San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

APR 13 2012

JJ Fair
Starwood Power-Midway, LLC
7365 Mission Gorge Rd, Suite C
San Diego, CA 92120-1273

Re: Notice of Preliminary Decision - Federally Mandated Operating Permit
District Facility # C-7286
Project # C-1101711

Dear Mr. Fair:

Enclosed for your review and comment is the District's analysis of Starwood Power-Midway's application for the Federally Mandated Operating Permit for its power generating facility located at 43627 West Panoche Road in Mendota, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Sincerely,

David Warner
Director of Permit Services

cc: Derek Fukuda, Permit Services Engineer

Attachments

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

APR 13 2012

Gerardo C. Rios, Chief
Permits Office (AIR-3)
U.S. EPA - Region IX
75 Hawthorne St
San Francisco, CA 94105

Re: Notice of Preliminary Decision - Federally Mandated Operating Permit
District Facility # C-7286
Project # C-1101711

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of Starwood Power-Midway's application for the Federally Mandated Operating Permit for its power generating facility located at 43627 West Panoche Road in Mendota, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 45-day comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Sincerely,

David Warner
Director of Permit Services

cc: Derek Fukuda, Permit Services Engineer

Attachments

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

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34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

APR 13 2012

Mike Tollstrup, Chief
Project Assessment Branch
Air Resources Board
P O Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Federally Mandated Operating Permit
District Facility # C-7286
Project # C-1101711

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Starwood Power-Midway's application for the Federally Mandated Operating Permit for its power generating facility located at 43627 West Panoche Road in Mendota, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Sincerely,

David Warner
Director of Permit Services

cc: Derek Fukuda, Permit Services Engineer

Attachments

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www.valleyair.org www.healthyairliving.com

Fresno Bee

NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
FEDERALLY MANDATED OPERATING PERMITS

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed issuance of the Federally Mandated Operating permits to Starwood Power-Midway, LLC for its power generating facility located at 43627 West Panoche Road in Mendota, California.

The District's analysis of the legal and factual basis for this proposed action, project #C-1101711, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. There are no emission changes associated with this proposed action. This will be the public's only opportunity to comment on the specific conditions of the proposed Federally Mandated Operating initial permits. If requested by the public, the District will hold a public hearing regarding issuance of this initial permit. For additional information, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CALIFORNIA 93726-0244.

SAN JOAQUIN VALLEY
UNIFIED AIR POLLUTION CONTROL DISTRICT

STARWOOD POWER-MIDWAY, LLC

PROPOSED ENGINEERING EVALUATION

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TITLE V APPLICATION REVIEW

Project #: C-1101711
Deemed Complete: May 19, 2010

Engineer: Derek Fukuda
Date: April 10, 2012

Facility Number: C-7286
Facility Name: Starwood Power-Midway, LLC
Mailing Address: 7365 Mission Gorge Rd, Suite C
San Diego, CA 92120-1273

Contact Name: JJ Fair
Phone: (619) 229-3770 x 340

Responsible Official: Jeff Paul
Title: General Manager

I. PROPOSAL

Starwood Power-Midway, LLC is proposing that an initial Title V permit be issued for its power generating facility at 43627 West Panoche Rd in Mendota, CA. The purpose of this evaluation is to identify all applicable requirements, determine if the facility will comply with those applicable requirements, and to provide the legal and factual basis for proposed permit conditions.

II. FACILITY LOCATION

Starwood Power-Midway, LLC is located at 43627 West Panoche Rd in Mendota, CA.

III. EQUIPMENT LISTING

A detailed facility printout listing all permitted equipment at the facility is shown in Attachment A.

A summary of the exempt equipment categories which describe the insignificant activities or equipment at the facility not requiring a permit is shown in Attachment B. This equipment is not exempt from facility-wide requirements.

IV. GENERAL PERMIT TEMPLATE USAGE

The applicant is requesting to use the following model general permit templates:

a. SJV-UM-0-3, Facility-wide Umbrella General Permit Template

The applicant has requested to utilize template #SJV-UM-0-3, Facility-wide Umbrella General Permit Template for unit C-7286-0-1. Based on the information submitted on the Template Qualification Form (Attachment C), the applicant qualifies for the use of this template.

V. SCOPE OF EPA AND PUBLIC REVIEW

Certain segments of the proposed Operating Permit are based on model general permit templates that have been previously subject to EPA and public review. The terms and conditions from the model general permit templates are included in the proposed permit and are not subject to further EPA and public review.

For permit applications utilizing model general permit templates, public and agency comments on the District's proposed actions are limited to the applicant's eligibility for model general permit template, applicable requirements not covered by the model general permit template, and the applicable procedural requirements for issuance of Title V Operating Permits.

The following permit conditions, including their underlying applicable requirements, originate form model general permit templates and are not subject to further EPA or public review.

Conditions 1 through 40 of the requirements for permit unit C-7286-0-1.

VI. REQUIREMENTS ADDRESSED BY GENERAL PERMIT TEMPLATES

District Rule 1100, Equipment Breakdown (amended December 17, 1992) (Non-SIP replacement for Kern County Rule 111)

District Rule 1160, Emission Statements (adopted November 18, 1992)

District Rule 2010, Permits Required (amended December 17, 1992)

District Rule 2020, Exemptions (amended August 18, 2011). The amendments made to this rule on August 18, 2011 have no impact to this source; therefore template SJV-UM-0-3 is still valid for this project.

District Rule 2031, Transfer of Permits (amended December 17, 1992)

District Rule 2040, Applications (amended December 17, 1992)

District Rule 2070, Standards for Granting Applications (amended December 17, 1992)

District Rule 2080, Conditional Approval (amended December 17, 1992)

District Rule 2520, Sections 5.2, 9.1.1, 9.4, 9.5, 9.7, 9.8, 9.9, 9.13.1, 9.13.2, 9.16 and 10.0, Federally Mandated Operating Permits (amended June 21, 2001)

District Rule 4101, Visible Emissions (amended February 17, 2005)

District Rule 4601, Architectural Coatings (amended December 17, 2009)

District Rule 8011, General Requirements (amended August 19, 2004)

District Rule 8021, Construction, Demolition, Excavation, and Other Earthmoving Activities (amended August 19, 2004)

District Rule 8031, Bulk Materials (amended August 19, 2004)

District Rule 8041, Carryout and Trackout (amended August 19, 2004)

District Rule 8051, Open Areas (amended August 19, 2004)

District Rule 8061, Paved and Unpaved Roads (amended August 19, 2004)

District Rule 8071, Unpaved Vehicle/Equipment Traffic Areas (amended September 16, 2004)

40 CFR Part 82, Subpart B and F, Stratospheric Ozone

40 CFR Part 61, Subpart M, National Emission Standard for Asbestos

VII. REQUIREMENTS NOT ADDRESSED BY GENERAL PERMIT TEMPLATES

District Rule 1080, Stack Monitoring (amended December 17, 1992)

District Rule 1081, Source Sampling (amended December 16, 1993)

District Rule 2201, New and Modified Stationary Source Review Rule (amended April 21, 2011)

District Rule 2520, Federally Mandate Operating Permits (amended June 21, 2001)

District Rule 4201, Particulate Matter Concentration (amended December 17, 1992)

District Rule 4703, Stationary Gas Turbines (September 20, 2007)

District Rule 4801, Sulfur Compounds (amended Decernber 17, 1992)

40 CFR Part 60, Standards of Performance for Stationary Combustion Turbines

40 CFR Part 64, Compliance Assurance Monitoring (CAM)

VIII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE

For each Title V source, the District issues a single permit that contains the Federally Enforceable requirements, as well as the District-only requirements. The District-only requirements are not a part of the Title V Operating Permits. The terms and conditions that are part of the facility's Title V permit are designated as Federally Enforceable through Title V Permit.

This facility is subject to the following rules that are not currently federally enforceable:

District Rule 4102 – Nuisance

a. C-1694-0-1: Facility-Wide Requirements

- Condition 42 on the proposed permit is based on this rule.

IX. COMPLIANCE

A. Requirements Addressed by Model General Permit Templates

1. Facility Wide Requirements

The applicant is proposing to use a general permit template to address federally applicable facility-wide requirements. Section IV of template SJV-UM-0-3 includes a demonstration of compliance for all applicable requirements. Template conditions have been added to the facility wide requirements as condition numbers 1 through 40 to assure compliance with these requirements.

B. Requirements Not Addressed by Model General Permit Templates

1. District Rule 1080, Stack Monitoring

This rule grants the APCO the authority to request the installation, use maintenance, and inspection of continuous monitoring equipment. The general, source and pollutant specific requirements for continuous monitoring equipment are defined. This rule also specifies the performance standards for the equipment and administrative recordkeeping, reporting, and violation and equipment breakdown notification requirements.

- Conditions 34 through 37, and 42 through 48 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with the requirements of this rule.

2. District Rule 1081, Source Sampling

The purpose of this rule is to ensure that any source operation which emits or may emit air contaminants provides adequate and safe facilities for use in sampling to determine compliance. This rule also specifies methods and procedures for source testing, sample collection, and compliance determination.

- Conditions 25, 26, 27, 29, 31, and 32 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with the requirements of this rule.

3. District Rule 2201, New and Modified Stationary Source Review

The permit units are subject to the District NSR Rule upon application for Authority to Construct (ATC). In accordance with the White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting Permit to Operate (PTO) were addressed to define how NSR permit terms should be incorporated into the Title V permit.

a) **C-7286-1-2:** 30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-2)

- Conditions 1 through 4 from the current PTO have been included as conditions 1 through 4 on the requirements for the proposed permit.
- Condition 5 from the current PTO has moved to the Facility-Wide permit as condition 22.
- Condition 6 from the current PTO has been included as condition 5 on the requirements for the proposed permit.
- Conditions 7, 8, and 9 from the current PTO have been included as conditions 6, 7, and 8 on the requirements for the proposed permit.
- Conditions 10 through 16 from the current PTO have been included as conditions 10 through 16 on the requirements for the proposed permit.
- Conditions 17 and 18 from the current PTO have been included as conditions 18 and 19 on the requirements for the proposed permit.

- Conditions 19 through 24 from the current PTO have been included as conditions 21 through 26 on the requirements for the proposed permit.
- Conditions 25 through 44 from the current PTO have been included as conditions 28 through 47 on the requirements for the proposed permit.
- Conditions 45 and 46 from the current PTO have been moved to the Facility-Wide permit as conditions 1 and 2.
- Conditions 47, 48, and 49 from the current PTO have been included as conditions 48, 49, and 50 on the requirements for the proposed permit.
- Conditions 50 though 59 from the current PTO have been replaced with conditions 29 through 34 on the Facility-Wide permit.
- Condition 60 from the current PTO has been included as condition 9 on the requirements for the proposed permit.
- Condition 61 from the current PTO has been included as condition 17 on the requirements for the proposed permit.
- Condition 62 from the current PTO has been included as condition 20 on the requirements for the proposed permit.
- Condition 63 from the current PTO has been included as condition 27 on the requirements for the proposed permit.

b) **C-7286-2-2:** 30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-1)

- Conditions 1 through 4 from the current PTO have been included as conditions 1 through 4 on the requirements for the proposed permit.
- Condition 5 from the current PTO has moved to the Facility-Wide permit as condition 22.
- Condition 6 from the current PTO has been included as condition 5 on the requirements for the proposed permit.
- Conditions 7, 8, and 9 from the current PTO have been included as conditions 6, 7, and 8 on the requirements for the proposed permit.
- Conditions 10 through 16 from the current PTO have been included as conditions 10 through 16 on the requirements for the proposed permit.
- Conditions 17 and 18 from the current PTO have been included as conditions 18 and 19 on the requirements for the proposed permit.

