777 12th Street 3rd Floor **SACRAMENTO METROPOLITAN** Sacramento, CA 95814
AIR QUALITY
MANAGEMENT DISTRICT

STATEMENT OF BASIS FOR
2ND RENEWAL OF TITLE V FEDERAL OPERATING PERMIT

Application No.: TV2012-12-01
Date: September 5, 2018
Evaluation By: Jorge DeGuzman

A. FACILITY INFORMATION:

FACILITY NAME: Sacramento Cogeneration Authority (SCA)

LOCATION: 5000 83rd Street
Sacramento, CA 95826

MAILING ADDRESS: P.O. Box 15830, Mail Stop B355
Sacramento, CA 95852-1830

RESPONSIBLE OFFICIAL: Paul Lau
Authority Representative, SCA
(916) 732-6252

CONTACT PERSON: Jeff White
Plant Manager, Carson Energy Group
(916) 379-2041

B. PURPOSE OF THIS STATEMENT OF BASIS:

The Title V Federal Operating Permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes that makes the terms meaningful. 40 CFR Part 70.7(a)(5) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions." The purpose of this Statement of Basis is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This Statement of Basis also includes background narrative and explanations of regulatory decisions made by the SMAQMD. It should be emphasized that this Statement of Basis, while based on information contained in the permit, is a separate document and is not, itself, an enforceable term and condition of the permit.

C. TITLE V PERMIT HISTORY

This Statement of Basis is for the 2nd renewal of the Sacramento Cogeneration Authority's existing Title V Federal Operating Permit No. TV2007-12-01. And all modifications submitted as of May 18, 2018 as indicated below. The existing permit expired on June 5, 2013 and the facility has been operating under a permit application shield.

The following permit actions have occurred since the initial Federal Operating Permit No. TV1997-12-01 was issued:

Permit Action	Date Issued	Permit No.
Initial Title V Federal Operating Permit	06-05-2003	TV1997-12-01
1st Significant Modification	05-08-2008	TV1997-12-02
1st Permit Renewal	06-05-2008	TV2007-12-01
1st Administrative Amendment	01-18-2012	TV2007-12-01A
2nd Permit Renewal	xx-xx-xxxx	TV2012-12-01
1st Administrative Amendment	Subsumed*	TV2012-12-01A
2nd Administrative Amendment	Subsumed*	TV2012-12-01B
3rd Administrative Amendment	Subsumed*	TV2012-12-01C

*Subsumed under permit TV2012-12-01

This 2nd permit renewal action will be assigned the permit number TV2012-12-01. In addition, two subsequent administrative amendment (TV2012-12-01A & TV2012-12-01B) were received to update the responsible official and a third administrative amendment (TV2012-12-01C) was received to incorporate the conditions on the new auxiliary boiler (Permit #24398) and the selective catalytic reduction system (Permit #24399) that underwent enhanced new source review (finalized on July 31, 2015).

Since the last permit renewal, the Sacramento Cogeneration Authority has completed the upgrade of its three gas turbines. The final turbine was upgraded in April, 2010. Since the upgrades have been completed, the permit conditions related to the turbine upgrades have been removed from the Title V permit.

Also as part of this renewal, an emission limitation related to the banking of Emission Reduction Credits (ERCs) has been added to the Title V permit (Turbine/Duct Burner Section, Condition No. 4).

E. SIGNIFICANT EMISSIONS UNIT DESCRIPTION

The Sacramento Cogeneration Authority facility generates electricity for the Sacramento Municipal Utility District (SMUD) and produces process steam for use in the operations of the Procter & Gamble Manufacturing Company. The project is located on a 10-acre site adjacent to the Procter & Gamble manufacturing facility at 5000 83rd Street, Sacramento.

The cogeneration facility consists of two major power systems and support equipment.

Combined Cycle Power System:

1. (2) General Electric LM6000PC SPRINT/EFS gas turbines, 500 MMBtu/hour each, natural gas fuel, with a nominal rating of 50 MW each.

2. (2) duct burners, 83.2 MMBtu/hour each, natural gas fuel.

3. (2) Heat recovery steam generators.

4. (1) 45 MW nominal capacity steam turbine generator.

5. (2) Selective catalytic reduction (SCR) NOx air pollution control systems.

6. (2) Oxidation catalyst CO and VOC air pollution control systems.

Simple Cycle Power System:

7. (1) General Electric LM6000PC SPRINT/EFS gas turbine, 500 MMBtu/hour, natural gas fuel, with a nominal rating of 50 MW.

8. (1) Selective catalytic reduction (SCR) NOx air pollution control system.

9. (1) Oxidation catalyst CO and VOC air pollution control system.

Support Equipment:

10. Auxiliary boiler, Babcock & Wilcox, Model FM103-88, 108.7 MMBtu/hour, natural gas fuel.

11. Auxiliary boiler, Cleaver Brooks, Model LD-94_R H, 108.7 MMBtu/hour, natural gas fuel.

12. Cooling tower.

Nitrogen oxide emissions from the gas turbines are controlled with water injection and SCR systems to comply with the NOx concentration limit of 2.5 ppmvd at 15% oxygen. Oxidation catalyst systems have also been installed for the three gas turbines to reduce VOC and CO emissions. Low-NOx duct burners are used for NOx control for the heat recovery steam generators (HRSGs). Control of NOx in the auxiliary boiler is achieved by low NOx burners and flue gas recirculation.

Fuel used for the gas turbines, duct burners and auxiliary boiler is natural gas with no emergency use fuel. The use of natural gas maintains low sulfur dioxide and PM10 emissions.

E. SIGNIFICANT EMISSIONS UNIT INFORMATION (continued)

This section describes the emission units that have an active SMAQMD Rule 201 Permit to Operate and are part of the Title V Federal Operating Permit.

COMBINED CYCLE POWER SYSTEM

Gas Turbine 1A Base Load

Permit No. 20734 (Permit number is for reference purposes only - not federally enforceable)
Manufacturer: General Electric
Model No.: LM6000PC SPRINT/EFS
Type: Combined Cycle
Nominal Rating: 50 MW
Heat Input Rating: 500 MMBtu/hour
Fuel: Natural Gas

Duct Burner 1A for Heat Recovery Steam Generator

Permit No. 11437 (Permit number is for reference purposes only - not federally enforceable)
Heat Input Rating: 83.2 MMBtu/hour
Fuel: Natural Gas

Air Pollution Control System 1A - NOx

Permit No. 11439 (Permit number is for reference purposes only - not federally enforceable)
Control Device: Selective Catalytic Reduction
Manufacturer: Peerless Manufacturing Co.
Venting: Gas Turbine 1A and Duct Burner 1A

Air Pollution Control System 1A - VOC and CO

Permit No. 11442 (Permit number is for reference purposes only - not federally enforceable)
Control Device: Oxidation Catalyst
Manufacturer: W. R. Grace Co.
Venting: Gas Turbine 1A and Duct Burner 1A

Gas Turbine 1B Base Load

Permit No. 20735 (Permit number is for reference purposes only - not federally enforceable)
Manufacturer: General Electric
Model No.: LM6000PC SPRINT/EFS
Type: Combined Cycle
Nominal Rating: 50 MW
Heat Input Rating: 500 MMBtu/hour
Fuel: Natural Gas

Duct Burner 1B for Heat Recovery Steam Generator

Permit No. 11438 (Permit number is for reference purposes only - not federally enforceable)
Heat Input Rating: 83.2 MMBtu/hour
Fuel: Natural Gas

E. SIGNIFICANT EMISSIONS UNIT INFORMATION (continued)

Air Pollution Control System 1B - NOx
Permit No. 11440 (Permit number is for reference purposes only - not federally enforceable)
Control Device: Selective Catalytic Reduction
Manufacturer: Peerless Manufacturing Co.
Venting: Gas Turbine 1B and Duct Burner 1B

Air Pollution Control System 1B - VOC and CO
Permit No. 11443 (Permit number is for reference purposes only - not federally enforceable)
Control Device: Oxidation Catalyst
Manufacturer: W. R. Grace Co.
Venting: Gas Turbine 1B and Duct Burner 1B

