to measure stack gas NOx , CO and O2 concentrations. The systems must meet EPA monitoring performance specification (40 C.F.R. 60.13 and 40 C.F.R. 60, Appendix B, Performance Specifications 2, 3 and 4); b.) A continuous monitoring system to measure stack gas and natural gas volumetric flow rates. The stack gas flow measurement system must meet EPA Performance Specifications for (40 C.F.R. Part 52, Appendix E). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

83. The Permittee (MSCC) must maintain a file of all measurements, including continuous monitoring systems evaluations; all continuous monitoring systems or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; performance and all other information required by 40 C.F.R. 60 Appendices A-B recorded in a permanent form suitable for inspection. The file must be retained for five years following the date of such measurements, maintenance, reports and records. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

84. The Permittee (MSCC) must notify EPA of the date on which demonstration for the continuous monitoring system performance commences (40 C.F.R. 60.13). This date must be no later than 60 days after full load operation but not later than 180 days after startup. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

85. The Permittee (MSCC) must submit a written report of all excess emissions to EPA for every calendar quarter. The quarterly report must include the following: a.) The magnitude of the excess emissions computed in accordance with 40 C.F.R. 60.13(h), any conversion factors used, and the date and time of commencement and compilation of each time period of excess emissions; b.) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of any equipment. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted must also be reported; c.) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks, and the nature of the system repairs or adjustments; d.) When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information must be stated in the report; and e.) Excess emissions must be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM exceeds the maximum emission limits set forth in the condition with a CO emission limit, where PSD is cited as the basis of the condition or any 3-hour period during which the average emissions of NOx exceed the maximum emission limits set forth in the condition with a NOx emission limit, where PSD is cited as the basis of the condition. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

86. Excess emissions indicated by the CEM system must be considered violations of the applicable emission limit for the purpose of this permit. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

87. The quality assurance project plan used by the Permittee (MSCC) for the certification and operation of the continuous emissions monitors, which meets the requirements of 40 C.F.R. Part 60, Appendix F, must be available upon request to EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

88. The Permittee (MSCC) must keep a monthly record of all fuel uses. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

89. The proposed power plant is subject to the federal regulations entitled Standards of Performance for New Stationary Sources (40 C.F.R. 60). The owner or operator must meet all applicable requirements of 40 C.F.R. 60 Subparts A and GG of this regulation. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

90. All three turbines will fire natural gas only. The Permittee (MSCC) must only combust pipeline quality natural gas with sulfur content (as S) below 0.75 grains per 100 dry standard cubic feet (dscf). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

91. MSCC shall have legal and operational responsibility and control of all air pollutant emitting activities of the MSCP. This responsibility shall include, but shall not be limited to the following: 1.) Operating and maintaining the project to comply with all federal, state, and local air pollution laws, regulations, orders, and other requirements; 2.) Ensuring the emissions offsets, tradeoffs, or other emission reductions required for this project under permits issued by the U.S. EPA, the District, and/or the California Energy Commission are obtained as required; or 3.) Any violations of any air pollution requirements are the legal responsibility of MSCC, in addition to any other legal responsible entity. Any proposed change to this condition shall require prior written concurrence of the US EPA. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

92. In accordance with the emissions offset plan proposed by the applicant for the District (dated November 12, 1987) and the emissions offset plan for the U.S. EPA (dated July 21, 1987), Aera Energy LLC must not operate the following four steam generators (listed by District permit numbers S-1135-119, S-1135-122, S-1135-123, and S-1135-115) simultaneously with the firing of the MSCP turbines unless one or more of the MSCP turbines is shutdown: Andersen-Goodwin Lease: S-1135-119, S-1135-122, S-1135-123 and Neely Lease: S-1135-115 [PSD SJ-87-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

93. MSCC shall maintain a record of the date(s), time(s), and duration(s) of the shutdown of any of the above mentioned steam generators. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