- Conditions 19 through 24 from the current PTO have been included as conditions 21 through 26 on the requirements for the proposed permit.
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- Conditions 45 and 46 from the current PTO have been moved to the Facility-Wide permit as conditions 1 and 2.
- Conditions 47, 48, and 49 from the current PTO have been included as conditions 48, 49, and 50 on the requirements for the proposed permit.
- Conditions 50 though 59 from the current PTO have been replaced with conditions 29 through 34 on the Facility-Wide permit.
- Condition 60 from the current PTO has been included as condition 9 on the requirements for the proposed permit.
- Condition 61 from the current PTO has been included as condition 17 on the requirements for the proposed permit.
- Condition 62 from the current PTO has been included as condition 20 on the requirements for the proposed permit.
- Condition 63 from the current PTO has been included as condition 27 on the requirements for the proposed permit.

c) **C-7286-3-2:** 30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-4)

- Conditions 1 through 4 from the current PTO have been included as conditions 1 through 4 on the requirements for the proposed permit.
- Condition 5 from the current PTO has moved to the Facility-Wide permit as condition 22.
- Condition 6 from the current PTO has been included as condition 5 on the requirements for the proposed permit.
- Conditions 7, 8, and 9 from the current PTO have been included as conditions 6, 7, and 8 on the requirements for the proposed permit.
- Conditions 10 through 16 from the current PTO have been included as conditions 10 through 16 on the requirements for the proposed permit.
- Conditions 17 and 18 from the current PTO have been included as conditions 18 and 19 on the requirements for the proposed permit.

- Conditions 19 through 24 from the current PTO have been included as conditions 21 through 26 on the requirements for the proposed permit.
- Conditions 25 through 44 from the current PTO have been included as conditions 28 through 47 on the requirements for the proposed permit.
- Conditions 45 and 46 from the current PTO have been moved to the Facility-Wide permit as conditions 1 and 2.
- Conditions 47, 48, and 49 from the current PTO have been included as conditions 48, 49, and 50 on the requirements for the proposed permit.
- Conditions 50 though 59 from the current PTO have been replaced with conditions 29 through 34 on the Facility-Wide permit.
- Condition 60 from the current PTO has been included as condition 9 on the requirements for the proposed permit.
- Condition 61 from the current PTO has been included as condition 17 on the requirements for the proposed permit.
- Condition 62 from the current PTO has been included as condition 20 on the requirements for the proposed permit.
- Condition 63 from the current PTO has been included as condition 27 on the requirements for the proposed permit.

d) **C-7286-4-2:** 30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-3)

- Conditions 1 through 4 from the current PTO have been included as conditions 1 through 4 on the requirements for the proposed permit.
- Condition 5 from the current PTO has moved to the Facility-Wide permit as condition 22.
- Condition 6 from the current PTO has been included as condition 5 on the requirements for the proposed permit.
- Conditions 7, 8, and 9 from the current PTO have been included as conditions 6, 7, and 8 on the requirements for the proposed permit.
- Conditions 10 through 16 from the current PTO have been included as conditions 10 through 16 on the requirements for the proposed permit.
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- Conditions 47, 48, and 49 from the current PTO have been included as conditions 48, 49, and 50 on the requirements for the proposed permit.
- Conditions 50 though 59 from the current PTO have been replaced with conditions 29 through 34 on the Facility-Wide permit.
- Condition 60 from the current PTO has been included as condition 9 on the requirements for the proposed permit.
- Condition 61 from the current PTO has been included as condition 17 on the requirements for the proposed permit.
- Condition 62 from the current PTO has been included as condition 20 on the requirements for the proposed permit.
- Condition 63 from the current PTO has been included as condition 27 on the requirements for the proposed permit.

2. District Rule 2520, Federally Mandated Operating Permits

There are no federally applicable Greenhouse Gas (GHG) requirements for this source. It should be noted that the Mandatory Greenhouse Gas Reporting rule (40CFR Part 98) is not included in the definition of an applicable requirement within Title V (per 40CFR 71.2). Therefore, there will be no further discussion of GHG in this evaluation.

3. District Rule 4201, Particulate Matter Concentration

The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission standard. Section 3.1 requires emissions to be at or below 0.1 grains of particulate matter per dry standard cubic foot of exhaust gas.

C-7286-1, C-7286-2, C-7286-3 and C-7286-4:

$$PM\ Conc.\ (gr/scf) = \frac{(PM\ emission\ rate) \times (7000\ gr/lb)}{(Air\ flow\ rate) \times (60\ min/hr)}$$

PM_{10} emission rate = 1.85 lb/hr. Assuming 100% of PM is PM_{10}
H_2O = 16.73%
Exhaust Gas Flow, scfm (wet) = 408,145

Exhaust Gas Flow, dscfm = 408,145 * [(100 – 16.73)/100] = 339,862

PM Conc. (gr/scf) = [(1.85 lb/hr) * (7,000 gr/lb)] ÷ [(339,862 ft^3/min) * (60 min/hr)]
PM Conc. = 0.00064 gr/scf

Calculated emissions are well below the allowable emissions level. It can be assumed that emissions from all these turbines will not exceed the allowable 0.1 gr/scf. Therefore, compliance with Rule 4201 is expected.

- Condition 5 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

4. District Rule 4307, Stationary Gas Turbines

Rule 4703 is applicable to stationary gas turbines with a rating greater than 0.3 megawatts. The facility operates four 30 MW gas turbines. Therefore the requirements of this rule apply to the proposed turbines.

Section 5.1 – NO_X Emission Requirements:

Section 5.1.1 (Tier I) of this rule limits the NO_X emissions from stationary gas turbine systems greater than 10 MW, and equipped with Selective Catalytic Reduction (SCR), based on the following equation:

$$NO_X \text{ (ppmv @ 15\% } O_2) = 9 \times \left(\frac{EFF}{25}\right)$$

Where EFF is the higher of EFF_1 or EFF_2 where:

$$EFF_1 = \frac{3{,}412 \frac{Btu}{kW-hr}}{\text{Actual Heat Rate @ HHV } (\frac{Btu}{kW-hr})} \text{ x } 100 \text{, and } EFF_2 = EFF_{MFR} \frac{LHV}{HHV}$$

$EFF_2 = EFF_{mfr} * (LHV/HHV)$

Calculated data indicates that the Actual Heat Rate @ HHV is 10,165 Btu/KW-hr (worst case based on an ambient inlet temperature of 63.3 °F). Therefore:

$$EFF_1 = \frac{3{,}412 \frac{Btu}{kW-hr}}{10{,}165 \frac{Btu}{kW-hr}} \times 100 = 33.57\%$$

$$NO_X \text{ limit utilizing } EFF_1 = 9 \times \left(\frac{33.57}{25}\right) = 12.1 \text{ ppmvd @ } 15\% O_2$$

EFF_2 calculations are not necessary since the turbines are limited to a maximum of 2.5 ppmv NO_X @ 15% O_2 (based on a 1-hour average).

Section 5.1.2 (Tier 2) of this rule limits the NO_X emissions from simple cycle, stationary gas turbine systems rated at greater than 10 MW and allowed to operate more than 876 hours per year to 5 ppmv @ 15% O_2 (Standard option) and 3 ppmv @ 15% O_2 (Enhanced Option). The turbines are limited to 2.5 ppmv @ 15% O_2 (based on a 1-hour average).

- Condition 8 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 5.2 – CO Emission Requirements:

Per Table 5-3 of section 5.2, the CO emissions concentration from the turbines must be less than 200 ppmvd @ 15% O_2. Starwood Power is limited to a CO emission concentration limit of 6 ppmvd @ 15% O_2.

- Condition 8 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 5.3 – Startup and Shutdown Requirements:

This section states that the emission limit requirements of Sections 5.1.1, 5.1.2 or 5.2 shall not apply during startup, shutdown, or a reduced load period provided an operator complies with the requirements specified below:

- The duration of each startup or each shutdown shall not exceed two hours, and the duration of each reduced load period shall not exceed one hour, except as provided below.
- The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during startup, shutdown, or a reduced load period.

- An operator may submit an application to allow more than two hours for each startup or each shutdown or more than one hour for each reduced load period provided the operator meets all of the conditions specified in the rule.

The facility has stated that the duration of each startup or shutdown event will last no more than two hours. The SCR system and oxidation catalyst will be in operation during startup and shutdown in order to minimize emissions insofar as technologically feasible during startups and shutdowns.

- Conditions 11 through 15 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 6.2 - Monitoring and Record Keeping:

Section 6.2.1 requires the owner to operate and maintain continuous emissions monitoring equipment for NO_X and oxygen, or install and maintain APCO-approved alternate monitoring. The applicant operates a Continuous Emissions Monitoring System (CEMS) that monitors the NO_X and oxygen content of the turbine exhaust.

- Condition 34 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 6.2.2 specifies monitoring requirements for turbines without exhaust-gas NO_X control devices. Each of the turbines is equipped with an SCR system that is designed to control NO_X emissions. Therefore, the requirements of this section are not applicable and no further discussion is required.

Section 6.2.3 requires that for units 10 MW and greater that operated an average of more than 4,000 hours per year over the last three years before August 18, 1994, the owner or operator shall monitor the exhaust gas NO_X emissions. The turbines were installed in 2009. Therefore, they were not in operation prior to August 18, 1994 and the requirements of this section are not applicable. No further discussion is required.

Section 6.2.4 requires the facility 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. Starwood Power is required to maintain all records for at least five years and make them available to the APCO upon request. Therefore, the proposed turbines will be operating in compliance with the five year recordkeeping requirements of this rule.

- Condition 50 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 6.2.5 requires that the owner or operator shall submit to the APCO, before issuance of the Permit to Operate, information correlating the control system operating to the associated measure NO_X output. This information may be used by the APCO to determine compliance when there is no continuous emission monitoring system for NO_X available or when the continuous emissions monitoring system is not operating properly. Starwood Power is required, by permit condition, to submit information correlating the NO_X control system operating parameters to the associated measured NO_X output. Therefore, the proposed turbines will be operating in compliance with the control system operating parameter requirements of this rule.

- Condition 3 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 6.2.6 requires the facility to maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, length and reason for reduced load periods, total hours of operation, and the type and quantity of fuel used. Starwood Power is required to maintain records of each item listed above. Therefore, the proposed turbines will be operating in compliance with the recordkeeping requirements of this rule.

- Conditions 48 and 49 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 6.2.7 establishes recordkeeping requirements for units that are exempt pursuant to the requirements of Section 4.2. Each of the turbines are subject to the requirements of this rule. Therefore, the requirements of this section are not applicable and no further discussion is required.

Section 6.2.8 requires owners or operators performing startups or shutdowns to keep records of the duration of each startup and shutdown. As discussed in the Section 6.2.6 discussion above for this rule, Starwood Power is required, by permit condition, to maintain records of the date, time and duration or each startup and shutdown. Therefore, the proposed turbines will be operating in compliance with the recordkeeping requirements of this rule.

Sections 6.3 and 6.4 - Compliance Testing:

Section 6.3.1 states that the owner or operator of any stationary gas turbine system subject to the provisions of Section 5.0 of this rule shall provide source test information annually regarding the exhaust gas NO_X and CO concentrations. Section 6.3.2 also states that the owner or operator of any stationary gas turbine system operating less than 877 hours per year shall provide source test information biennially regarding the exhaust gas NO_X concentrations.

The turbines operated by Starwood Power are subject to the provisions of Section 5.0 of this rule. However, since this is a peaking power plant, the turbines have the potential to actually operate less than 877 hours per year. Therefore, each turbine is required to test annually to demonstrate compliance with the exhaust gas NO_X and CO concentrations. The source testing frequency will be allowed to be reduced to once every 24 months if the actual operation for any turbine does not exceed 877 hours during any 12 consecutive month rolling period.

- Conditions 26 and 27 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 6.3.3 specifies source testing requirements for units that are equipped with intermittently operated auxiliary burners. Starwood Power does not operate any of these turbines with auxiliary burners. Therefore, the requirements of this section are not applicable and no further discussion is required.

Section 6.4 states that the facility must demonstrate compliance annually with the NO_X and CO emission limits using the following test methods, unless otherwise approved by the APCO and EPA:

- Oxides of nitrogen emissions for compliance tests shall be determined by using EPA Method 7E or EPA Method 20.

- Carbon monoxide emissions for compliance tests shall be determined by using EPA Test Methods 10 or 10B.

- Oxygen content of the exhaust gas shall be determined by using EPA Methods 3, 3A, or 20.