SIMPLE CYCLE POWER SYSTEM

Gas Turbine 1C Peaking Load
Permit No. 20736 (Permit number is for reference purposes only - not federally enforceable)
Manufacturer: General Electric
Model No.: LM6000PC SPRINT/EFS
Type: Simple Cycle
Nominal Rating: 50 MW
Heat Input Rating: 500 MMBtu/houR
Fuel: Natural Gas

Air Pollution Control System 1C - NOx
Permit No. 11441 (Permit number is for reference purposes only - not federally enforceable)
Control Device: Selective Catalytic Reduction
Manufacturer: Peerless Manufacturing Co.
Venting: Gas Turbine 1C

Air Pollution Control System 1C - VOC and CO
Permit No. 11444 (Permit number is for reference purposes only - not federally enforceable)
Control Device: Oxidation Catalyst
Manufacturer: W. R. Grace Co.
Venting: Gas Turbine 1C

Auxiliary Boiler A
Permit No. 12318 (Permit number is for reference purposes only - not federally enforceable)
Manufacturer: Babcock & Wilcox
Model No.: FM101-88
Burner Type: Todd Ultra Low NOx Rapid Mix Burner System
Heat Input: 108.7 MMBtu/hour
Fuel: Natural gas

Auxiliary Boiler 1B
Permit No. 24398 (Permit number is for reference purposes only - not federally enforceable)
Manufacturer: Cleaver Brooks
Model No.: LD-94-R,H

E. SIGNIFICANT EMISSIONS UNIT INFORMATION (continued)

Serial No: W-3549
Heat Input: 108.7 MMBtu/hour with a 4.9 MMBtu/hr pilot burner
Fuel: Natural gas

Air Pollution Control System

Permit No. 24399 (Permit number is for reference purposes only - not federally enforceable)
Control Device: Selective Catalytic Reduction
Venting: Boiler unit 1B

Cooling Tower

P/O No. 11431 (Permit number is for reference purposes only - not federally enforceable)
Manufacturer: Hamon Cooling Towers
Type: Mechanical draft, counterflow, 900,000 cfm with drift eliminator
Size: 3 cell
Capacity: 48,850 gallons/minute

F. INSIGNIFICANT EMISSIONS UNIT INFORMATION

This section contains a list of emissions units operated at the facility that are considered insignificant emission sources and are listed as such in the Title V permit. The basis for determining whether equipment is an insignificant emission unit is made based on the SMAQMD "List and Criteria" document, Part B (List of Title V Insignificant Activities), Section 5 which was last revised on April 26, 2001.

Source Category and Exempt Equipment Description	Basis for Exemption (SMAQMD "List and Criteria")
A. Fugitive Emissions Sources Associated with Insignificant Activities • Fuel gas compressor. • Fuel gas piping, valves, and fittings.	Any valves, flanges, and unvented (except for emergency pressure relief valves) pressure vessels associated with an insignificant activity on this list.
B. Combustion and Heat Transfer Equipment • Water heater, 199,000 Btu/hr, 100 gallon, natural gas fired. • Seven space heaters, 25,000 Btu/hr each, 100 gallon, natural gas fired. • Portable pressure washer, 13.5 hp • Portable welder, 16 hp.	1. Combustion equipment with maximum heat input ≤ 5,000,000 BTU/hour and exclusively fired with natural gas or LPG (propane). 2. Piston-type internal combustion engine with rating ≤ 50 bhp.
D. Printing and Reproduction Equipment • Office printers and copiers.	1. Any printing, coating, or laminating activity which uses no more than two gallons per day of graphic arts materials, including: inks, coatings, adhesives, fountain solutions, thinners, retarders, or cleaning solutions. 2. Any laser printing equipment.
H. Storage Containers, Reservoirs, and Tanks - General Organic and VOC-Containing Material • Turbine lube oil storage. • Waste lube oil storage. • Hydraulic oil storage. • Oily water separator.	1. Any equipment used exclusively for the storage of unheated organic material with: a. An initial boiling point of 150° C [302° F] or greater as determined by ASTM test method 1078-86); or b. A vapor pressure of no more than five millimeters mercury (mmHg) [0.1 pound per square inch (psi) absolute] as determined by ASTM test method D-2879-86. 2. Any equipment with a capacity of no more than 250 gallons used exclusively for the storage of unheated organic liquid. 3. Any equipment with a capacity of no more than 6,077 gallons used exclusively for the underground storage of unheated organic liquid with a vapor pressure no more than 75 mm Hg (1.5 psi absolute) as determined by ASTM test method D-2879-86.

E. SIGNIFICANT EMISSIONS UNIT INFORMATION (continued)

Source Category and Exempt Equipment Description	Basis for Exemption (SMAQMD "List and Criteria")
I. Storage Containers, Reservoirs, and Tanks - Inorganic Material • Water treatment chemicals. • Water storage. • Aqueous and anhydrous ammonia storage tanks.	1. Any equipment used exclusively for the storage of fresh, commercial or purer grade: a. Sulfuric or phosphoric acid with acid content of no more than 99% by weight; or b. Nitric acid with acid content of no more than 70% by weight.
J. Storage Containers, Reservoirs, and Tanks - Liquefied Gases • Aqueous ammonia storage. • Hydrogen storage. • Carbon dioxide storage. • Calibration gas cylinders. • Welding gas cylinders.	Any equipment used exclusively for the storage of liquefied gases in unvented (except for emergency pressure-relief valves) pressure vessels.
K. Compression and Storage of Dry Natural Gas • Fuel gas compressor, electric.	Any equipment used exclusively to compress or hold dry natural gas. Any internal combustion engine or other equipment associated with the dry natural gas should not be considered an insignificant activity unless such engine or other equipment independently qualifies as an insignificant activity.
L. Transfer Equipment • Pumps and piping associated with Sections H-K above.	Any transfer equipment when used with the equipment described in Sections H -K above.
M. Adhesive Application • Miscellaneous and non-process use of adhesives for office and plant maintenance shop.	Any adhesive operation in which no more than 173 gallons of adhesives are applied in a consecutive 12 month period.
N. Surface Coating • Miscellaneous and non-process surface coating activities in plant maintenance shop.	1. Any equipment or activity using no more than one gallon per day of surface coating, or any combination of surface coating and solvent, which contains either VOC or hazardous air pollutants (HAP) or both. 2. Any coating operation using less than 10,950 gallons per year of coating(s) that contain less than 20 grams of VOC per liter.

E. SIGNIFICANT EMISSIONS UNIT INFORMATION (continued)

Source Category and Exempt Equipment Description	Basis for Exemption (SMAQMD "List and Criteria")
O. Solvent Cleaning • Miscellaneous and non-process solvent cleaning activities for plant maintenance. • Wipe cleaning. • Degreaser, water based cleaner	1. Any equipment or activity using no more than one gallon per day of solvent, or combination of solvent and surface coating, which contains either VOC or HAP, or both. 2. Any unheated, non-conveyorized cleaning equipment (not including control enclosures): a. which has an open surface area of no more than 10.8 square feet (2 square meters) and internal volume of no more than 92.5 gallons b. which uses organic solvents with an initial boiling point of 302 ^{o}F or greater as determined by ASTM test method 1078-78 c. from which the owner or operator can demonstrate, through solvent purchase and use records, that less than 25 gallons per year of solvent was lost exclusive of solvent loss from recycling or disposal. 3. Any solvent wipe cleaning provided such cleaning: a. utilizes a container applicator to limit emissions (e.g., squeeze containers with narrow tips, spray bottles, dispensers with press-down caps, etc.) and b. occurs at a facility which emits no more than five tons VOC (uncontrolled emissions) per calendar year from all solvent wipe-cleaning operations or which purchases no more than 1,500 gallons of solvent per calendar year.
P. Abrasive Blasting • Abrasive blast cabinet – Free standing cabinet with glove-box access. Vents to dust collector that discharges air to indoor shop area.	1. Any blast cleaning equipment using a suspension of abrasive material in water and the control equipment venting such blast cleaning equipment. 2. Any abrasive blast room when vented to a control device that discharges back to the room.
Q. Brazing, Soldering, Welding and Cutting Torches • Welding equipment.	1. Any brazing, soldering, welding, or cutting torch equipment used in manufacturing and construction activities and with the potential to emit hazardous air pollutant (HAP) metals, provided the total emissions of HAPs do not exceed 0.5 tons per year.