94. Aera Energy LLC shall not lease or modify the permit conditions for any of the above generators for use in the Midway Sunset Oil field, unless creditable emissions reductions (as defined in 40 C.F.R. 52.21), at a ratio of at least 1:1, are provided for emissions from those generators. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

95. Aera Energy LLC shall not modify any of the District Permit to Operate numbers. If any of the above steam generators are issued new Permit to Operate numbers by the District, Aera Energy LLC shall notify the U.S. EPA in writing of this action and shall make such notification upon issuance of a new Permit to Operate number. This letter shall include the original District Permit to Operate number(s) of the subject generator(s) and a copy of the new Permit to Operate issued by the District. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

96. Aera Energy LLC shall notify the U.S. EPA in writing of the intention to sell, or potential sale, of any of the above generators and shall make such notification prior to the District's final action of the re-permitting process associated with the sale of a generators. This letter shall include the following: a.) The subject steam generator as identified by its District Permit to Operate number; b.) The name of the buyer (as identified by the company name) of the steam generator; and c.) An estimated date of the final action of the re-permitting process by the District. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

97. The allowable incidental taking (killing, harming, or harassment) of San Joaquin kit foxes, blunt-nosed leopard lizards, and giant kangaroo rats is confined to the proposed cogeneration plant site one half mile radius around this site (on lands owned or leased by Aera Energy LLC), and associated subject cogeneration plant facilities (including pipelines, transmission lines, temporary equipment stockpiling areas, and access roads) as discussed in the project Application for Certification report (Sun Cogeneration Company and Southern Sierra Energy Company 1985). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

98. MSCC is required to implement the "Agreement on Conditions for Mitigation of the Biological Impacts of the Midway-Sunset Project" as required by the U.S. Fish and Wildlife Service (USFWS) (Memorandum dated March 16, 1987 from the USFWS to the US EPA). [PSD SJ-87-01] Federally Enforceable Through Title V Permit

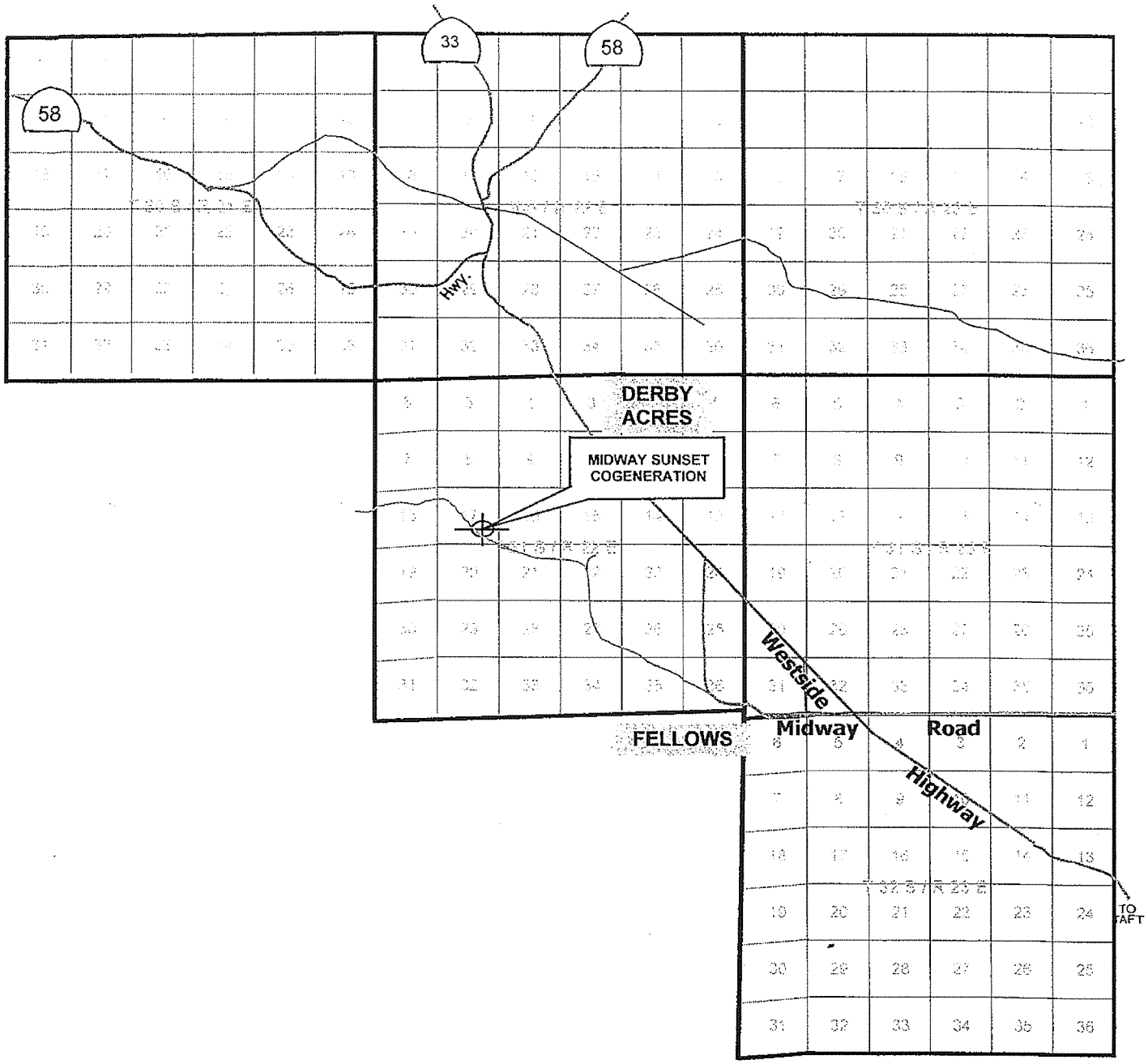
99. Any endangered species found dead should be turned in to the California Department of Fish and Game for Analysis. MSCC must also report this event to the USFWS. The USFWS may recommend amendment to the existing project actions pending results of the analysis. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