- HHV and LHV of gaseous fuels shall be determined by using ASTM D3588-91, ASTM 1826-88, or ASTM 1945-81.

- Condition 29 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

5. District Rule 4801 – Sulfur Compounds

Per Section 3.1, a person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO_2 on a dry basis averaged over 15 consecutive minutes:

C-7286-1, C-7286-2, C-7286-3 and C-7286-4:

The sulfur of the natural gas fuel is 1.0 gr/100 dscf.

The ratio of the volume of the SO_X exhaust to the entire exhaust for one MMBtu of fuel combusted is:

Volume of SO_x: $V = \frac{n \cdot R \cdot T}{P}$

Where:

- n = number of moles of SO_x produced per MMBtu of fuel.
- Weight of SO_x as SO_2 is 64 lb/(lb-mol)
- $n = \frac{0.00285\ lb}{MMBtu} \times \frac{1\ (lb-mol)}{64\ lb} = 0.000045\ (lb-mol)$
- $R = \frac{0.7302\ ft^3 \cdot atm}{(lb-mol)\,°R}$
- T = 500 °R
- P = 1 atm

Thus, volume of SO_X per MMBtu is:

$$V = \frac{n \cdot R \cdot T}{P}$$

$$V = \frac{0.000045\ (lb-mol) \cdot \frac{0.7302\ ft^3 \cdot atm}{(lb-mol)\ °R} \cdot 500\ °R}{1\ atm}$$

$$V = 0.016\ ft^3$$

Since the total volume of exhaust per MMBtu is 8,578 scf, the ratio of SO_X volume to exhaust volume is

$$= \frac{0.016}{8{,}578} = 0.0000019 = 1.9\ ppmv = 0.00019\%\ by\ volume$$

1.9 ppmv ≤ 2000 ppmv, therefore the turbines comply with Rule 4801.

- Condition 8 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

6. 40 CFR Part 60, Subpart KKKK

40 CFR Part 60 Subpart KKKK applies to all stationary gas turbines rated at greater than or equal to 10 MMBtu/hr that commence construction, modification, or reconstruction after February 18, 2005. The gas turbines involved in this project have a rating of 311 MMBtu/hr and were installed after February 18, 2005. Therefore, this subpart applies to these gas turbines.

Subpart KKKK established requirements for nitrogen oxide (NO_X) and sulfur dioxide (SO_X) emissions.

Section 60.4320 - Standards for Nitrogen Oxides:

Paragraph (a) states that NO_X emissions shall not exceed the emission limits specified in Table 1 of this subpart. Paragraph (b) states that if you have two or more turbines that are connected to a single generator, each turbine must meet the emission limits for NO_X. Table 1 states that new turbines firing natural gas with a combustion turbine heat input at peak load of greater than 50 MMBtu/hr but less than or equal to 850 MMBtu/hr shall meet a NO_X emissions limit of 25 ppmvd @ 15% O_2 or 150 ng/J of useful output (1.2 lb/MWh).

The turbines at this facility have a NO_X emission concentration limit of 2.5 ppmvd @ 15% O_2 for each turbine.

- Condition 8 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 60.4330 - Standards for Sulfur Dioxide:

Paragraph (a) states that if your turbine is located in a continental area, you must comply with one of the following:

(1) Operator must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO_2 in excess of 110 nanograms per Joule (ng/J) (0.90) pounds per megawatt-hour (lb/MWh)) gross output; or
(2) Operator must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input.

Starwood Power burns natural gas fuel in each of these turbines with a maximum sulfur content of 1.0 grain/ 100 scf (0.00285 lb/MMBtu).

- Condition 7 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 60.4335 – NO_X Compliance Demonstration, with Water or Steam Injection:

Paragraph (a) states that when a turbine is using water or steam injection to reduce NO_X emissions, you must install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine when burning a fuel that requires water or steam injection for compliance.

Paragraph (b) states that alternatively, an operator may use continuous emission monitoring, as follows:

(1) Install, certify, maintain and operate a continuous emissions monitoring system (CEMS) consisting of a NO_X monitor and a diluent gas (oxygen (O_2) or carbon dioxide (CO_2)) monitor, to determine hourly NO_X emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu); and
(2) For units complying with the output-based standard, install, calibrate, maintain and operate a fuel flow meter (or flow meters) to continuously measure the heat input to the affected unit; and
(3) For units complying with the output based standard, install, calibrate, maintain and operate a watt meter (or meters) to continuously measure the gross electrical output of the unit in megawatt-hours; and

(4) For combined heat and power units complying with the output-based standard, install, calibrate, maintain and operate meters for useful recovered energy flow rate, temperature, and pressure, to continuously measure the total thermal energy output in British thermal units per hour (Btu/h).

Starwood Power operates each of these turbines with water injection. They also operate a CEMS consisting of a NO_X monitor and an O_2 monitor to determine hourly NO_X emission rate in ppm. They are not proposing to comply with the output-based NO_X emission standards listed in Table 1.

- Condition 34 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 60.4340 – NO_X Compliance Demonstration, without Water or Steam Injection:

This section specifies the requirements for units not equipped with water or steam injection. As discussed above, Starwood Power uses water injection to reduce NO_X emissions in each of these turbines. Therefore, the requirements of this section are not applicable and no further discussion is required.

Section 60.4345 – CEMS Equipment Requirements:

Paragraph (a) states that each NO_X diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in Appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in Appendix F to this part is not required. Alternatively, a NO_X diluent CEMS that is installed and certified according to Appendix A of Part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.

Paragraph (b) states that as specified in §60.13(e)(2), during each full unit operating hour, both the NO_X monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NO_X emission rate for the hour.

Paragraph (c) states that each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of Appendix D to Part 75 of this chapter are acceptable for use under this subpart.

Paragraph (d) states that each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.

Paragraph (e) states that the owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of Appendix B to Part 75 of this chapter.

Starwood Power operates a NO_X CEMS in accordance with the requirements of this section. As discussed above, Starwood Power is not required to install a fuel flow meter, watt meter, steam flow meter, or a pressure or temperature measurement device to comply with the requirements of this subpart.

- Conditions 35 and 35 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure cornpliance with these requirements.

<u>Section 60.4350 – CEMS Data and Excess NO_X Emissions:</u>

Section 60.4350 states that for purposes of identifying excess emissions:

(a) All CEMS data must be reduced to hourly averages as specified in §60.13(h).

(b) For each unit operating hour in which a valid hourly average, as described in §60.4345(b), is obtained for both NO_X and diluent monitors, the data acquisition and handling system must calculate and record the hourly NO_X emission rate in units of ppm or lb/MMBtu, using the appropriate equation from Method 19 in Appendix A of this part. For any hour in which the hourly average O_2 concentration exceeds 19.0 percent O_2 (or the hourly average CO_2 concentration is less than 1.0 percent CO_2), a diluent cap value of 19.0 percent O_2 or 1.0 percent CO_2 (as applicable) may be used in the emission calculations.

(c) Correction of measured NO_X concentrations to 15 percent O_2 is not allowed.

(d) If you have installed and certified a NO_X diluent CEMS to meet the requirements of Part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in Subpart D of Part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under §60.7(c).

(e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.

(f) Calculate the hourly average NO_X emission rates, in units of the emission standards under §60.4320, using either ppm for units complying with the concentration limit or the equations 1 (simple cycle turbines) or 2 (combined cycle turbines) listed in §60.4350, paragraph (f).

Starwood Power monitors the NO_X emissions rates from these turbines with a CEMS. The CEMS system determines if, and when, any excess NO_X emissions are released to the atmosphere from the turbine exhaust stacks. The CEMS operates in accordance with the methods and procedures described above.

- Conditions 40 and 41 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 60.4355 – Parameter Monitoring Plan:

This section sets forth the requirements for operators that elect to continuously monitor parameters in lieu of installing a CEMS for NO_X emissions. As discussed above, Starwood Power has CEMS on each of these turbines that will directly measure NO_X emissions. Therefore, the requirements of this section are not applicable and no further discussion is required.

Sections 60.4360, 60.4365 and 60.4370 – Monitoring of Fuel Sulfur Content:

Section 60.4360 states that an operator must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was

less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.

Section 60.4365 states that an operator may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for units located in continental areas and 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use one of the following sources of information to make the required demonstration:

(a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for noncontinental areas; or

(b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for continental areas or 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for noncontinental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of Appendix D to Part 75 of this chapter is required.

Starwood Power operates these turbines on natural gas that contains a maximum sulfur content of 1.0 grains/100 scf.

Section 60.4370 states that the frequency of determining the sulfur content of the fuel must be as follows:

(a) *Fuel oil.* For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to Part 75 of this chapter (*i.e.*, flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).

(b) *Gaseous fuel.* If you elect not to demonstrate sulfur content using options in §60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day.

(c) *Custom schedules.* Notwithstanding the requirements of paragraph (b) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs (c)(1) and (c)(2) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in §60.4330.

- Condition 28 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 60.4380 – Excess NO_X Emissions:

Section 60.4380 establishes reporting requirements for periods of excess emissions and monitor downtime. Paragraph (a) lists requirements for operators choosing to monitor parameters associated with water or steam to fuel ratios. As discussed above, Starwood Power does not monitor parameters associated with water or steam to fuel ratios to predict what the NO_X emissions from the turbines will be. Therefore, the requirements of this paragraph are not applicable and no further discussion is required.

Paragraph (b) states that for turbines using CEM's:

(1) An excess emissions is any unit operating period in which the 4-hour or 30-day rolling average NO_X emission rate exceeds the applicable emission limit in §60.4320. For the purposes of this subpart, a "4-hour rolling average NO_X emission rate" is the arithmetic average of the average NO_X emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO_X emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO_X emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a "30-day rolling average NO_X emission rate" is the arithmetic average of all hourly NO_X emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_X emissions rates for the preceding 30 unit operating days if a valid NO_X emission rate is obtained for at least 75 percent of all operating hours.

(2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_X concentration, CO2 or O_2 concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

(3) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

Paragraph (c) lists requirements for operators who choose to monitor combustion parameters that document proper operation of the NO_X emission controls. Starwood Power is not proposing to monitor combustion parameters that document proper operation of the NO_X emission controls. Therefore, the requirements of this paragraph are not applicable and no further discussion is required.

- Condition 41 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 60.4385 – Excess SO_X Emissions:

Section 60.4385 states that if an operator chooses the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime are defined as follows:

(a) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(b) If the option to sample each delivery of fuel oil has been selected, you must immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. You must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and you must evaluate excess emissions according to paragraph (a) of this section. When all of the fuel from the delivery has been burned, you may resume using the as-delivered sampling option.

(c) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

Starwood Power followings the definitions and procedures specified above for determining periods of excess SO_X emissions. Therefore, the proposed turbines will be operating in compliance with the requirements of this section.

Sections 60.4375, 60.4380, 60.4385 and 60.4395 – Reporting:

These sections establish the reporting requirements for each turbine. These requirements include methods and procedures for submitting reports of monitoring parameters, annual performance tests, excess emissions and periods of monitor downtime. Starwood Power maintains records and submits reports in accordance with the requirements specified in these sections. Therefore, the proposed turbines are operating in compliance with the requirements of this section.

- Condition 46 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 60.4400 – NO_X Performance Testing:

Section 60.4400, paragraph (a) states that an operator must conduct an initial performance test, as required in §60.8. Subsequent NO_X performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

Paragraphs (1), (2) and (3) set forth the requirements for the methods that are to be used during source testing.

- Conditions 26, 27, and 29 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

Section 60.4405 – Initial CEMS Relative Accuracy Testing:

Section 60.4405 states that if you elect to install and certify a NO_X-diluent CEMS, then the initial performance test required under §60.8 may be performed in the alternative manner described in paragraphs (a), (b), (c) and (d). Starwood Power is not installation a CEMS as part of this project. Therefore, the requirements of this section are not applicable and no further discussion is required.

Section 60.4410 – Parameter Monitoring Ranges:

Section 60.4410 sets forth requirements for operators that elect to monitor combustion parameters or parameters indicative of proper operation of NO_X emission controls. As discussed above, Starwood Power operates a CEMS system to monitor the NO_X emissions from each of these turbines and does not monitor combustion parameters or parameters indicative of proper operation. Therefore, the requirements of this section are not applicable and no further discussion is required.