E. SIGNIFICANT EMISSIONS UNIT INFORMATION (continued)

Source Category and Exempt Equipment Description	Basis for Exemption (SMAQMD "List and Criteria")
R. Refrigeration Units • Building/enclosure air conditioners	1. Any refrigeration unit provided the unit: a. Contains less than 50 pounds of refrigerant; and b. Is not used in conjunction with air pollution control equipment.

G. ALTERNATE OPERATING SCENARIOS

None requested by the permit holder.

H. FACILITY EMISSIONS

Equipment	Annual Maximum Potential to Emit (tons/year)							
	VOC	NOx	SO_2	PM10	PM2.5	CO (C)	Single HAP	Total HAPs
Gas Turbine 1A Gas Turbine 1B Gas Turbine 1C Duct Burner 1A Duct Burner 1B Auxiliary Boiler A Cooling Tower	16.8	58.8	3.9	34.9	34.9	99.3	4.4(A)	7.6(A)
Auxiliary Boiler 1B	1.0	2.2	0.2	1.4	1.4			
Total (B)	17.9	61.0	4.0	36.3	36.3	99.3	4.4	7.6

(A) HAP values are based on estimated HAP emission levels that were submitted with the Title V permit application. These HAP values are not federally enforceable emission limits. The federally enforceable emission limits are 9.9 tons/year for a single HAP and 24.9 tons/year for a combination of all HAPs.
(B) Total tons per year is calculated by adding the annual PTE (in lb/yr), converting to tons/year and rounding to one decimal place.
(C) The facility has a facility-wide CO limit that was added during the permitting of Auxiliary Boiler 1B.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
1. Facility-wide Requirements – General

SMAQMD Rule 101 – General Provision and Definitions

SIP Approved: 08-09-2012 (77 FR 47535)

Rule Description: This rule provides definitions of terms, specifies authority to arrest and specifies what data is public information.

Compliance Status: The rule does not require the permit holder to take any action.

SMAQMD Rule 102 – Circumvention

SIP Approved: 12-05-1984 (49 FR 47490)

Rule Description: This rule prohibits concealment of emissions and specifies how compliance determinations are made for combined and separated emissions.

Compliance Status: The permit holder is expected to comply with the rule requirements.

SMAQMD Rule 105 - Emission Statement

SIP Approved: 06-06-2008 (73 FR 32240)
09-05-1996 rule version is SIP approved

Rule Description: This rule requires the facility to provide annual emission data.

Compliance Status: The permit holder has provided annual emission data as required and is in compliance.

SMAQMD Rule 201 - General Permit Requirements

SIP Approved: 07-13-1987 (52 FR 26148)
11-20-1984 rule version is SIP approved
08-24-2006 rule version is the current version and is not SIP approved

Rule Description: This rule provides an orderly procedure for the review of new sources of air pollution and of the modification and operation of existing sources through the issuance of permits.

Compliance Status: The permit holder has active permits for all sources that require permits.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
1. Facility-wide Requirements – General (continued)

SMAQMD Rule 202 - New Source Review

SIP Approved: SIP approval of 11-20-1984 rule version was withdrawn on 08-19-2011. *08-23-2012 rule version is the current version and is not SIP approved. This rule is not federally enforceable.*

Rule Description: This rule sets the procedures for review of new and modified stationary sources and provides the mechanisms for evaluating the applicability of BACT and offset requirements.

Compliance Status: The permit holder's past permit actions have been in compliance with this rule.

SMAQMD Rule 203 – Prevention of Significant Deterioration

SIP Approved: 07-20-2011 (76 FR 43183)

Rule Description: This rule sets the procedures for review of the Prevention of Significant Deterioration (PSD) program which is a permitting program for new major facilities and major modifications at existing major facilities located in attainment areas.

Compliance Status: This is a recently adopted and SIP approved rule. The facility's equipment will be reviewed pursuant to this rule, if applicable, for all future permitting actions.

SMAQMD Rule 207 - Title V Federal Operating Permits

SIP Approved: 11-21-2003 (68 FR 65637) (as part of the Title V Federal Operating Permit program approval)

Rule Description: This rule sets forth the procedures for review, issuance and renewal of Title V operating permits.

Compliance Status: The permit holder has submitted a timely and complete Title V & IV application for permit renewal in this current permitting action and is currently operating under an active Title V & IV permit. In addition, the applicant has requested a permit shield from SMAQMD Rule 202 & 214 Section 229 (Modification).

SMAQMD shall grant a permit shield where ambiguity or conflict occurs between rule requirements that require an alternative interpretation to the literal language of the rule. On March 30, 2000, the permit holder requested the following interpretation for the installation of an identical substitute engine core for either the combined cycle gas turbine or the

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
1. Facility-wide Requirements – General (continued)

peaking gas turbine for routine maintenance and repair of its original engine core to not constitute a modification pursuant to SMAQMD Rule 202 & 214 Section 229. The District concurred with this interpretation provided:

A. The operation of the temporary substitute engine core shall not involve upgrades or changes to heat input, production rate, method of operation, exhaust gas emissions or emissions control technology, and

B. All of the original emission control systems, heat recovery equipment, fuel supply systems, lubrication systems, certified CEMS/DAHS and other auxiliary equipment associated with the generation unit shall remain in place

In addition, the applicant has requested a permit shield from SMAQMD Rule 413 and 40 CFR 60 Part GG. SMAQMD shall grant a permit shield where ambiguity or conflict occurs between rule requirements that requires an alternative interpretation to the literal language of the rule. Compliance with a rule condition or the rule entirety is not considered sufficient reason to grant a permit shield.

SMAQMD has reviewed the submitted information from the applicant and does not find any ambiguity or conflicts in rule conditions. SMAQMD does see an operational limitation in compliance with the 9.0 PPM standard for NOx that is provided in SMAQMD Rule 413 and the method of testing required to show compliance with the rule. To provide a more streamlined method of determining compliance between the two standards, compliance with the 2.5 PPM NOx standard, (2.5 ppmvd of NOx at 15% O2, averaged over any 1 hour period, monitored by the CEM) shall be considered equivalent to the 9.0 PPM NOx standard (9.0 ppmvd of NOx at 15% O2, measured by the average of three runs for 15 minutes, determined by using EPA Method 20).

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
1. Facility-wide Requirements – General (continued)

SMAQMD Rule 214 - Federal New Source Review

SIP Approved: 08/29/2013 (78 FR 53271)

Rule Description: This rule sets the procedures for review of emissions units at new and modified major stationary sources and provides the mechanisms for evaluating the applicability of BACT and/or offset requirements.

Compliance Status: This is a recently adopted and SIP approved rule. The auxiliary boiler and its SCR (Permits #24398 and 24399) were reviewed under this rule.

SMAQMD Rule 217 - Public Notice Requirements for Permits

SIP Approved: 08/29/2013 (78 FR 53271)

Rule Description: This rule provides an administrative mechanism for public notification and review of the issuance of authorities to construct and permits to operate at new and modified stationary air pollution sources.

Compliance Status: The applicant is in compliance. All permit actions at the facility since this rule was adopted have been performed in compliance with the rule.

SMAQMD Rule 301 - Permit Fees (for Title V referenced fees only)

SIP Approved: The rule is not SIP approved but the portions of the rule that reference Title V permit fees are applicable because they are part of the SMAQMD Title V Federal Operating Permit program approved by U.S. EPA on 11-21-2003 (68 FR 65637).

Rule Description: This rule requires Title V sources to pay specified fees.

Compliance Status: The permit holder has paid permit fees as required and is in compliance.

SMAQMD Rule 307 - Clean Air Act Fees

SIP Approved: 08-26-2003 (68 FR 51184)

Rule Description: This rule requires major sources of VOC and NOx to pay specified fees beginning after the U.S. EPA determines that the SMAQMD has failed to demonstrate attainment of the one hour ozone ambient air quality standard by the attainment year.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
1. Facility-wide Requirements – General (continued)

Compliance Status: The owner/operator is expected to comply with the fee requirement.

SMAQMD Rule 401 - Ringelmann Chart

SIP Approved: 02-01-1984 (49 FR 3987)
04-19-1983 rule version is SIP approved

Rule Description: This rule limits the discharge of air contaminants into the atmosphere through visible emissions and opacity limitations.