100. All correspondence as required by this permit shall be forwarded to: 1.) Director, Air Division (Attn: Air-3) EPA Region IX 75 Hawthorne Street San Francisco, CA 94105-3901 Tel: (415) 744-1291 Fax: (415) 744-1076; 2.) Chief, Stationary Source Division, California Air Resource Board P.O. Box 2815 Sacramento, CA 95812; and 3.) Air Pollution Control Officer, San Joaquin Valley Unified APCD 2700 M Street, Suite 275 Bakersfield, CA 93301-2370. [PSD SJ-87-01] Federally Enforceable Through Title V Permit

101. Aera Energy LLC is the legal owner of the subject steam generators and of the leases on which the steam generators are located. MSCC is the legal owner of the gas turbine cogeneration facility. MSCC is jointly owned by Sun Cogeneration Limited Partnership (Sun Cogen LP) and San Joaquin Energy Company. Sun Cogen LP is managed and controlled by a wholly owned subsidiary of Aera Energy LLC. (See Condition 104) [PSD SJ-87-01] Federally Enforceable Through Title V Permit

APPENDIX C

Location Map



- N -

MIDWAY SUNSET COGENERATION

LOCATION MAP

SE Sec. 17, T31S / R22E

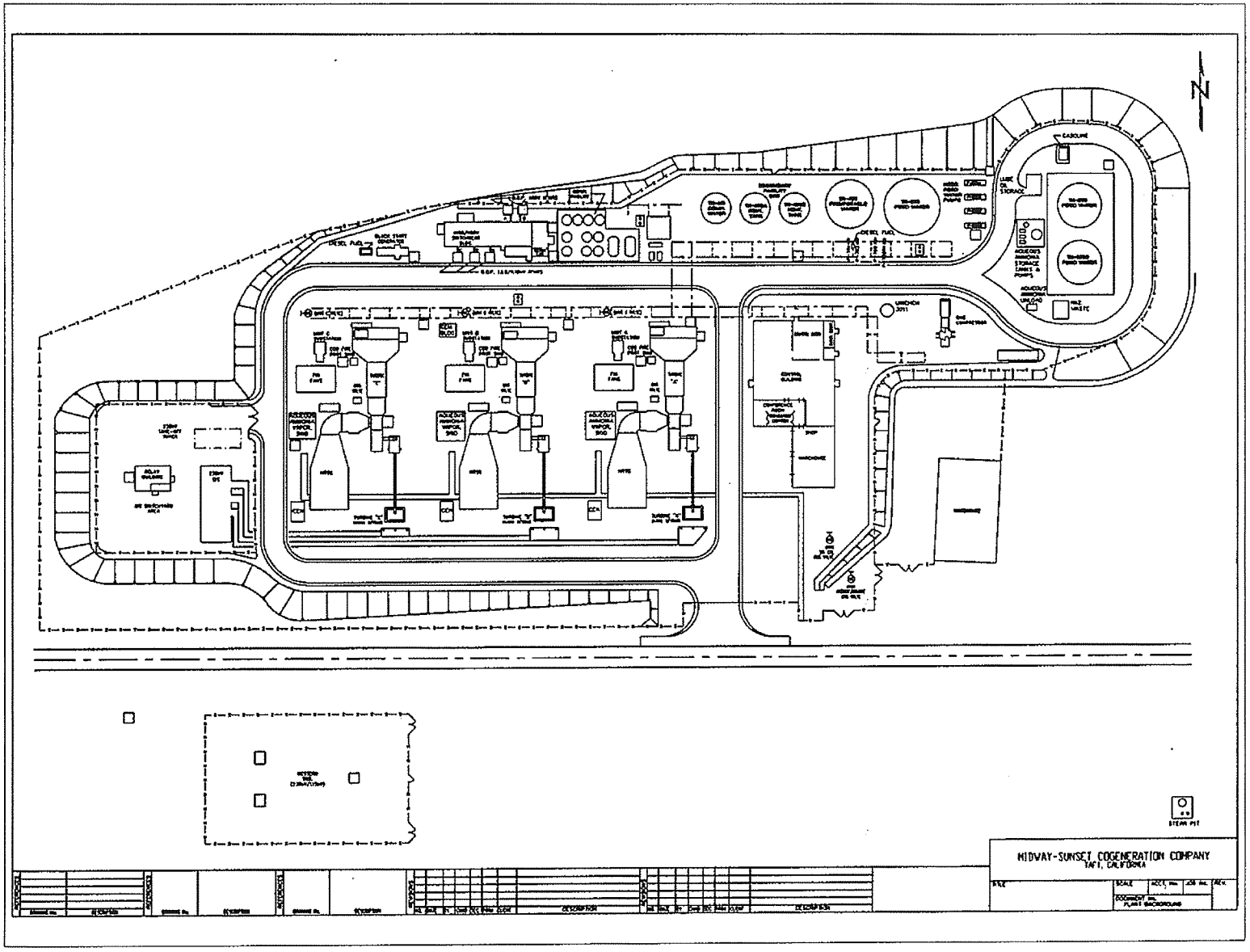
Prepared by:

Insight Environmental Consultants

JANUARY 2003

APPENDIX D

Facility Diagram


N
GASOLINE
DIESEL FUEL
STEAM PIT
MIDWAY-SUNSET COGENERATION COMPANY
TAFT, CALIFORNIA
PLANT BACKGROUND

APPENDIX E

Compliance Certification (TVFORM-009)

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

☐ SIGNIFICANT PERMIT MODIFICATION ☐ ADMINISTRATIVE AMENDMENT

☒ MINOR PERMIT MODIFICATION

COMPANY NAME: **Aera Enercy LLC**	FACILITY ID: **S - 1135**
1. Type of Organization: ☒ Corporation ☐ Sole Ownership ☐ Government ☐ Partnership ☐ Utility	
2. Owner's Name:	
3. Agent to the Owner:	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial **all** circles for confirmation):

Based on information and belief formed after reasonable inquiry, the emissions unit(s) identified in this application will continue to comply with the applicable federal requirement(s) with which the emissions unit is in compliance.