Section 60.4415– SO_X Performance Testing:

Section 60.4415 states that an operator must conduct an initial performance test, as required in §60.8. Subsequent SO_2 performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests.

(1) If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see §60.17) for natural gas or ASTM D4177 (incorporated by reference, see §60.17) for oil. Alternatively, for oil, you may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see §60.17). The fuel analyses of this section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using:

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

(ii) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17).

- Condition 30 of the requirements for proposed permits -1-2, -2-2, -3-2, and -4-2 ensure compliance with these requirements.

7. 40 CFR Part 64, CAM

40 CFR Part 64 requires Compliance Assurance Monitoring (CAM) for units that meet the following three criteria:

1) the unit must have an emission limit for the pollutant;
2) the unit must have add-on controls for the pollutant; these are devices such as flue gas recirculation (FGR), baghouses, and catalytic oxidizers; and
3) the unit must have a pre-control potential to emit of greater than the major source thresholds.

Pollutant	Major Source Threshold (lb/year)
VOC	20,000
NO_X	20,000
CO	200,000
PM_{10}	140,000
SO_X	140,000

a) **C-7286-1-2:** 30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-2)

1) This unit contains emission limits for NO_X, SO_x, PM_{10}, CO and VOC.
2) This unit is served by a SCR system to control NO_X emissions and a oxidation catalyst to control CO emissions.
3) The SCR system will be assumed to have a NO_X control efficiency of 90%. The oxidation catalyst will be assumed to have a CO control efficiency of 80%.

Pre-control Annual PE:

NO_X:

PE = 12,736 lb/year (permit condition)

Pre-control PE = PE ÷ (1 – CE)
= (12,736 lb-NO_X/year) ÷ (1 – 0.9)
= **127,360 lb-NO_X/year**

Since 127,360 lb-NO_X/yr > 20,000 lb-NO_X/yr (Major Source threshold for NO_X), this unit is subject to CAM for NO_X emissions.

The facility operates a CEM system to monitor NO_X, CO, and O2 emissions from this turbine therefore, CAM is not applicable and the equipment is exempt from CAM requirements. The standard conditions that require the CEMs to be installed, calibrated, maintained, and require the data to be reported ensure that the equipment will remain exempt from CAM requirements.

CO:

PE = 18,826 lb/year (permit condition)

Pre-control PE = PE ÷ (1 – CE)
= (18,826 lb-CO/year) ÷ (1 – 0.8)
= **94,130 lb-CO/year**

Since 94,130 lb-CO/yr < 200,000 lb-CO/yr (Major Source threshold for CO), this unit is not subject to CAM for CO emissions.

b) **C-7286-2-2:** 30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-1)

1) This unit contains emission limits for NO_X, SO_x, PM_{10}, CO and VOC.
2) This unit is served by a SCR system to control NO_X emissions and a oxidation catalyst to control CO emissions.
3) The SCR system will be assumed to have a NO_X control efficiency of 90%. The oxidation catalyst will be assumed to have a CO control efficiency of 80%.

Pre-control Annual PE:

NO_X:

PE = 12,736 lb/year (permit condition)

Pre-control PE = PE ÷ (1 – CE)
= (12,736 lb-NO_X/year) ÷ (1 – 0.9)
= **127,360 lb-NO_X/year**

Since 127,360 lb-NO_X/yr > 20,000 lb-NO_X/yr (Major Source threshold for NO_X), this unit is subject to CAM for NO_X emissions.

The facility operates a CEM system to monitor NO_X, CO, and O2 emissions from this turbine therefore, CAM is not applicable and the equipment is exempt from CAM requirements. The standard conditions that require the CEMs to be installed, calibrated, maintained, and require the data to be reported ensure that the equipment will remain exempt from CAM requirements.

CO:

PE = 18,826 lb/year (permit condition)

Pre-control PE = PE ÷ (1 – CE)
= (18,826 lb-CO/year) ÷ (1 – 0.8)
= **94,130 lb-CO/year**

Since 94,130 lb-CO/yr < 200,000 lb-CO/yr (Major Source threshold for CO), this unit is not subject to CAM for CO emissions.

c) **C-7286-3-2:** 30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-4)

1) This unit contains emission limits for NO_X, SO_x, PM_{10}, CO and VOC.
2) This unit is served by a SCR system to control NO_X emissions and a oxidation catalyst to control CO emissions.
3) The SCR system will be assumed to have a NO_X control efficiency of 90%. The oxidation catalyst will be assumed to have a CO control efficiency of 80%.

Pre-control Annual PE:

NO_X:

PE = 12,736 lb/year (permit condition)

Pre-control PE = PE ÷ (1 – CE)
= (12,736 lb-NO_X/year) ÷ (1 – 0.9)
= **127,360 lb-NO_X/year**

Since 127,360 lb-NO_X/yr > 20,000 lb-NO_X/yr (Major Source threshold for NO_X), this unit is subject to CAM for NO_X emissions.

The facility operates a CEM system to monitor NO_X, CO, and O2 emissions from this turbine therefore, CAM is not applicable and the equipment is exempt from CAM requirements. The standard conditions that require the CEMs to be installed, calibrated, maintained, and require the data to be reported ensure that the equipment will remain exempt from CAM requirements.

CO:

PE = 18,826 lb/year (permit condition)

Pre-control PE = PE ÷ (1 – CE)
= (18,826 lb-CO/year) ÷ (1 – 0.8)
= **94,130 lb-CO/year**

Since 94,130 lb-CO/yr < 200,000 lb-CO/yr (Major Source threshold for CO), this unit is not subject to CAM for CO emissions.

d) C-7286-4-2: 30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-3)

1) This unit contains emission limits for NO_X, SO_x, PM_{10}, CO and VOC.
2) This unit is served by a SCR system to control NO_X emissions and a oxidation catalyst to control CO emissions.
3) The SCR system will be assumed to have a NO_X control efficiency of 90%. The oxidation catalyst will be assumed to have a CO control efficiency of 80%.

Pre-control Annual PE:

NO_X:

PE = 12,736 lb/year (permit condition)

Pre-control PE = PE ÷ (1 – CE)
= (12,736 lb-NO_X/year) ÷ (1 – 0.9)
= **127,360 lb-NO_X/year**

Since 127,360 lb-NO_X/yr > 20,000 lb-NO_X/yr (Major Source threshold for NO_X), this unit is subject to CAM for NO_X emissions.

The facility operates a CEM system to monitor NO_X, CO, and O2 emissions from this turbine therefore, CAM is not applicable and the equipment is exempt from CAM requirements. The standard conditions that require the CEMs to be installed, calibrated, maintained, and require the data to be reported ensure that the equipment will remain exempt from CAM requirements.

CO:

PE = 18,826 lb/year (permit condition)

Pre-control PE = PE ÷ (1 – CE)
= (18,826 lb-CO/year) ÷ (1 – 0.8)
= **94,130 lb-CO/year**

Since 94,130 lb-CO/yr < 200,000 lb-CO/yr (Major Source threshold for CO), this unit is not subject to CAM for CO emissions.

X. PERMIT SHIELD

A permit shield legally protects a facility from enforcement of the shielded regulations when a source is in compliance with the terms and conditions of the Title V permit. Compliance with the terms and conditions of the Operating Permit is considered compliance with all applicable requirements upon which those conditions are based, including those that have been subsumed.

A. Requirements Addressed by Model General Permit Templates

By using the model general permit template listed in Section IV of this evaluation, the applicant has requested that a permit shield be issued for requirements addressed in the template. The basis for each permit shield is discussed in the Permit Shield section of each template.

XI. PERMIT CONDITIONS

See draft operating permit beginning on the following page.

San Joaquin Valley
Air Pollution Control District

FACILITY: C-7286-0-1 **EXPIRATION DATE:** 05/31/2016

FACILITY-WIDE REQUIREMENTS

1. {4362} The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
2. {4363} The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. {4364} The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. {4365} Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. {4366} The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.9.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. {4367} A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. {4368} Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. {4369} The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

9. {4370} The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. {4371} The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit

11. {4372} Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit

12. {4373} If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit

13. {4374} It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit

14. {4375} The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit

15. {4376} The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit

16. {4377} The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit

17. {4378} The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit

18. {4379} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit

19. {4380} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit

20. {4381} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit

21. {4382} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

22. {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

23. {4384} No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 1 effective until 12/30/10 or Table of Standards 2 effective on and after 1/1/11 of District Rule 4601 (12/17/09) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit

24. {4385} All VOC-containing materials subject to Rule 4601 (12/17/09) shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit

25. {4386} The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (12/17/09). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit

26. {4387} With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit

27. {4388} If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit

28. {4389} If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit

29. {4390} Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8021 and 8011] Federally Enforceable Through Title V Permit

30. {4391} Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8031 and 8011] Federally Enforceable Through Title V Permit

31. {4392} An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8041 and 8011] Federally Enforceable Through Title V Permit

32. {4393} Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8051 and 8011] Federally Enforceable Through Title V Permit

33. {4394} Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8061 and Rule 8011] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

34. {4395} Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rule 8071 and Rule 8011] Federally Enforceable Through Title V Permit

35. {4396} Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit

36. {4397} The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit

37. {4398} The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit

38. {4399} When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit

39. {4400} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

40. {4401} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

41. District facilities C-3811 and C-7286 are the same stationary source for District permitting purposes. [District Rule 2201] Federally Enforceable Through Title V Permit

42. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

43. On (MONTH DAY, YEAR), the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report are based upon this initial permit issuance date, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7286-1-2 **EXPIRATION DATE:** 05/31/2016

EQUIPMENT DESCRIPTION:
30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-2)

PERMIT UNIT REQUIREMENTS

1. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. The permittee shall submit SCR and oxidation catalyst design details to the District at least 30 days prior to commencement of construction. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall submit continuous emission monitor design, installation, and operational details to the District at least 30 days prior to commencement of construction. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The permittee shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when no continuous emission monitoring data for NOx is available or when continuous emission monitoring system is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
7. This CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
8. Emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 2.8 lb/hr and 2.5 ppmvd @ 15% O2; CO - 4.19 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 0.82 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Combined emission rates from the CTG's operating under permit units C-7286-1 and C-7286-2, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 5.6 lb/hr and 2.5 ppmvd @ 15% O2; CO - 8.38 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 1.64 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 3.70 lb/hr; or SOx (as SO2) - 1.78 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit

10. The ammonia (NH3) emissions from this CTG shall not exceed either of the following limits: 4.24 lb/hr or 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

11. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 30.0 lb/hr; CO - 12.5 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

12. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 1.50 lb/hr; CO - 21.33 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

13. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

14. The duration of each startup or shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

15. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit

16. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 79.8 lb/day; CO - 117.6 lb/day; VOC - 19.7 lb/day; PM10 - 44.4 lb/day; or SOx (as SO2) - 21.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Combined daily emissions from the CTG's operating under permit units C-7286-1 and C-7286-2 shall not exceed any of the following limits: NOx (as NO2) - 159.6 lb/day; CO - 235.2 lb/day; VOC - 39.4 lb/day; PM10 - 88.8 lb/day; or SOx (as SO2) - 42.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Quarterly hours of operation of this CTG shall not exceed any of the following limits: 1st Quarter - 800 hours, 2nd Quarter - 800 hours, 3rd Quarter - 1,400 hours, or 4th Quarter - 1,000 hours. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 12,736 lb/year; CO - 18,826 lb/year; VOC - 3,281 lb/year; PM10 - 7,400 lb/year; or SOx (as SO2) - 3,560 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Combined annual emissions from the CTG's operating under permit units C-7286-1 and C-7286-2, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 25,742 lb/year; CO - 37,652 lb/year; VOC - 6,562 lb/year; PM10 - 14,800 lb/year; or SOx (as SO2) - 7,120 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

21. The combined annual NOx emissions from the CTG's operating under permits C-7286-1, C-7286-2, C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed 50,000 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

22. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

25. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one SwiftPac unit (two paired turbines operating under units C-7286-1 and C-7286-2 or C-7286-3 and C-7286-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