Compliance Status: All of the permit holder's equipment is expected to comply with the visible emission requirement.

SMAQMD Rule 403 - Fugitive Dust

SIP Approved: 12-05-1984 (49 FR 47490)
08-03-1977 rule version is SIP approved

Rule Description: The rule regulates equipment and processes that may cause fugitive dust emissions into the atmosphere.

Compliance Status: The facility complies with this rule by taking the necessary precautions to ensure that fugitive dust is not airborne beyond the property line.

SMAQMD Rule 442 - Architectural Coatings

SIP Approved: 10-04-16 (81 FR 68320)
09-24-15 rule version is SIP approved

Rule Description: This rule limits the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application or manufactured for use within the District.

Compliance Status: The affected coatings used by the permit holder are received and stored in containers that display the required manufacturer's labels and demonstrate compliance with the rule's requirements.

SMAQMD Rule 466 - Solvent Cleaning

SIP Approved: 09-29-2011 (76 FR 60376)
10-28-2010 rule version is SIP approved

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
1. Facility-wide Requirements – General (continued)

Rule Description: This rule limits emissions of volatile organic compounds from solvent cleaning activities and from the storage and disposal of new and spent cleaning solvents.

Compliance Status: The affected architectural coating application equipment solvent cleaning materials used by the facility are received and stored in containers that display the required manufacturer's labels and demonstrate compliance with the rule's requirements.

The following SMAQMD rule is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

SMAQMD Rule 701 - Emergency Episode Plan

SIP Approved: 09-05-2000 (65 FR 53602):
05-27-1999 rule version is SIP approved

Rule Description: This rule requires a plan be prepared for specific actions to be taken when health related levels of ozone, carbon monoxide or PM10 are exceeded and is applicable to sources exceeding 50 tons of VOC or NOx or 100 tons of CO or PM.

Compliance Status: This rule is not applicable because actual emissions from the facility are less than the applicability levels listed in the rule. The facility had previously had a plan on file after exceeding these thresholds; however, the facility has been below these thresholds for over a year.

40 CFR 68 (begin at 68.1) - Chemical Accident Prevention Provisions

Promulgated: 01-31-1994 (59 FR 4493)
[04-09-2004 (69 FR 18831) most recent amendment]

Rule Description: This regulation specifies requirements for owners or operators of stationary sources concerning the prevention of accidental chemical releases.

An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, must comply with the requirements of 40 CFR Part 68. 40 CFR 68.215 requires that the air permitting authority include in the Title V permit for a facility specified statements regarding the regulation. Those statements are included in the Federally Enforceable Requirements - General section of the permit.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
1. Facility-wide Requirements – General (continued)

Compliance Status: The permit holder stores less than the designated amounts of the specified chemical substances in 40 CFR 68 and is exempt from the requirements of the regulation.

40 CFR 82 Subpart F (begin at 82.150) - Protection of Stratospheric Ozone - Recycling and Emissions Reduction

Promulgated: 05-14-1993 (58 FR 28712)
[08-11-2011 most recent amendment]

Rule Description: The purpose of this subpart is to reduce emissions of class I and class II refrigerants and their substitutes to the lowest achievable level by maximizing the recapture and recycling of such refrigerants during the service, maintenance, repair and disposal of appliances and restricting the sale of refrigerants consisting in whole or in part of a class I and class II ODS in accordance with Title VI of the Clean Air Act.

This subpart applies to any person servicing, maintaining or repairing appliances. This subpart also applies to persons disposing of appliances, including small appliances and motor vehicle air conditioners. In addition, this subpart applies to refrigerant reclaimers, technician certifying programs, appliance owners and operators, manufacturers of appliances, manufacturers of recycling and recovery equipment, approved recycling and recovery equipment testing organizations, persons selling class I or class II refrigerants or offering class I or class II refrigerants for sale and persons purchasing class I or class II refrigerants.

As indicated in 40 CFR 70.6, Title V permits need to assure compliance with all applicable requirements at the time of permit issuance. Part 70 defines as an applicable requirement, "Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the Act, unless the Administrator has determined that such requirements need not be contained in a Title V permit." [40 CFR 70.2(12)]. The applicable requirements of Title VI are included in the Federally Enforceable Requirements - General section of the permit.

Compliance Status: The permit holder employs qualified contractors to maintain equipment that contains class I or class II refrigerants. All of the permit holder's equipment is expected to comply with the requirements of this NESHAP.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

SMAQMD Rule 406 - Specific Contaminants

SIP Approved: 12-05-1984 (49 FR 47490)
12-06-1978 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds and combustion contaminants by limiting emission concentrations of SO_2 and particulate matter (PM).

Compliance Status: The following tables illustrate (a) the SMAQMD Rule 406 emission limits for sulfur compounds (measured as SO_2) and combustion contaminants (measured as PM) and (b) the expected emissions from the gas turbines and duct burners at the facility.

The permit holder's equipment complies with this rule.

SO_2 Emission Concentration

Equipment	SMAQMD Rule 406 Allowable Sulfur Compounds Emissions (% SO_2 by volume)	Expected Sulfur Compounds Emissions from Subject Equipment (% SO_2 by volume)
Gas Turbine Duct Burner	0.2	0.000015 (A)

(A) The following calculation converts sulfur compounds in the natural gas combusted in the turbine from units of lb/MMBtu to percent:

Assumptions for calculations:
Natural gas fuel F-factor = 8710 dscf/MMBtu (at 0% O_2, by definition of F factor)
Molecular weight of SO_2 = 64 grams/gram mole
Standard molar volume = 385.3 dscf/lb mole (at 68 degrees F and 1 atm)
SO_2 emission factor for natural gas = 0.0006 lb SO_2/MMBtu

$$= \frac{0.0006 \text{ lb } SO_2}{\text{MMBtu}} \times \frac{1 \text{ MMBtu @ 0\% } O_2}{8710 \text{ dscf}} \times \frac{385.3 \text{ cf/mole}}{64 \text{ lb/lb mole}}$$

= 0. 414 ppmv at 0% O_2
= 0. 1454 ppmv at 13.56% O_2 (Oxygen percent from source test conducted on March 14 & 15, 2012 on Turbine 1B (worst case scenario). Turbines 1A and 1C tested at 13. 61% and 15.81% oxygen respectively).
= 0.00001454% SO_2 by volume

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

Particulate Matter Emission Concentration

Equipment	SMAQMD Rule 406 Allowable Combustion Contaminants (PM) Emissions (grains/dscf at 12% CO_2)	Expected Combustion Contaminants (PM) Emissions from Subject Equipment (grains/dscf at 12% CO_2)
Gas Turbine Duct Burner	0.1	0.0052 (A)

(A) Calculated value based on the following:

Natural Gas Fuel F-Factor	=	8710 dscf/MMBtu
Molar Volume	=	385.3 ft3/mol
Natural Gas HHV	=	1020 MMBtu/MMcf
Conversion Factor	=	7000 gr/g
PM10 Emission Factor	=	3.30 lb/hour for Turbines 1A & 1B (worst case). Turbine 1C is 2.50 lb/hr
Natural Gas Fuel Density	=	44582 lb fuel/MMcf
Weight % C in Natural Gas	=	76% or 0.76 lb C/lb fuel
C to CO_2 Conversion Efficiency	=	99.5%

1. Calculate uncorrected grain loading
   = (3.3 lb/hr) x (7000 gr/lb) x (1 hr/500 MMBtu) x (1 MMBtu/8710 dscf)
   = 0.0053 gr/dscf

2. Calculate CO_2 emission factor (lb CO_2/MMBtu) assuming 100% C to CO_2 conversion
   = (0.76 lb C/lb fuel) x (1 mol C/12 lb C) x (1 mol CO_2/1 mol C) x (44 lb CO_2/mol CO_2) x (44,582 lb fuel/1 MMcf) x (1 MMcf/1020 MMBtu)
   = 121.799 lb CO_2/MMBtu

3. Calculate lb CO_2/MMbut at 99.5% Conversion of C to CO_2
   = 121.799 lb CO_2/MMBtu x 99.5%
   = 121.900 lb CO_2/MMBtu

4. Calculate volume % of CO_2 in Exhaust Gas
   = mol CO_2/mol exhaust
   = (121.900 lb CO_2/MMBtu) x (mol CO_2/44 lb CO_2) x (MMBtu/8710 dscf) x (385.3 dscf/mol exhaust)
   = 0.1218 mol CO_2/mol exhaust or 12.18% CO_2

5. Calculate corrected grain loading
   = (0.0053 gr/dscf) x (12% CO_2/12.18% CO_2)
   = 0.0052 gr/dscf corrected to 12% CO_2

Compliance is further confirmed from source testing conducted in March, 2012. Test results of turbines 1A, 1B, & 1C indicate a PM10 concentration of 0.0011 gr/dscf, 0.0002 gr/dscf, and 0.0006 gr/dscf, respectively.