Based on information and belief formed after reasonable inquiry, the emissions unit(s) identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

D. Faeilla
Signature of Responsible Official

9/25/13
Date

Dave Faeilla
Name of Responsible Official (please print)

Executive Director
Title of Responsible Official (please print)

Modify Title V permits S-1135-224, & '-225 conditions of approval to allow Units to operate as a cogen unit or as a peaker unit with new ultra Low-NOx combustors and clarify several conditions of approval on both units.

APPENDIX F

Manufacturer Guarantee

GE Energy Services

DLN1+ WITH TURNDOWN ENHANCE

To: MIDWAY SUNSET COGENERATION COMPANY
3466 CROCKER SPRINGS RD
FELLOWS, CA 93224

Attn: Dave Faiella/Greg Jans
Phone : 661-768-3020/661-768-3018
Email: DFaiella@edisonmission.com
gjans@edisonmission.com

Proposal	CQ563177B
Serial Number	295368 & 295369
Date	Sep 17, 2013
Revision	
Offering Type	
DLN1+ w/ TD	

GE Energy Services in coordination with our Applications Engineering team has approved changing the emissions language to a single guarantee point across all ambient over a specified load range. In particular, GE will guarantee emissions of 5 ppm NOx and 25 ppm CO from 78% to 100% load across the entire ambient range.

Any further questions or concerns please contact me.

Regards,

Adam

Submitted by

Name	Adam Piepgrass
Title	Senior Sales Manager
Address	8100 NE Pkwy. Drive Suite 330 Vancouver, WA 98662-7963
Telephone	(360)-514-5203
Mobile	(503)-593-4086
Email	adam.piepgrass@ge.com

GE Proprietary Information

This proposal is submitted in confidence for evaluation by the Purchaser and its contents are proprietary to GE. By receiving this document, the Purchaser agrees to not reveal its contents except to those in the Purchaser's organization who must evaluate it. Copies of this proposal may not be made without the prior written consent of GE. This proposal shall not be provided to any Party outside the Purchaser. If the preceding is not acceptable, this proposal shall be returned to GE. Purchaser shall return this proposal to GE if requested by GE to do so.

APPENDIX G

Historical Fuel Use

24 Consecutive Months fuel use

MMBtu

	Unit A		Unit B
Apr-09	638824.6618	Nov-08	632,023.60
May-09	645342.1201	Dec-08	653,971.29
Jun-09	626299.9463	Jan-09	642,937.00
Jul-09	601728.6755	Feb-09	630,023.27
Aug-09	626264.1342	Mar-09	660,111.45
Sep-09	625957.8093	Apr-09	648,865.48
Oct-09	625054.5887	May-09	254,094.41
Nov-09	640356.3434	Jun-09	651,976.62
Dec-09	642000.2377	Jul-09	634,282.46
Jan-10	625807.442	Aug-09	643,859.81
Feb-10	235454.1004	Sep-09	646,555.77
Mar-10	617304.3619	Oct-09	654,928.95
Apr-10	633306.7263	Nov-09	651,937.48
May-10	657914.6048	Dec-09	656,969.90
Jun-10	630925.4198	Jan-10	655,965.77
Jul-10	647263.0326	Feb-10	615,533.30
Aug-10	635543.5505	Mar-10	656,668.44
Sep-10	630158.5036	Apr-10	644,357.78
Oct-10	655076.0562	May-10	582,241.81
Nov-10	684342.4209	Jun-10	633,691.38
Dec-10	680967.157	Jul-10	651,494.22
Jan-11	712160.5948	Aug-10	651,859.06
Feb-11	642212.3034	Sep-10	633,454.45
Mar-11	575278.2649	Oct-10	657,610.87
	14935543.06		15,045,414.54