26. Source testing to determine compliance with NOx, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O2) and PM10 emission rate (lb/hr) shall be conducted at least once every 12 months. The source testing frequency may be reduced to once every 24 months if the actual operation of units C-7286-1 and C-7286-2 combined is less than 877 hours during any 12 consecutive month rolling period. NOx emission concentration at the SCR inlet shall be determined for 90%, and 100% loads during compliance testing by measuring NOx emissions at each load for a minimum of 5 minutes or until NOx concentration has stabilized. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

27. Source testing shall be conducted while units C-7286-1 and C-7286-2 are operating simultaneously. If unit C-7286-1 operates independently from unit C-7286-2 for more than 400 hours during any given calendar year, source testing shall also be conducted while unit C-7286-1 is operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

28. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored within 60 days of the end of the commission period and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx - EPA Method 7E or 20; CO - EPA Method 10 or 10B; VOC - EPA Method 18 or 25; PM10 - EPA Method 5/202 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20. EPA approved alternative test methods, as approved by the District, may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

30. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit

31. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

32. Compliance demonstration (source testing) shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. 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. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 40 CFR 60.4375(b)] Federally Enforceable Through Title V Permit

33. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

34. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

35. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit

36. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 75, Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

37. The owner/operator shall perform audits of the CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every QA operating quarter, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next audit. No more than four successive calendar quarters shall elapse after the quarter in which an audit was last performed without a subsequent audit having been conducted. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080 and 4703, 6.2.3, 40 CFR 60.4345(e) and 40 CFR 75, Appendix B] Federally Enforceable Through Title V Permit

38. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO and O2 CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every two QA operating quarters. The RATA frequency may be reduced to at least once every four QA operating quarters if the incentive criteria of 40 CFR 75, Appendix B, Section 2.3.1.2 has been met. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 75, Appendices A and B. [District Rule 1080, 40 CFR 60.4345(a) and 40 CFR 75, Appendices A & B] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. For the purposes of performing quarterly audits and RATA on the CEMS, a QA operating quarter shall be defined as a calendar quarter in which there are at least 168 unit operating hours, or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours. An operating hour is defined as a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour. [40 CFR 72] Federally Enforceable Through Title V Permit

40. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13] Federally Enforceable Through Title V Permit

41. Excess NOx emissions shall be defined as any operating hour in which the 1-hour rolling average NOx concentration exceeds an applicable emissions limit. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(g) and 40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

42. Results of continuous emissions monitoring shall be reduced according to the procedures 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 ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

43. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit

44. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

45. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080] Federally Enforceable Through Title V Permit

46. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

47. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

48. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201 and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

49. The permittee shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr, lb/qtr and lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

50. All records shall be maintained and retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4703] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7286-2-2 **EXPIRATION DATE:** 05/31/2016

EQUIPMENT DESCRIPTION:
30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-1)

PERMIT UNIT REQUIREMENTS

1. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. The permittee shall submit SCR and oxidation catalyst design details to the District at least 30 days prior to commencement of construction. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall submit continuous emission monitor design, installation, and operational details to the District at least 30 days prior to commencement of construction. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The permittee shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when no continuous emission monitoring data for NOx is available or when continuous emission monitoring system is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
7. This CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
8. Emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 2.8 lb/hr and 2.5 ppmvd @ 15% O2; CO - 4.19 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 0.82 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Combined emission rates from the CTG's operating under permit units C-7286-1 and C-7286-2, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 5.6 lb/hr and 2.5 ppmvd @ 15% O2; CO - 8.38 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 1.64 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 3.70 lb/hr; or SOx (as SO2) - 1.78 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit

10. The ammonia (NH3) emissions from this CTG shall not exceed either of the following limits: 4.24 lb/hr or 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

11. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 30.0 lb/hr; CO - 12.5 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

12. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 1.50 lb/hr; CO - 21.33 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

13. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

14. The duration of each startup or shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

15. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit

16. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 79.8 lb/day; CO - 117.6 lb/day; VOC - 19.7 lb/day; PM10 - 44.4 lb/day; or SOx (as SO2) - 21.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Combined daily emissions from the CTG's operating under permit units C-7286-1 and C-7286-2 shall not exceed any of the following limits: NOx (as NO2) - 159.6 lb/day; CO - 235.2 lb/day; VOC - 39.4 lb/day; PM10 - 88.8 lb/day; or SOx (as SO2) - 42.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Quarterly hours of operation of this CTG shall not exceed any of the following limits: 1st Quarter - 800 hours, 2nd Quarter - 800 hours, 3rd Quarter - 1,400 hours, or 4th Quarter - 1,000 hours. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 12,736 lb/year; CO - 18,826 lb/year; VOC - 3,281 lb/year; PM10 - 7,400 lb/year; or SOx (as SO2) - 3,560 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Combined annual emissions from the CTG's operating under permit units C-7286-1 and C-7286-2, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 25,742 lb/year; CO - 37,652 lb/year; VOC - 6,562 lb/year; PM10 - 14,800 lb/year; or SOx (as SO2) - 7,120 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

21. The combined annual NOx emissions from the CTG's operating under permits C-7286-1, C-7286-2, C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed 50,000 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

22. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

25. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one SwiftPac unit (two paired turbines operating under units C-7286-1 and C-7286-2 or C-7286-3 and C-7286-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

26. Source testing to determine compliance with NOx, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O2) and PM10 emission rate (lb/hr) shall be conducted at least once every 12 months. The source testing frequency may be reduced to once every 24 months if the actual operation of units C-7286-1 and C-7286-2 combined is less than 877 hours during any 12 consecutive month rolling period. NOx emission concentration at the SCR inlet shall be determined for 90%, and 100% loads during compliance testing by measuring NOx emissions at each load for a minimum of 5 minutes or until NOx concentration has stabilized. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

27. Source testing shall be conducted while units C-7286-1 and C-7286-2 are operating simultaneously. If unit C-7286-1 operates independently from unit C-7286-2 for more than 400 hours during any given calendar year, source testing shall also be conducted while unit C-7286-2 is operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

28. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored within 60 days of the end of the commission period and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx - EPA Method 7E or 20; CO - EPA Method 10 or 10B; VOC - EPA Method 18 or 25; PM10 - EPA Method 5/202 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20. EPA approved alternative test methods, as approved by the District, may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

30. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit

31. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

32. Compliance demonstration (source testing) shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. 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. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 40 CFR 60.4375(b)] Federally Enforceable Through Title V Permit

33. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

34. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

35. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit

36. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 75, Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

37. The owner/operator shall perform audits of the CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every QA operating quarter, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next audit. No more than four successive calendar quarters shall elapse after the quarter in which an audit was last performed without a subsequent audit having been conducted. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080 and 4703, 6.2.3, 40 CFR 60.4345(e) and 40 CFR 75, Appendix B] Federally Enforceable Through Title V Permit

38. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO and O2 CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every two QA operating quarters. The RATA frequency may be reduced to at least once every four QA operating quarters if the incentive criteria of 40 CFR 75, Appendix B, Section 2.3.1.2 has been met. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 75, Appendices A and B. [District Rule 1080, 40 CFR 60.4345(a) and 40 CFR 75, Appendices A & B] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. For the purposes of performing quarterly audits and RATA on the CEMS, a QA operating quarter shall be defined as a calendar quarter in which there are at least 168 unit operating hours, or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours. An operating hour is defined as a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour. [40 CFR 72] Federally Enforceable Through Title V Permit

40. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13] Federally Enforceable Through Title V Permit

41. Excess NOx emissions shall be defined as any operating hour in which the 1-hour rolling average NOx concentration exceeds an applicable emissions limit. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(g) and 40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

42. Results of continuous emissions monitoring shall be reduced according to the procedures 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 ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

43. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit

44. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

45. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080] Federally Enforceable Through Title V Permit

46. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

47. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

48. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201 and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

49. The permittee shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr, lb/qtr and lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

50. All records shall be maintained and retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4703] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7286-3-2 **EXPIRATION DATE:** 05/31/2016

EQUIPMENT DESCRIPTION:
30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-4)

PERMIT UNIT REQUIREMENTS

1. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. The permittee shall submit SCR and oxidation catalyst design details to the District at least 30 days prior to commencement of construction. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall submit continuous emission monitor design, installation, and operational details to the District at least 30 days prior to commencement of construction. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The permittee shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when no continuous emission monitoring data for NOx is available or when continuous emission monitoring system is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
7. This CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
8. Emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 2.8 lb/hr and 2.5 ppmvd @ 15% O2; CO - 4.19 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 0.82 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Combined emission rates from the CTG's operating under permit units C-7286-3 and C-7286-4, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 5.6 lb/hr and 2.5 ppmvd @ 15% O2; CO - 8.38 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 1.64 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 3.70 lb/hr; or SOx (as SO2) - 1.78 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit

10. The ammonia (NH3) emissions from this CTG shall not exceed either of the following limits: 4.24 lb/hr or 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

11. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 30.0 lb/hr; CO - 12.5 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

12. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 1.50 lb/hr; CO - 21.33 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

13. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

14. The duration of each startup or shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

15. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit

16. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 79.8 lb/day; CO - 117.6 lb/day; VOC - 19.7 lb/day; PM10 - 44.4 lb/day; or SOx (as SO2) - 21.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Combined daily emissions from the CTG's operating under permit units C-7286-3 and C-7286-4 shall not exceed any of the following limits: NOx (as NO2) - 159.6 lb/day; CO - 235.2 lb/day; VOC - 39.4 lb/day; PM10 - 88.8 lb/day; or SOx (as SO2) - 42.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Quarterly hours of operation of this CTG shall not exceed any of the following limits: 1st Quarter - 800 hours, 2nd Quarter - 800 hours, 3rd Quarter - 1,400 hours, or 4th Quarter - 1,000 hours. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 12,736 lb/year; CO - 18,826 lb/year; VOC - 3,281 lb/year; PM10 - 7,400 lb/year; or SOx (as SO2) - 3,560 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Combined annual emissions from the CTG's operating under permit units C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 25,742 lb/year; CO - 37,652 lb/year; VOC - 6,562 lb/year; PM10 - 14,800 lb/year; or SOx (as SO2) - 7,120 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

21. The combined annual NOx emissions from the CTG's operating under permits C-7286-1, C-7286-2, C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed 50,000 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

22. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

25. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one SwiftPac unit (two paired turbines operating under units C-7286-1 and C-7286-2 or C-7286-3 and C-7286-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

26. Source testing to determine compliance with NOx, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O2) and PM10 emission rate (lb/hr) shall be conducted at least once every 12 months. The source testing frequency may be reduced to once every 24 months if the actual operation of units C-7286-3 and C-7286-4 combined is less than 877 hours during any 12 consecutive month rolling period. NOx emission concentration at the SCR inlet shall be determined for 90%, and 100% loads during compliance testing by measuring NOx emissions at each load for a minimum of 5 minutes or until NOx concentration has stabilized. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

27. Source testing shall be conducted while units C-7286-3 and C-7286-4 are operating simultaneously. If unit C-7286-3 operates independently from unit C-7286-4 for more than 400 hours during any given calendar year, source testing shall also be conducted while unit C-7286-3 is operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

28. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored within 60 days of the end of the commission period and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx - EPA Method 7E or 20; CO - EPA Method 10 or 10B; VOC - EPA Method 18 or 25; PM10 - EPA Method 5/202 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20. EPA approved alternative test methods, as approved by the District, may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

30. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit

31. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

32. Compliance demonstration (source testing) shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. 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. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 40 CFR 60.4375(b)] Federally Enforceable Through Title V Permit

33. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

34. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

35. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit

36. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 75, Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

37. The owner/operator shall perform audits of the CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every QA operating quarter, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next audit. No more than four successive calendar quarters shall elapse after the quarter in which an audit was last performed without a subsequent audit having been conducted. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080 and 4703, 6.2.3, 40 CFR 60.4345(e) and 40 CFR 75, Appendix B] Federally Enforceable Through Title V Permit

38. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO and O2 CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every two QA operating quarters. The RATA frequency may be reduced to at least once every four QA operating quarters if the incentive criteria of 40 CFR 75, Appendix B, Section 2.3.1.2 has been met. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 75, Appendices A and B. [District Rule 1080, 40 CFR 60.4345(a) and 40 CFR 75, Appendices A & B] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. For the purposes of performing quarterly audits and RATA on the CEMS, a QA operating quarter shall be defined as a calendar quarter in which there are at least 168 unit operating hours, or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours. An operating hour is defined as a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour. [40 CFR 72] Federally Enforceable Through Title V Permit

40. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13] Federally Enforceable Through Title V Permit

41. Excess NOx emissions shall be defined as any operating hour in which the 1-hour rolling average NOx concentration exceeds an applicable emissions limit. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(g) and 40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

42. Results of continuous emissions monitoring shall be reduced according to the procedures 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 ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

43. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit

44. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

45. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080] Federally Enforceable Through Title V Permit

46. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

47. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

48. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201 and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

49. The permittee shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr, lb/qtr and lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

50. All records shall be maintained and retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4703] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7286-4-2 **EXPIRATION DATE:** 05/31/2016

EQUIPMENT DESCRIPTION:
30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-3)

PERMIT UNIT REQUIREMENTS

1. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. The permittee shall submit SCR and oxidation catalyst design details to the District at least 30 days prior to commencement of construction. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall submit continuous emission monitor design, installation, and operational details to the District at least 30 days prior to commencement of construction. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The permittee shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when no continuous emission monitoring data for NOx is available or when continuous emission monitoring system is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
7. This CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
8. Emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 2.8 lb/hr and 2.5 ppmvd @ 15% O2; CO - 4.19 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 0.82 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Combined emission rates from the CTG's operating under permit units C-7286-3 and C-7286-4, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 5.6 lb/hr and 2.5 ppmvd @ 15% O2; CO - 8.38 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 1.64 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 3.70 lb/hr; or SOx (as SO2) - 1.78 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
10. The ammonia (NH3) emissions from this CTG shall not exceed either of the following limits: 4.24 lb/hr or 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
11. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 30.0 lb/hr; CO - 12.5 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
12. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 1.50 lb/hr; CO - 21.33 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
13. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
14. The duration of each startup or shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
16. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 79.8 lb/day; CO - 117.6 lb/day; VOC - 19.7 lb/day; PM10 - 44.4 lb/day; or SOx (as SO2) - 21.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Combined daily emissions from the CTG's operating under permit units C-7286-3 and C-7286-4 shall not exceed any of the following limits: NOx (as NO2) - 159.6 lb/day; CO - 235.2 lb/day; VOC - 39.4 lb/day; PM10 - 88.8 lb/day; or SOx (as SO2) - 42.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Quarterly hours of operation of this CTG shall not exceed any of the following limits: 1st Quarter - 800 hours, 2nd Quarter - 800 hours, 3rd Quarter - 1,400 hours, or 4th Quarter - 1,000 hours. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 12,736 lb/year; CO - 18,826 lb/year; VOC - 3,281 lb/year; PM10 - 7,400 lb/year; or SOx (as SO2) - 3,560 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Combined annual emissions from the CTG's operating under permit units C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 25,742 lb/year; CO - 37,652 lb/year; VOC - 6,562 lb/year; PM10 - 14,800 lb/year; or SOx (as SO2) - 7,120 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
21. The combined annual NOx emissions from the CTG's operating under permits C-7286-1, C-7286-2, C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed 50,000 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

22. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

25. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one SwiftPac unit (two paired turbines operating under units C-7286-1 and C-7286-2 or C-7286-3 and C-7286-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

26. Source testing to determine compliance with NOx, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O2) and PM10 emission rate (lb/hr) shall be conducted at least once every 12 months. The source testing frequency may be reduced to once every 24 months if the actual operation of units C-7286-3 and C-7286-4 combined is less than 877 hours during any 12 consecutive month rolling period. NOx emission concentration at the SCR inlet shall be determined for 90%, and 100% loads during compliance testing by measuring NOx emissions at each load for a minimum of 5 minutes or until NOx concentration has stabilized. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

27. Source testing shall be conducted while units C-7286-3 and C-7286-4 are operating simultaneously. If unit C-7286-3 operates independently from unit C-7286-4 for more than 400 hours during any given calendar year, source testing shall also be conducted while unit C-7286-4 is operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

28. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored within 60 days of the end of the commission period and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx - EPA Method 7E or 20; CO - EPA Method 10 or 10B; VOC - EPA Method 18 or 25; PM10 - EPA Method 5/202 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20. EPA approved alternative test methods, as approved by the District, may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

30. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit

31. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

32. Compliance demonstration (source testing) shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. 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. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 40 CFR 60.4375(b)] Federally Enforceable Through Title V Permit

33. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

34. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

35. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit

36. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 75, Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

37. The owner/operator shall perform audits of the CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every QA operating quarter, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next audit. No more than four successive calendar quarters shall elapse after the quarter in which an audit was last performed without a subsequent audit having been conducted. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080 and 4703, 6.2.3, 40 CFR 60.4345(e) and 40 CFR 75, Appendix B] Federally Enforceable Through Title V Permit

38. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO and O2 CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every two QA operating quarters. The RATA frequency may be reduced to at least once every four QA operating quarters if the incentive criteria of 40 CFR 75, Appendix B, Section 2.3.1.2 has been met. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 75, Appendices A and B. [District Rule 1080, 40 CFR 60.4345(a) and 40 CFR 75, Appendices A & B] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. For the purposes of performing quarterly audits and RATA on the CEMS, a QA operating quarter shall be defined as a calendar quarter in which there are at least 168 unit operating hours, or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours. An operating hour is defined as a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour. [40 CFR 72] Federally Enforceable Through Title V Permit

40. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13] Federally Enforceable Through Title V Permit

41. Excess NOx emissions shall be defined as any operating hour in which the 1-hour rolling average NOx concentration exceeds an applicable emissions limit. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(g) and 40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

42. Results of continuous emissions monitoring shall be reduced according to the procedures 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 ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

43. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit

44. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

45. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080] Federally Enforceable Through Title V Permit

46. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

47. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

48. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201 and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

49. The permittee shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr, lb/qtr and lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

50. All records shall be maintained and retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4703] Federally Enforceable Through Title V Permit

Attachment A

Detailed Facility Printout

Detailed Facility Report

For Facility=7286 and excluding Deleted Permits
Sorted by Facility Name and Permit Number

STARWOOD POWER-MIDWAY, LLC
43699 PANOCHE RD
FIREBAUGH, CA

FAC # **C 7286** TYPE: **TitleV** EXPIRE ON: 05/31/2016
STATUS: **A** TOXIC ID: AREA: 3 /
TELEPHONE: INSP. DATE: 04/12

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
C-7286-1-1	30,000 kW	3020-08A F	1	8,171.00	8,171.00	A	30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-2)
C-7286-2-1	30,000 kW	3020-08A F	1	8,171.00	8,171.00	A	30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-1)
C-7286-3-1	30,000 kW	3020-08A F	1	8,171.00	8,171.00	A	30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-4)
C-7286-4-1	30,000 kW	3020-08A F	1	8,171.00	8,171.00	A	30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-3)

Number of Facilities Reported: 1

Attachment B

Exempt Equipment

San Joaquin Valley
Unified Air Pollution Control District
Title V Application - INSIGNIFICANT ACTIVITIES

COMPANY NAME: STARWOOD POWER - MIDWAY, LLC	FACILITY ID: C - 7286

Check the box next to the exemption category from Rule 2020 which describes any insignificant activity or equipment at your facility not requiring a permit.

Exemption Category	Rule 2020 Citation	√
Structure or incinerator assoc. with a structure designed as a dwelling for 4 families or less	4.1	
Locomotives, airplanes, and watercraft used to transport passengers or freight	4.4	
Natural gas or LPG-fired boilers or other indirect heat transfer units of 5 MMBtu/hr or less	6.1.1	
Piston-type i.c.engine with maximum continuous rating of 50 braking horsepower (bhp) or less	6.1.2	
Gas turbine engines with maximum heat input rating of 3 MMBtu/hr or less	6.1.3	
Space heating equipment other than boilers	6.1.4	
Cooling towers with a circulation rate less than 10,000 gal/min, and that are not used for cooling of process water, or water from barometric jets or condensers++	6.2	
Use of less than 2 gal/day of graphic arts materials	6.3	
Equipment at retail establishments used to prepare food for human consumption	6.4.1	
Ovens at bakeries with total daily production less than 1,000 pounds and exempt by sec. 6.1.1	6.4.3	
Equipment used exclusively for extruding or compression molding of rubber or plastics, where no plastisizer or blowing agent is used	6.5	
Containers used to store clean produced water	6.6.1	
Containers ≤100 bbl used to store oil with specific gravity ≥ 0.8762	6.6.2	
Containers ≤ 100 bbl installed prior to 6/1/89 used to store oil with specific gravity ≥ 0.8762	6.6.3	
Containers with a capacity ≤ 250 gallons used to store organic material where the actual storage temperature <150 F	6.6.4	
Containers used to store unheated organic material with an initial boiling point ≥ 302 F	6.6.5	
Containers used to store fuel oils or non-air-blown asphalt with specific gravity ≥0.9042	6.6.6	
Containers used to store petroleum distillates used as motor fuel with specific gravity ≥ 0.8251	6.6.7	

Exemption Category	Rule 2020 Citation	√
Containers used to store refined lubricating oils	6.6.8	√
Unvented pressure vessels used exclusively to store liquified gases or assoc with exempt equipment	6.6.9 or 6.13	
Portable tanks used exclusively to store produced fluids for ≤ six months	6.6.10	
Mobile transport tanks on delivery vehicles of VOCs	6.6.11	
Loading racks used for the transfer of less than 4,000 gal/day of unheated organic material with initial boiling point ≥ 302 F or of fuel oil with specific gravity ≥0.8251	6.7.1.1	
Loading racks used for the transfer of asphalt, crude or residual oil stored in exempt tanks, or crude oil with specific gravity ≥ 0.8762	6.7.1.2	
Equipment used exclusively for the transfer of refined lubricating oil	6.7.2	
Equipment used to apply architectural coatings	6.8.1	
Unheated, non-conveyorized cleaning equipment with < 10 ft^2 open area; using solvents with initial boiling point ≥ 248 F; and < 25 gal/yr. evaporative losses	6.9	
Brazing, soldering, or welding equipment	6.10	
Equipment used to compress natural gas	6.11	
Fugitive emissions sources assoc. with exempt equipment	6.12	
Pits and Ponds as defined in Rule 1020	6.15	
On-site roadmix manufacturing and the application of roadmix as a road base material	6.17	
Emissions less than 2 lb/day from units not included above	6.19	
Venting PUC quality natural gas from for sole purpose of pipeline and compressor repair and or maintenance	7.2	√
Non-structural repairs & maintenance to permitted equipment	7.3	√
Detonation of explosives ≤ 100 lb/day and 1,000 lb/year	7.4	

☐ No insignificant activities (Check this box if no equipment in the above categories exist at your facility.)

Attachment C

Template Qualification Form

Title V General Permit Template Qualification Form for Facility-wide Umbrella General Permit Template

District facility ID # C-7286

To use this template, remove this sheet and attach to application. The conditions outlined in this template will be placed on your Title V permit.

Any facility may use this facility-wide template as part of its Title V application.

Based on information and belief formed after reasonable inquiry: 1) the information on this form is true and correct and 2) the facility certifies compliance with this template's permit conditions.