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

SMAQMD Rule 411 - Boiler NOx

SIP Approved: 05-06-09 (74 FR 20880)
08-23-2007 rule version is SIP approved

Rule Description: This rule limits NOx and CO emissions from boilers, steam generators and process heaters with heat input ratings of 1 MMBtu/hour or greater.

Compliance Status: SMAQMD Rule 411 Section 112 exempts waste heat recovery boilers from the requirements of the rule. The duct burners associated with the heat recovery steam generators contribute less than 50% of the total rated heat input and therefore meet the definition in SMAQMD Rule 411 Section 225.

SMAQMD Rule 413 - Stationary Gas Turbines

SIP Approved: 01-10-2008 (73 FR 1819)
03-24-2005 rule version is SIP approved

Rule Description: This rule limits emission concentrations of NOx emissions from stationary gas turbines with a heat input of 3 MMBtu/hour or greater and operated on gaseous and/or liquid fuel.

Compliance Status: NOx emission limitation -
The gas turbines are required to meet a BARCT NOx emission concentration limit of 9 ppmvd at 15% oxygen. The NOx emission concentration limit in the Title V permits for gas turbines 1A, 1B and 1C is 2.5 ppmvd at 15% oxygen. This NOx emission limitation in the Title V permit reflect BACT and it is much stricter than the 9 ppmvd NOx emission limitation of SMAQMD Rule 413.

The permit holder complies with the rule requirements.

Startup operation -
Gas turbines 1A and 1B are required to meet a startup period of 1 hour by SMAQMD Permit to Operate Nos. 20734 and 20735. For a combined cycle gas turbine, SMAQMD Rule 413 allows a startup period of 4 hours following the shutdown of an associated steam turbine of 72 hours or more and 2 hours following the shutdown of an associated steam turbine of between 8 to 72 hours. The SMAQMD has determined that the Permit to Operate condition is stricter than SMAQMD Rule 413

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

requirement.

Gas turbine 1C is required to meet a startup period of 0.5 hours by SMAQMD Permit to Operate Nos. 20736. SMAQMD Rule 413 allows a startup period of 1 hour. The startup condition in the Permit to Operate is stricter than the SMAQMD Rule 413 startup requirement.

The permit holder complies with the rule requirements.

SMAQMD Rule 420 - Sulfur Content of Fuels

SIP Approved: 12-05-1984 (49 FR 47490)
08-13-1981 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds from the combustion of fuels by limiting the sulfur content of the fuel.

Compliance Status: The rule limits the sulfur content of gaseous fuels to less than 50 grains per 100 cubic feet and for liquid fuels less than 0.5 percent by weight. The commercial natural gas supplied to the permit holder has a sulfur content of 0.5 grains or less per 100 cubic feet, calculated as hydrogen sulfide.

The permit holder complies with the rule requirements.

40 CFR 60 Subpart KKKK (begin at 60.4300) - NSPS for Stationary Combustion Turbines:

Promulgated: 07-06-2006 (71 FR 38482)
Last Amended: 03-20-2009 (74 FR 11861)

Rule Description: This NSPS establishes emission standards for the control of NOx and SO_2 emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005. This regulation affects all stationary gas turbines with a heat input greater than 10 MMBtu/hour including any associated duct burners in heat recovery steam generators.

Compliance Status: The gas turbine emissions are required to not exceed 42 ppmvd of NOx at 15% O_2. The gas turbine emissions are required to not exceed 0.9 lb SO_2/MW-hour or the turbine shall not combust any fuel which contains total potential sulfur emissions that exceed 0.060 lb SO_2/MMBtu. The

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

measuring points are located after any duct burners. The gas turbines were modified after February 18, 2005 and are therefore subject to the NSPS.

The gas turbines have a BACT limit of 2.5 ppm NOx and a fuel with no more than 0.0006 lb SO_2/MMBtu. Therefore, the turbines comply with the NSPS requirements.

40 CFR Parts 72 through 78 Acid Rain Program

Promulgated: 01-11-1993 (58 FR 3650)
Last amended: 10-19-2007 (72 FR 59205)

Rule Description: This federal regulation limits the emission of NOx and SO_2 from electric utility associated combustion equipment such as boilers and gas turbines in order to reduce the formation of acid rain.

Compliance Status: The permit holder submits quarterly reports to the U.S. EPA in accordance with the applicable requirements of 40 CFR Part 75.

The permit holder complies with the Acid Rain Program requirements.

The following federal regulations are not an applicable federal requirement but are discussed here to document the non-applicability determination for the record:

40 CFR 60 Subpart GG (begin at 60.330) - NSPS for Stationary Gas Turbines

Promulgated: 09-10-1979 (44 FR 52798)
Last Amended: 02-24-2006 (71 FR 9457)

Rule Description: This regulation affects all stationary gas turbines with a heat input greater than 10 MMBtu/hour. The gas turbine emissions are required to not exceed 75 ppmvd of NOx at 15% O2 and 150 ppmvd of SO_2 at 15% O2.

Compliance Status: Each gas turbine is not subject to this rule because it is subject to 40 CFR 60, Subpart KKKK. Subpart KKKK exempts each turbine from Subpart GG per 40 CFR 60.4305(b) if the turbine is governed by Subpart KKKK.

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

40 CFR 60 Subpart D (begin at 60.40) - NSPS for Electric Utility Steam Generating Units for Which Construction Is Commenced After August 17, 1971:

Promulgated: 06-14-1974 (39 FR 20791)
Last Amended 06-13-2007 (72 FR 32717)

Rule Description: This federal regulation applies to any fossil fuel fired steam generating unit with a heat input greater than 250 MMBTU. It limits PM emissions to 0.1 lb/MMBTU, NOx to 0.20 lb/MMBTU and opacity to 20% except for one six minute period per hour of not more than 27% opacity.

Compliance Status: Each gas turbine is not subject to this rule because it is not a fossil fuel fired steam generating unit as defined in 40 CFR 60.41(a). "Fossil-fuel fired steam generating unit means a furnace or boiler used in the process of burning fossil fuel for the purpose of producing steam by heat transfer."

Each gas turbine is not a "furnace or boiler" and is therefore not subject to the rule.

Each duct burner is not subject to the rule requirements because its heat input is less than 250 MMBTU/hour and it's instead subject to 40 CFR Subpart KKKK.

40 CFR 60 Subpart Da (begin at 60.40a) - NSPS for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978:

Promulgated: 06-11-1979 (44 FR 33613)
Last Amended: 04-19-2012 (77 FR 23402)

Rule Description: This federal regulation applies to any steam electric generating unit capable of combusting 250 MMBtu/hour of fossil fuel and supplying more than 1/3 of its potential output capacity and more than 25 MW electrical output to any utility power distribution system for sale. It limits PM emissions to 0.03 lb/MMBtu, NOx to 0.20 lb/MMBtu and opacity to 20% (6-minute average) except for one six minute period per hour of not more than 27% opacity.

Compliance Status: Each gas turbine is not subject to this rule because it is not a steam generating unit as defined in 40 CFR 60.41Da. "Steam generating unit means any furnace, boiler, or other device used for combusting fuel for the purpose of producing steam (including fossil-fuel-fired steam

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

generators associated with combined cycle gas turbines; nuclear steam generators are not included)".

Each duct burner is not subject to the rule requirements because its heat input is less than 250 MMBtu/hour and it is instead subject to 40 CFR Subpart KKKK. Since each duct burner is subject to 40 CFR Subpart KKKK, the duct burners are exempt from Subpart Da per 40 CFR 60.4305(b).

40 CFR 60 Subpart Db (begin at 60.40b) - NSPS for Industrial - Commercial - Institutional Steam Generating Units:

Promulgated: 11-26-1986 (51 FR 42768)
02-16-2012 (77 FR 9459)

Rule Description: This federal regulation applies to any steam generating unit capable of combusting 100 MMBtu/hour of fuels. The regulation limits PM, NOx, SO_2 and opacity emissions.

Compliance Status: Each gas turbine is not subject to this rule because it is not a steam generating unit as defined in 40 CFR 60.41b. "Steam generating unit means a device that combusts any fuel or byproduct/waste to produce steam or to heat water or any other heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart".

Each duct burner is not subject to the rule requirements because its heat input is less than 100 MMBtu/hour and it is instead subject to 40 CFR Subpart KKKK. Since each duct burner is subject to 40 CFR Subpart KKKK, each duct burner is exempt from Subpart Db per 40 CFR 60.4305(b).

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

40 CFR 60 Subpart Dc (begin at 60.40c) - NSPS for Small Industrial - Commercial - Institutional Steam Generating Units:

Promulgated: 09-12-1990 (55 FR 37683)
02-16-2012 (77 FR 9461)

Rule Description: This federal regulation applies to any steam generating unit capable of combusting between 10 and 100 MMBtu/hour of fuels. The regulation limits PM, SO_2 and opacity emissions.

Compliance Status: Each gas turbine is not subject to this rule because it is rated at 500 MMBtu/hour, which is greater than the applicability threshold of 10 - 100 MMBtu/hour. Each gas turbine is not subject to this rule because it is not a "steam generating unit" as defined in 40 CFR 60.41c. "Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart."

Each duct burner is not subject to the rule requirements because it is instead subject to 40 CFR Subpart KKKK. Since each duct burner is subject to 40 CFR Subpart KKKK, each duct burner is exempt from Subpart Dc per 40 CFR 60.4305(b).

40 CFR 63 Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Gas Turbines:

Promulgated: 03-05-2004 (69 FR 10512)
Partially Stayed on 08-18-2004 (51184)

Rule Description: This federal regulation limits the emission of HAP from stationary gas turbines located at major sources of HAP.

Rule Compliance: The gas turbines are not subject to the federal NESHAP for Stationary Gas Turbines because they are not located at a facility that is a major source for HAP.

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

40 CFR 64 (beginning at 64.1) Compliance Assurance Monitoring:

Promulgated: 10-22-1997 (52 FR 54940)

Rule Description: This federal regulation specifies monitoring requirements for Title V sources that will assure compliance with emission limitations or standards.

Rule Compliance:

VOC, SO_2, and PM10

Applicability of the Compliance Assurance Monitoring regulation requires that:

"The unit uses a control device to achieve compliance with any such emission limitation or standard"
[40 CFR 64.2(a)(2)]

The gas turbine does not use a control device for compliance with VOC, SO_2, and PM10 emissions limits and is therefore not subject to 40 CFR Part 64 Compliance Assurance Monitoring for VOC and PM10.

NOx and CO

This federal regulation exempts pollutant specific emissions units that are regulated by:

"Emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method, as defined in §64.1"
[40 CFR 64.2(b)(1)(vi)]

Since the gas turbine is subject to a continuous emission monitoring requirement for CO and NOx in the Title V permit, it is exempt from 40 CFR Part 64 Compliance Assurance Monitoring for CO and NOx.

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

Permit Conditions - SMAQMD Rule 201 Permit to Operate No. 20734, 11437, 11439, & 11442

Condition Description: SMAQMD Permits to Operate No. 20734, 11437, 11439, & 11442 for turbine 1A, duct burner 1A, SCR, and oxidation catalyst, limit NOx and NH3 (not federally enforceable) emission concentration, limits mass emissions, and requires emission offsets be provided and requires recordkeeping and reporting.

Condition 23.F. allows the SMAQMD to waive the annual VOC test if the latest test results indicate that an adequate compliance margin has been maintained. This condition is being clarified as follows to remove the discretionary aspect of the condition:

The VOC and PM10 tests can be conducted every other year if the previous test indicates that the respective hourly emissions are less than or equal to 75% of the hourly respective emission limit.

[Condition Nos. 1, 2, 3, 4, 5, 6, portion of condition 8 (as it relates to NH3), 20, portion of condition 23 (as it relates to NH3) of the SMAQMD Rule 201 permit are not federally enforceable.]

Compliance Status: The permit holder complies with the rule requirements.

Permit Conditions - SMAQMD Rule 201 Permit to Operate No. 20735, 11438, 11440, & 11443

Condition Description: SMAQMD Permits to Operate No. 20735, 11438, 11440, & 11443 for s turbine **1B**, duct burner 1B, SCR, and oxidation catalyst, limit NOx and NH3 (not federally enforceable) emission concentration, limits mass emissions, and requires emission offsets be provided and requires recordkeeping and reporting.

Condition 23.F. allows the SMAQMD to waive the annual VOC test if the latest test results indicate that an adequate compliance margin has been maintained. This condition is being clarified as follows to remove the discretionary aspect of the condition:

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

The VOC and PM10 tests can be conducted every other year if the previous test indicates that the respective hourly emissions are less than or equal to 75% of the hourly respective emission limit.

[Condition Nos. 1, 2, 3, 4, 5, 6, portion of condition 8 (as it relates to NH3), 20, portion of condition 23 (as it relates to NH3) of the SMAQMD Rule 201 permit are not federally enforceable.]

Compliance Status: The permit holder complies with the rule requirements.

Permit Conditions - SMAQMD Rule 201 Permit to Operate No. 20736, 11441 & 11444

Condition Description: SMAQMD Permits to Operate No. 20736, 11441 & 11444 for turbine 1C, SCR, and oxidation catalyst, limit NOx and NH3 (not federally enforceable) emission concentration, limits mass emissions, and requires emission offsets be provided and requires recordkeeping and reporting.

Condition 21.F. allows the SMAQMD to waive the annual VOC test if the latest test results indicate that an adequate compliance margin has been maintained. This condition is being clarified as follows to remove the discretionary aspect of the condition:

The VOC and PM10 tests can be conducted every other year if the previous test indicates that the respective hourly emissions are less than or equal to 75% of the hourly respective emission limit.

[Condition Nos. 1, 2, 3, 4, 5, 6, portion of condition 8 (as it relates to NH3), 18, portion of condition 21 (as it relates to NH3) of the SMAQMD Rule 201 permit are not federally enforceable.]

Compliance Status: The permit holder complies with the rule requirements.

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

Streamlining Multiple Applicable Requirements:

Each of the gas turbines is subject to the following overlapping Applicable Federally Enforceable Requirements:

A. Gas Turbine NOx Emission Concentration

Basis of Requirement	Applicable Requirements NOx
40 CFR 60 Subpart KKKK NSPS for Stationary Combustion Turbines	< 42 ppmv at 15% O_2
SMAQMD Rule 413 – Stationary Gas Turbines	< 9 ppmv at 15% O_2
SMAQMD Rule 201 permit conditions based on: SMAQMD Rule 202 – New Source Review (BACT)	< 2.5 ppmv at 15% O_2

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule 201 and 202, which will be included in the Title V permit (< 2.5 ppmv at 15% O_2).