Signature of Responsible Official

4-4-2012
Date

Jeff Paul
Name of Responsible Official (Please Print)

Attachment D

Current Permits to Operate

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7286-1-1 **EXPIRATION DATE:** 05/31/2016

EQUIPMENT DESCRIPTION:
30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-2)

PERMIT UNIT REQUIREMENTS

1. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. The permittee shall submit SCR and oxidation catalyst design details to the District at least 30 days prior to commencement of construction. [District Rule 2201]
2. Permittee shall submit continuous emission monitor design, installation, and operational details to the District at least 30 days prior to commencement of construction. [District Rule 2201]
3. The permittee shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when no continuous emission monitoring data for NOx is available or when continuous emission monitoring system is not operating properly. [District Rule 4703]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
7. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101]
8. This CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)]
9. Emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 2.8 lb/hr and 2.5 ppmvd @ 15% O2; CO - 4.19 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 0.82 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]
10. The ammonia (NH3) emissions from this CTG shall not exceed either of the following limits: 4.24 lb/hr or 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rules 2201 and 4102]
11. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 30.0 lb/hr; CO - 12.5 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 1.50 lb/hr; CO - 21.33 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]

13. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703]

14. The duration of each startup or shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703]

15. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]

16. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 79.8 lb/day; CO - 117.6 lb/day; VOC - 19.7 lb/day; PM10 - 44.4 lb/day; or SOx (as SO2) - 21.4 lb/day. [District Rule 2201]

17. Quarterly hours of operation of this CTG shall not exceed any of the following limits: 1st Quarter - 800 hours, 2nd Quarter - 800 hours, 3rd Quarter - 1,400 hours, or 4th Quarter - 1,000 hours. [District Rule 2201]

18. Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 12,736 lb/year; CO - 18,826 lb/year; VOC - 3,281 lb/year; PM10 - 7,400 lb/year; or SOx (as SO2) - 3,560 lb/year. [District Rule 2201]

19. The combined annual NOx emissions from the CTG's operating under permits C-7286-1, C-7286-2, C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed 50,000 lb/year. [District Rule 2201]

20. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201]

21. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201]

22. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102]

23. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one SwiftPac unit (two paired turbines operating under units C-7286-1 and C-7286-2 or C-7286-3 and C-7286-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rules 1081 and 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. Source testing to determine compliance with NOx, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O2) and PM10 emission rate (lb/hr) shall be conducted at least once every 12 months. The source testing frequency may be reduced to once every 24 months if the actual operation of units C-7286-1 and C-7286-2 combined is less than 877 hours during any 12 consecutive month rolling period. NOx emission concentration at the SCR inlet shall be determined for 90%, and 100% loads during compliance testing by measuring NOx emissions at each load for a minimum of 5 minutes or until NOx concentration has stabilized. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

25. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored within 60 days of the end of the commission period and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)]

26. The following test methods shall be used: NOx - EPA Method 7E or 20; CO - EPA Method 10 or 10B; VOC - EPA Method 18 or 25; PM10 - EPA Method 5/202 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20. EPA approved alternative test methods, as approved by the District, may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i)]

27. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)]

28. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]

29. Compliance demonstration (source testing) shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. 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. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 40 CFR 60.4375(b)]

30. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703]

31. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703 and 40 CFR 60.4335(b)(1)]

32. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)]

33. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 75, Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

34. The owner/operator shall perform audits of the CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every QA operating quarter, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next audit. No more than four successive calendar quarters shall elapse after the quarter in which an audit was last performed without a subsequent audit having been conducted. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080 and 4703, 6.2.3, 40 CFR 60.4345(e) and 40 CFR 75, Appendix B]

35. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO and O2 CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every two QA operating quarters. The RATA frequency may be reduced to at least once every four QA operating quarters if the incentive criteria of 40 CFR 75, Appendix B, Section 2.3.1.2 has been met. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 75, Appendices A and B. [District Rule 1080, 40 CFR 60.4345(a) and 40 CFR 75, Appendices A & B]

36. For the purposes of performing quarterly audits and RATA on the CEMS, a QA operating quarter shall be defined as a calendar quarter in which there are at least 168 unit operating hours, or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours. An operating hour is defined as a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour. [40 CFR 72]

37. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13]

38. Excess NOx emissions shall be defined as any operating hour in which the 1-hour rolling average NOx concentration exceeds an applicable emissions limit. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(g) and 40 CFR 60.4380(b)(1)]

39. Results of continuous emissions monitoring shall be reduced according to the procedures 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 ARB, and the EPA. [District Rule 1080]

40. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080]

41. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080]

42. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080]

43. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395]

44. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

45. Permittee shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1]

46. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0]

47. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201 and 4703 and 40 CFR 60.8(d)]

48. The permittee shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr, lb/qtr and lb/twelve month rolling period). [District Rules 2201 and 4703]

49. All records shall be maintained and retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4703]

50. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]

51. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021]

52. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021]

53. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]

54. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

55. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

56. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]

57. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

58. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

59. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031 and 8071]

60. Combined emission rates from the CTG's operating under permit units C-7286-1 and C-7286-2, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 5.6 lb/hr and 2.5 ppmvd @ 15% O2; CO - 8.38 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 1.64 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 3.70 lb/hr; or SOx (as SO2) - 1.78 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]

61. Combined daily emissions from the CTG's operating under permit units C-7286-1 and C-7286-2 shall not exceed any of the following limits: NOx (as NO2) - 159.6 lb/day; CO - 235.2 lb/day; VOC - 39.4 lb/day; PM10 - 88.8 lb/day; or SOx (as SO2) - 42.8 lb/day. [District Rule 2201]

62. Combined annual emissions from the CTG's operating under permit units C-7286-1 and C-7286-2, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 25,742 lb/year; CO - 37,652 lb/year; VOC - 6,562 lb/year; PM10 - 14,800 lb/year; or SOx (as SO2) - 7,120 lb/year. [District Rule 2201]

63. Source testing shall be conducted while units C-7286-1 and C-7286-2 are operating simultaneously. If unit C-7286-1 operates independently from unit C-7286-2 for more than 400 hours during any given calendar year, source testing shall also be conducted while unit C-7286-1 is operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7286-2-1 **EXPIRATION DATE:** 05/31/2016

EQUIPMENT DESCRIPTION:
30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-1)

PERMIT UNIT REQUIREMENTS

1. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. The permittee shall submit SCR and oxidation catalyst design details to the District at least 30 days prior to commencement of construction. [District Rule 2201]
2. Permittee shall submit continuous emission monitor design, installation, and operational details to the District at least 30 days prior to commencement of construction. [District Rule 2201]
3. The permittee shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when no continuous emission monitoring data for NOx is available or when continuous emission monitoring system is not operating properly. [District Rule 4703]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
7. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101]
8. This CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)]
9. Emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 2.8 lb/hr and 2.5 ppmvd @ 15% O2; CO - 4.19 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 0.82 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]
10. The ammonia (NH3) emissions from this CTG shall not exceed either of the following limits: 4.24 lb/hr or 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rules 2201 and 4102]
11. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 30.0 lb/hr; CO - 12.5 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 1.50 lb/hr; CO - 21.33 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]

13. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703]

14. The duration of each startup or shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703]

15. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]

16. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 79.8 lb/day; CO - 117.6 lb/day; VOC - 19.7 lb/day; PM10 - 44.4 lb/day; or SOx (as SO2) - 21.4 lb/day. [District Rule 2201]

17. Quarterly hours of operation of this CTG shall not exceed any of the following limits: 1st Quarter - 800 hours, 2nd Quarter - 800 hours, 3rd Quarter - 1,400 hours, or 4th Quarter - 1,000 hours. [District Rule 2201]

18. Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 12,736 lb/year; CO - 18,826 lb/year; VOC - 3,281 lb/year; PM10 - 7,400 lb/year; or SOx (as SO2) - 3,560 lb/year. [District Rule 2201]

19. The combined annual NOx emissions from the CTG's operating under permits C-7286-1, C-7286-2, C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed 50,000 lb/year. [District Rule 2201]

20. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201]

21. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201]

22. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102]

23. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one SwiftPac unit (two paired turbines operating under units C-7286-1 and C-7286-2 or C-7286-3 and C-7286-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rules 1081 and 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. Source testing to determine compliance with NOx, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O2) and PM10 emission rate (lb/hr) shall be conducted at least once every 12 months. The source testing frequency may be reduced to once every 24 months if the actual operation of units C-7286-1 and C-7286-2 combined is less than 877 hours during any 12 consecutive month rolling period. NOx emission concentration at the SCR inlet shall be determined for 90%, and 100% loads during compliance testing by measuring NOx emissions at each load for a minimum of 5 minutes or until NOx concentration has stabilized. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

25. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored within 60 days of the end of the commission period and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)]

26. The following test methods shall be used: NOx - EPA Method 7E or 20; CO - EPA Method 10 or 10B; VOC - EPA Method 18 or 25; PM10 - EPA Method 5/202 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20. EPA approved alternative test methods, as approved by the District, may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i)]

27. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)]

28. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]

29. Compliance demonstration (source testing) shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. 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. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 40 CFR 60.4375(b)]

30. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703]

31. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703 and 40 CFR 60.4335(b)(1)]

32. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)]

33. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 75, Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

34. The owner/operator shall perform audits of the CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every QA operating quarter, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next audit. No more than four successive calendar quarters shall elapse after the quarter in which an audit was last performed without a subsequent audit having been conducted. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080 and 4703, 6.2.3, 40 CFR 60.4345(e) and 40 CFR 75, Appendix B]

35. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO and O2 CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every two QA operating quarters. The RATA frequency may be reduced to at least once every four QA operating quarters if the incentive criteria of 40 CFR 75, Appendix B, Section 2.3.1.2 has been met. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 75, Appendices A and B. [District Rule 1080, 40 CFR 60.4345(a) and 40 CFR 75, Appendices A & B]

36. For the purposes of performing quarterly audits and RATA on the CEMS, a QA operating quarter shall be defined as a calendar quarter in which there are at least 168 unit operating hours, or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours. An operating hour is defined as a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour. [40 CFR 72]

37. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13]

38. Excess NOx emissions shall be defined as any operating hour in which the 1-hour rolling average NOx concentration exceeds an applicable emissions limit. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(g) and 40 CFR 60.4380(b)(1)]

39. Results of continuous emissions monitoring shall be reduced according to the procedures 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 ARB, and the EPA. [District Rule 1080]

40. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080]

41. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080]

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43. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395]

44. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

45. Permittee shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1]

46. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0]

47. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201 and 4703 and 40 CFR 60.8(d)]

48. The permittee shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr, lb/qtr and lb/twelve month rolling period). [District Rules 2201 and 4703]

49. All records shall be maintained and retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4703]

50. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]

51. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021]

52. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021]

53. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]

54. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

55. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

56. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]

57. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

58. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

59. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031 and 8071]

60. Combined emission rates from the CTG's operating under permit units C-7286-1 and C-7286-2, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 5.6 lb/hr and 2.5 ppmvd @ 15% O2; CO - 8.38 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 1.64 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 3.70 lb/hr; or SOx (as SO2) - 1.78 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]

61. Combined daily emissions from the CTG's operating under permit units C-7286-1 and C-7286-2 shall not exceed any of the following limits: NOx (as NO2) - 159.6 lb/day; CO - 235.2 lb/day; VOC - 39.4 lb/day; PM10 - 88.8 lb/day; or SOx (as SO2) - 42.8 lb/day. [District Rule 2201]

62. Combined annual emissions from the CTG's operating under permit units C-7286-1 and C-7286-2, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 25,742 lb/year; CO - 37,652 lb/year; VOC - 6,562 lb/year; PM10 - 14,800 lb/year; or SOx (as SO2) - 7,120 lb/year. [District Rule 2201]

63. Source testing shall be conducted while units C-7286-1 and C-7286-2 are operating simultaneously. If unit C-7286-1 operates independently from unit C-7286-2 for more than 400 hours during any given calendar year, source testing shall also be conducted while unit C-7286-2 is operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7286-3-1 **EXPIRATION DATE:** 05/31/2016

EQUIPMENT DESCRIPTION:
30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-4)

PERMIT UNIT REQUIREMENTS

1. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. The permittee shall submit SCR and oxidation catalyst design details to the District at least 30 days prior to commencement of construction. [District Rule 2201]
2. Permittee shall submit continuous emission monitor design, installation, and operational details to the District at least 30 days prior to commencement of construction. [District Rule 2201]
3. The permittee shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when no continuous emission monitoring data for NOx is available or when continuous emission monitoring system is not operating properly. [District Rule 4703]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
7. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101]
8. This CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)]
9. Emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 2.8 lb/hr and 2.5 ppmvd @ 15% O2; CO - 4.19 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 0.82 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]
10. The ammonia (NH3) emissions from this CTG shall not exceed either of the following limits: 4.24 lb/hr or 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rules 2201 and 4102]
11. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 30.0 lb/hr; CO - 12.5 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 1.50 lb/hr; CO - 21.33 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]

13. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703]

14. The duration of each startup or shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703]

15. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]

16. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 79.8 lb/day; CO - 117.6 lb/day; VOC - 19.7 lb/day; PM10 - 44.4 lb/day; or SOx (as SO2) - 21.4 lb/day. [District Rule 2201]

17. Quarterly hours of operation of this CTG shall not exceed any of the following limits: 1st Quarter - 800 hours, 2nd Quarter - 800 hours, 3rd Quarter - 1,400 hours, or 4th Quarter - 1,000 hours. [District Rule 2201]

18. Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 12,736 lb/year; CO - 18,826 lb/year; VOC - 3,281 lb/year; PM10 - 7,400 lb/year; or SOx (as SO2) - 3,560 lb/year. [District Rule 2201]

19. The combined annual NOx emissions from the CTG's operating under permits C-7286-1, C-7286-2, C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed 50,000 lb/year. [District Rule 2201]

20. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201]

21. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201]

22. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102]

23. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one SwiftPac unit (two paired turbines operating under units C-7286-1 and C-7286-2 or C-7286-3 and C-7286-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rules 1081 and 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. Source testing to determine compliance with NOx, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O2) and PM10 emission rate (lb/hr) shall be conducted at least once every 12 months. The source testing frequency may be reduced to once every 24 months if the actual operation of units C-7286-1 and C-7286-2 combined is less than 877 hours during any 12 consecutive month rolling period. NOx emission concentration at the SCR inlet shall be determined for 90%, and 100% loads during compliance testing by measuring NOx emissions at each load for a minimum of 5 minutes or until NOx concentration has stabilized. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

25. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored within 60 days of the end of the commission period and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)]

26. The following test methods shall be used: NOx - EPA Method 7E or 20; CO - EPA Method 10 or 10B; VOC - EPA Method 18 or 25; PM10 - EPA Method 5/202 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20. EPA approved alternative test methods, as approved by the District, may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i)]

27. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)]

28. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]

29. Compliance demonstration (source testing) shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. 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. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 40 CFR 60.4375(b)]

30. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703]

31. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703 and 40 CFR 60.4335(b)(1)]

32. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)]

33. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 75, Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

34. The owner/operator shall perform audits of the CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every QA operating quarter, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next audit. No more than four successive calendar quarters shall elapse after the quarter in which an audit was last performed without a subsequent audit having been conducted. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080 and 4703, 6.2.3, 40 CFR 60.4345(e) and 40 CFR 75, Appendix B]

35. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO and O2 CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every two QA operating quarters. The RATA frequency may be reduced to at least once every four QA operating quarters if the incentive criteria of 40 CFR 75, Appendix B, Section 2.3.1.2 has been met. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 75, Appendices A and B. [District Rule 1080, 40 CFR 60.4345(a) and 40 CFR 75, Appendices A & B]

36. For the purposes of performing quarterly audits and RATA on the CEMS, a QA operating quarter shall be defined as a calendar quarter in which there are at least 168 unit operating hours, or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours. An operating hour is defined as a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour. [40 CFR 72]

37. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13]

38. Excess NOx emissions shall be defined as any operating hour in which the 1-hour rolling average NOx concentration exceeds an applicable emissions limit. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(g) and 40 CFR 60.4380(b)(1)]

39. Results of continuous emissions monitoring shall be reduced according to the procedures 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 ARB, and the EPA. [District Rule 1080]

40. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080]

41. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080]

42. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080]

43. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395]

44. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

45. Permittee shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1]

46. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0]

47. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201 and 4703 and 40 CFR 60.8(d)]

48. The permittee shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr, lb/qtr and lb/twelve month rolling period). [District Rules 2201 and 4703]

49. All records shall be maintained and retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4703]

50. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]

51. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021]

52. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021]

53. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]

54. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

55. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

56. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]

57. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

58. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

59. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031 and 8071]

60. Combined emission rates from the CTG's operating under permit units C-7286-3 and C-7286-4, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 5.6 lb/hr and 2.5 ppmvd @ 15% O2; CO - 8.38 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 1.64 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 3.70 lb/hr; or SOx (as SO2) - 1.78 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]

61. Combined daily emissions from the CTG's operating under permit units C-7286-3 and C-7286-4 shall not exceed any of the following limits: NOx (as NO2) - 159.6 lb/day; CO - 235.2 lb/day; VOC - 39.4 lb/day; PM10 - 88.8 lb/day; or SOx (as SO2) - 42.8 lb/day. [District Rule 2201]

62. Combined annual emissions from the CTG's operating under permit units C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 25,742 lb/year; CO - 37,652 lb/year; VOC - 6,562 lb/year; PM10 - 14,800 lb/year; or SOx (as SO2) - 7,120 lb/year. [District Rule 2201]

63. Source testing shall be conducted while units C-7286-3 and C-7286-4 are operating simultaneously. If unit C-7286-3 operates independently from unit C-7286-4 for more than 400 hours during any given calendar year, source testing shall also be conducted while unit C-7286-3 is operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7286-4-1 **EXPIRATION DATE:** 05/31/2016

EQUIPMENT DESCRIPTION:
30 MW NOMINALLY RATED SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A 311 MMBTU/HR PRATT & WHITNEY MODEL FT8-3 SWIFTPAC NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY AN INLET AIR FILTRATION AND COOLING SYSTEM, WATER INJECTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A OXIDATION CATALYST POWERING A 60 MW NOMINALLY RATED ELECTRICAL GENERATOR (SHARED WITH C-7286-3)

PERMIT UNIT REQUIREMENTS

1. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. The permittee shall submit SCR and oxidation catalyst design details to the District at least 30 days prior to commencement of construction. [District Rule 2201]
2. Permittee shall submit continuous emission monitor design, installation, and operational details to the District at least 30 days prior to commencement of construction. [District Rule 2201]
3. The permittee shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when no continuous emission monitoring data for NOx is available or when continuous emission monitoring system is not operating properly. [District Rule 4703]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
7. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101]
8. This CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)]
9. Emission rates from this CTG, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 2.8 lb/hr and 2.5 ppmvd @ 15% O2; CO - 4.19 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 0.82 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]
10. The ammonia (NH3) emissions from this CTG shall not exceed either of the following limits: 4.24 lb/hr or 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rules 2201 and 4102]
11. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 30.0 lb/hr; CO - 12.5 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]

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12. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 1.50 lb/hr; CO - 21.33 lb/hr; VOC (as methane) - 0.83 lb/hr; PM10 - 1.85 lb/hr; or SOx (as SO2) - 0.89 lb/hr, based on a per event average. [District Rules 2201 and 4703]

13. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703]

14. The duration of each startup or shut down time shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703]

15. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]

16. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 79.8 lb/day; CO - 117.6 lb/day; VOC - 19.7 lb/day; PM10 - 44.4 lb/day; or SOx (as SO2) - 21.4 lb/day. [District Rule 2201]

17. Quarterly hours of operation of this CTG shall not exceed any of the following limits: 1st Quarter - 800 hours, 2nd Quarter - 800 hours, 3rd Quarter - 1,400 hours, or 4th Quarter - 1,000 hours. [District Rule 2201]

18. Annual emissions from this CTG, calculated on a twelve month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 12,736 lb/year; CO - 18,826 lb/year; VOC - 3,281 lb/year; PM10 - 7,400 lb/year; or SOx (as SO2) - 3,560 lb/year. [District Rule 2201]

19. The combined annual NOx emissions from the CTG's operating under permits C-7286-1, C-7286-2, C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed 50,000 lb/year. [District Rule 2201]

20. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201]

21. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201]

22. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102]

23. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one SwiftPac unit (two paired turbines operating under units C-7286-1 and C-7286-2 or C-7286-3 and C-7286-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rules 1081 and 2201]

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24. Source testing to determine compliance with NOx, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O2) and PM10 emission rate (lb/hr) shall be conducted at least once every 12 months. The source testing frequency may be reduced to once every 24 months if the actual operation of units C-7286-1 and C-7286-2 combined is less than 877 hours during any 12 consecutive month rolling period. NOx emission concentration at the SCR inlet shall be determined for 90%, and 100% loads during compliance testing by measuring NOx emissions at each load for a minimum of 5 minutes or until NOx concentration has stabilized. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]

25. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored within 60 days of the end of the commission period and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)]

26. The following test methods shall be used: NOx - EPA Method 7E or 20; CO - EPA Method 10 or 10B; VOC - EPA Method 18 or 25; PM10 - EPA Method 5/202 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20. EPA approved alternative test methods, as approved by the District, may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i)]

27. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)]

28. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]

29. Compliance demonstration (source testing) shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. 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. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 40 CFR 60.4375(b)]

30. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703]

31. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703 and 40 CFR 60.4335(b)(1)]

32. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)]

33. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 75, Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]

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34. The owner/operator shall perform audits of the CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every QA operating quarter, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next audit. No more than four successive calendar quarters shall elapse after the quarter in which an audit was last performed without a subsequent audit having been conducted. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080 and 4703, 6.2.3, 40 CFR 60.4345(e) and 40 CFR 75, Appendix B]

35. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO and O2 CEMS as specified by 40 CFR Part 75, Appendices A and B, at least once every two QA operating quarters. The RATA frequency may be reduced to at least once every four QA operating quarters if the incentive criteria of 40 CFR 75, Appendix B, Section 2.3.1.2 has been met. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 75, Appendices A and B. [District Rule 1080, 40 CFR 60.4345(a) and 40 CFR 75, Appendices A & B]

36. For the purposes of performing quarterly audits and RATA on the CEMS, a QA operating quarter shall be defined as a calendar quarter in which there are at least 168 unit operating hours, or, for a common stack or bypass stack, a calendar quarter in which there are at least 168 stack operating hours. An operating hour is defined as a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour. [40 CFR 72]

37. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13]

38. Excess NOx emissions shall be defined as any operating hour in which the 1-hour rolling average NOx concentration exceeds an applicable emissions limit. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(g) and 40 CFR 60.4380(b)(1)]

39. Results of continuous emissions monitoring shall be reduced according to the procedures 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 ARB, and the EPA. [District Rule 1080]

40. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080]

41. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080]

42. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080]

43. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395]

44. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080]

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45. Permittee shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1]

46. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0]

47. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201 and 4703 and 40 CFR 60.8(d)]

48. The permittee shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr, lb/qtr and lb/twelve month rolling period). [District Rules 2201 and 4703]

49. All records shall be maintained and retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4703]

50. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]

51. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021]

52. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021]

53. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]

54. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

55. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

56. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]

57. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

58. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

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59. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031 and 8071]

60. Combined emission rates from the CTG's operating under permit units C-7286-3 and C-7286-4, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 5.6 lb/hr and 2.5 ppmvd @ 15% O2; CO - 8.38 lb/hr and 6.0 ppmvd @ 15% O2; VOC (as methane) - 1.64 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 3.70 lb/hr; or SOx (as SO2) - 1.78 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]

61. Combined daily emissions from the CTG's operating under permit units C-7286-3 and C-7286-4 shall not exceed any of the following limits: NOx (as NO2) - 159.6 lb/day; CO - 235.2 lb/day; VOC - 39.4 lb/day; PM10 - 88.8 lb/day; or SOx (as SO2) - 42.8 lb/day. [District Rule 2201]

62. Combined annual emissions from the CTG's operating under permit units C-7286-3 and C-7286-4, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 25,742 lb/year; CO - 37,652 lb/year; VOC - 6,562 lb/year; PM10 - 14,800 lb/year; or SOx (as SO2) - 7,120 lb/year. [District Rule 2201]

63. Source testing shall be conducted while units C-7286-3 and C-7286-4 are operating simultaneously. If unit C-7286-3 operates independently from unit C-7286-4 for more than 400 hours during any given calendar year, source testing shall also be conducted while unit C-7286-4 is operating independently. [District Rules 1081, 2201 and 4703 and 40 CFR 60.4400(a)]