B. Gas Turbine SO_2 Emission Concentration

Basis of Requirement	Applicable Requirements SO_2
40 CFR 60 Subpart KKKK NSPS for Stationary Combustion Turbines	Potential sulfur emissions from the fuel combustion shall be < 0.060 lb SO_2/MMBtu
SMAQMD Rule 406 - Combustion Contaminants	Sulfur compounds shall be < 0.2% by volume, measured as SO_2 in exhaust (equivalent to ~ 8.0 lb SO_2/MMBtu) (A)
SMAQMD Rule 420 - Sulfur Content of Fuels	Gaseous fuel shall contain < 50 grains of sulfur compounds/100 cf measured as H_2S (equivalent to 0.1270 lb SO_2/MMBtu) (B)

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

Basis of Requirement	Applicable Requirements SO_2
SMAQMD Rule 201 permit conditions based on: SMAQMD Rule 202 – New Source Review	The gas turbine shall only use natural gas as fuel. Typical natural gas fuel has a sulfur compound content of less than 0.0006 lb/MMBtu. Therefore, sulfur emissions from the fuel combustion shall be < 0.0006 lb/MMBtu

(A) The calculation for determining the equivalent lb SO_2/MMBtu based on 0.2% SO_2 by volume in the exhaust gas is -

525.2 MMBtu/hour is used in the calculation below because the 2012 source test data that provided the exhaust airflow rate is based on the gas turbine and duct burner operating at that heat input.

$$\frac{\text{lb } SO_2}{} = \frac{(0.002 \text{ part } SO_2/1 \text{ part exhst}) \times (210{,}013 \text{ ft}^3 \text{ exhst/min}) \times (60 \text{ min/hour}) \times (1 \text{ lb mol}/385 \text{ ft}^3) \times (64 \text{ lb } SO_2/\text{lb mol})}{525.2 \text{ MMBtu/hour}}$$

$$= \frac{4189.4 \text{ lb } SO_2/\text{hour}}{525.2 \text{ MMBtu/hour}}$$

$$= 8.0 \text{ lb } SO_2/\text{MMBtu}$$

(B) The calculation for determining the equivalent lb SO_2/MMBtu based on the fuel's sulfur content by weight is:

$$\frac{\text{lb } SO_2}{\text{MMBtu}} = \frac{50 \text{ grain } H_2S}{100 \text{ cf nat. gas}} \times \frac{1 \text{ cf nat. gas}}{1000 \text{ BTU}} \times \frac{1{,}000{,}000 \text{ BTU}}{1 \text{ MMBtu}} \times \frac{1 \text{ lb}}{7000 \text{ grains}} \times \frac{32 \text{ lb/lb-mol } SO_2}{18 \text{ lb/lb-mol } H_2S}$$

$$= 0.1270 \text{ lb } SO_2/\text{MMBtu}$$

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule 201 and 202, which will be included in the Title V permit (< 0.0006 lb/MMBtu).

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

C. Gas Turbine PM Emission Concentration

Basis of Requirement	Applicable Requirements for PM
SMAQMD Rule 406 - Combustion Contaminants	< 0.1 grains/dscf, corrected to 12% CO_2
SMAQMD Rule 201 permit conditions based on: SMAQMD Rule 202 – New Source Review	Gas turbines and duct burners 1A and 1B shall be < 3.3 lb/hour equivalent to ~ 0.0050 grains/dscf, corrected to 12% CO_2 Gas turbine 1C shall be < 2.5 lb/hour equivalent to ~ 0.0052 grains/dscf, corrected to 12% CO_2

(A) The calculation for determining the equivalent grains PM/dscf based on lb PM/hour value is -

Turbine 1A and 1B

$$\frac{\text{grains PM}}{\text{dscf}} = \frac{(3.3 \text{ lb PM/hour}) \times (7000 \text{ grains/lb})}{(210{,}013 \text{ cf exhaust air/min}) \times (60 \text{ min/hour}) \times (\text{exhaust air cfm from 2012 source test})}$$

$$= \frac{23100 \text{ grains PM/hour}}{12{,}600{,}780 \text{ cf exhaust air/hour}}$$

= 0.0018 grains/dscf at 4.3% CO_2 (CO_2 concentration from 2012 source test)

= 0.0050 grains PM/dscf at 12% CO_2

Turbine 1C

$$\frac{\text{grains PM}}{\text{dscf}} = \frac{(2.5 \text{ lb PM/hour}) \times (7000 \text{ grains/lb})}{(227{,}264 \text{ cf exhaust air/min}) \times (60 \text{ min/hour}) \times (\text{exhaust air cfm from 2012 source test})}$$

$$= \frac{17{,}500 \text{ grains PM/hour}}{13{,}635{,}840 \text{ cf exhaust air/hour}}$$

= 0.0013 grains/dscf at 3% CO_2 (CO_2 concentration from 2012 source test)

= 0.0052 grains PM/dscf at 12% CO_2

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule 201 and 202, which will be included in the Title V permit.

I. A PPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
a. Gas Turbines 1A, 1B, and 1C
Duct Burners 1A and 1B
APC NOx SCR Systems 1A, 1B, and 1C
APC VOC and CO Oxidation Catalyst Systems 1A, 1B, and 1C

D. Gas Turbine Start-up Operation Allowance

Basis of Requirement	Applicable Requirements Start-up Operation Allowance
SMAQMD Rule 413 - Combustion Contaminants	9 ppmv NOx emission limit does not apply during gas turbine start-up. Start-up is no more than 60 minutes.
SMAQMD Rule 201 permit conditions based on: SMAQMD Rule 202 – New Source Review	Combined Cycle Gas Turbines: 2.5 ppmvd NOx emission limit does not apply during gas turbine start-up. Start-up is no more than 60 minutes. Single Cycle Gas Turbines: 2.5 ppmvd NOx emission limit does not apply during gas turbine start-up. Start-up is no more than 30 minutes.

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule 201 and 202, which will be included in the Title V permit.

Streamlining Multiple Applicable Requirements:

The following discussion is taken from the 05-01-2008 SMAQMD response to U.S. EPA Region 9 comments regarding the last significant modification to the SCA Title Permit No. TV1997-12-02. Its purpose here is to document the source of emission factors used to calculate turbine and duct burner emissions.

The Engineering Evaluation for Authority to Construct Nos. 20734, 20735 and 20736 and the Final Determination of Compliance document provided to U.S. EPA includes emission factors and methodology for emission calculations. We further note that compliance with NOx and CO emission limits will be verified by continuous emissions monitoring equipment and annual emissions testing; compliance with SOx emission limits will be verified by continuous fuel flow monitoring equipment; and that compliance with the VOC and PM10 emission limits will be verified by annual emissions testing. SCA has proposed emissions limits based on either historical emissions testing data (for PM10 and VOC) or vendor recommendations and guarantees (for NOx and CO). SOx emission limits are based on U.S. EPA AP-42 emission factors and PG&E fuel sulfur data. These limits will be made federally enforceable by the Title V permit, and are practically enforceable by the continuous monitoring and annual testing requirements in the Title V permit.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements
b. Auxiliary Boilers A & B
APC NOx SCR SYSTEM 1D
APC VOC AND CO OXIDATION CATALYST SYSTEMS 1D

SMAQMD Rule 406 - Specific Contaminants

SIP Approved: 12-05-1984 (49 FR 47490)
12-06-1978 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds and combustion contaminants by limiting emission concentrations of SO_2 and particulate matter (PM).

Compliance Status: The following tables illustrate (a) the SMAQMD Rule 406 emission limits for sulfur compounds (measured as SO_2) and combustion contaminants (measured as PM) and (b) the expected emissions from the equipment at the facility.

The permit holder's equipment complies with this rule.

SO_2 Emission Concentration

Equipment	SMAQMD Rule 406 Allowable Sulfur Compounds Emissions (% SO_2 by volume)	Expected Sulfur Compounds Emissions from Subject Equipment (% SO_2 by volume)
Auxiliary Boiler	0.2	0.000031 (A)

(A) The following calculation converts sulfur compounds in the natural gas combusted in the boilers from units of lb/MMBtu to percent:

Assumptions for calculations:
Natural gas fuel F-factor = 8710 dscf/MMBtu (at 0% O_2, by definition of F factor)
Molecular weight of SO_2 = 64 grams/gram mole
Standard molar volume = 385.3 dscf/lb mole (at 68 degrees F and 1 atm)
SO_2 emission factor for natural gas = 0.0006 lb SO_2/MMBtu

$$\% SO_2 = \frac{0.0006 \text{ lb } SO_2}{\text{MMBtu}} \times \frac{1 \text{ MMBtu @ 0\% } O_2}{8710 \text{ dscf}} \times \frac{385.3 \text{ cf/mole}}{64 \text{ lb/lb mole}}$$

= 0. 414 ppmv at 0% O_2
= 0. 3068 ppmv at 5.41% O_2 (Oxygen percent from source test conducted on March 20, 2012.)
= 0.00003068% SO_2 by volume

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
b. Auxiliary Boilers A & B
APC NOx SCR SYSTEM 1D
APC VOC AND CO OXIDATION CATALYST SYSTEMS 1D

Particulate Matter Emission Concentration

Equipment	SMAQMD Rule 406 Allowable Combustion Contaminants (PM) Emissions (grains/dscf at 12% CO_2)	Expected Combustion Contaminants (PM) Emissions from Subject Equipment (grains/dscf at 12% CO_2)
Auxiliary Boiler	0.1	0.86 (A)

(A) Calculated value based on the following:

Natural Gas Fuel F-Factor	=	8710 dscf/MMBtu
Molar Volume	=	385.3 ft3/mol
Natural Gas HHV	=	1020 MMBtu/MMcf
Conversion Factor	=	7000 gr/g
PM10 Emission Factor	=	0.54 lb/hour
Natural Gas Fuel Density	=	44,582 lb fuel/MMcf
Weight % C in Natural Gas	=	76% or 0.76 lb C/lb fuel
C to CO_2 Conversion Efficiency	=	99.5%

1. Calculate uncorrected grain loading
   = (0.54 lb/hr) x (7000 gr/lb) x (1 hr/500 MMBtu) x (1 MMBtu/8710 dscf)
   = 0.00087 gr/dscf

2. Calculate CO_2 emission factor (lb CO_2/MMBtu) assuming 100% C to CO_2 conversion
   = (0.76 lb C/lb fuel) x (1 mol C/12 lb C) x (1 mol CO_2/1 mol C) x (44 lb CO_2/mol CO_2) x (44,582 lb fuel/1 MMcf) x (1 MMcf/1020 MMBtu)
   = 121.799 lb CO_2/MMBtu

3. Calculate lb CO_2/MMbut at 99.5% Conversion of C to CO_2
   = 121.799 lb CO_2/MMBtu x 99.5%
   = 121.900 lb CO_2/MMBtu

4. Calculate volume % of CO_2 in Exhaust Gas
   = mol CO_2/mol exhaust
   = (121.900 lb CO_2/MMBtu) x (mol CO_2/44 lb CO_2) x (MMBtu/8710 dscf) x (385.3 dscf/mol exhaust)
   = 0.1218 mol CO_2/mol exhaust or 12.18% CO_2

5. Calculate corrected grain loading
   = (0.00087 gr/dscf) x (12% CO_2/12.18% CO_2)
   = 0.00086 gr/dscf corrected to 12% CO_2

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
b. Auxiliary Boilers A & B
APC NOx SCR SYSTEM 1D
APC VOC AND CO OXIDATION CATALYST SYSTEMS 1D

SMAQMD Rule 411 - Boiler NOx

SIP approved: 05-06-2009 (74 FR 20880)
[08-23-2007 version]

Rule Description: This rule limits NOx and CO emissions from boilers, steam generators and process heaters with heat input ratings of 1 MMBtu/hour or greater.

Compliance Status: The rule limits boiler emissions of NOx to 9 ppmvd at 3% oxygen and CO to 400 ppmvd at 3% oxygen. Source testing of the auxiliary boiler conducted on March 20, 2012 indicates that the boiler complies with the rule by emiting NOx and CO at 7.1 ppmvd at 3% oxygen and 44.6 ppmvd at 3% oxygen respectively.

The permit holder complies with the rule requirements.

SMAQMD Rule 420 - Sulfur Content of Fuels

SIP approved: 12-05-1984 (49 FR 47490)
[08-31-1981 version]

Rule Description: This rule regulates emissions of sulfur compounds from the combustion of fuels by limiting the sulfur content of the fuel.

Compliance Status: This rule limits the sulfur content of gaseous fuels to less than 50 grains of sulfur compounds per 100 cubic feet, calculated as hydrogen sulfide. The commercial natural gas combusted by the auxiliary boiler has a typical sulfur content of 0.5 grains or less per 100 cubic feet, calculated as hydrogen sulfide.

The permit holder complies with the rule requirements.

40 CFR 60 Subpart Db (begin at 60.40b) - NSPS for Industrial - Commercial - Institutional Steam Generating Units:

Promulgated: 11-26-1986 (51 FR 42768)
02-16-2012 (77 FR 9459)

Rule Description: This federal regulation applies to any steam generating unit capable of combusting 100 MMBtu/hour of fuels. The regulation limits PM, NOx, SO_2, and opacity emissions.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
b. Auxiliary Boilers A & B
APC NOx SCR SYSTEM 1D
APC VOC AND CO OXIDATION CATALYST SYSTEMS 1D

Compliance Status: The auxiliary boiler uses only natural gas fuel with a potential SO_2 emission rate of 0.32 lb SO_2/ MMBtu or less and is exempt from the SO_2 emissions limit in 40 CFR 60.42b(k)(1) by 40 CFR 60.42b(k)(2).

The auxiliary boiler uses natural gas fuel only and there are no PM emission limits for a boiler combusting only natural gas in 40 CFR 60.43b.

The auxiliary boiler uses natural gas fuel only and therefore must limit NOx emissions to 0.1 lb/MMBtu by the requirements of 40 CFR 60.44b(a).

The permit holder complies with the rule requirements.

Permit Conditions - SMAQMD Rule 201 Permit to Operate No. 12318 (Rev05)

Condition Description: SMAQMD Permit to Operate No. 12318 (Rev05) for the auxiliary boiler, limits NOx and CO emission concentration, limits mass emissions, and requires emission offsets be provided and requires recordkeeping and reporting.

Condition 20.E. allows the SMAQMD to waive the annual VOC test every other year if the latest test results indicate that an adequate compliance margin has been maintained. This condition is being clarified as follows to remove the discretionary aspect of the condition:

The VOC and PM10 tests can be conducted every other year if the previous test indicates that the respective hourly emissions are less than or equal to 75% of the hourly respective emission limit.

[Condition Nos. 1, 2, 3, 4, 5, 6, and 7 of the SMAQMD Rule 201 permit are not federally enforceable.]

Compliance Status: The permit holder complies with the rule requirements.

Permit Conditions - SMAQMD Rule 201 Permit to Operate No. 24398 & 24399

Condition Description: SMAQMD Permit to Operate No. 24398 & 24399 for the auxiliary boiler 1B and SCR, limits NOx and CO emission concentration, limits mass emissions, and requires emission offsets be provided and requires recordkeeping and reporting.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
b. Auxiliary Boilers A & B
APC NOx SCR SYSTEM 1D
APC VOC AND CO OXIDATION CATALYST SYSTEMS 1D

Condition 18.E. allows the SMAQMD to waive the annual VOC test every other year if the latest test results indicate that an adequate compliance margin has been maintained. It also incorrectly makes reference to a PM10 and PM2.5 test. This condition is being clarified as follows to remove the discretionary aspect of the condition:

The VOC and PM10 tests can be conducted every other year if the previous test indicates that the respective hourly emissions are less than or equal to 75% of the hourly respective emission limit.

[Condition Nos. 1, 2, 3, 4, 5, 6, 7, 12, and portions of 18 (as it relates to ammonia) of the SMAQMD Rule 201 permit are not federally enforceable.]

Compliance Status: The permit holder complies with the rule requirements.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination:

40 CFR 60 Subpart D (begin at 60.40) - NSPS for Electric Utility Steam Generating Units for Which Construction Is Commenced After August 17, 1971:

Promulgated: 06-14-1974 (39 FR 20791)
Last Amended: 06-13-2007 (72 FR 32717)

Rule Description: This federal regulation applies to any fossil fuel fired steam generating unit with a heat input greater than 250 MMBtu. It limits PM emissions to 0.1 lb/MMBtu, NOx to 0.20 lb/MMBtu and opacity to 20% except for one six minute period per hour of not more than 27% opacity.

Compliance Status: The auxiliary boiler is not subject to this rule because it does not have a heat input capacity greater than 250 MMBtu/hour.

40 CFR 60 Subpart Da (begin at 60.40a) - NSPS for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978:

Promulgated: 06-11-1979 (44 FR 33613)
Last Amended: 04-19-2012 (77 FR 23402)

Rule Description: This federal regulation applies to any steam electric generating unit capable of combusting 250 MMBtu/hour of fossil fuel and supplying more than 1/3 of its potential output capacity and more than 25 MW electrical

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
b. Auxiliary Boilers A & B
APC NOx SCR SYSTEM 1D
APC VOC AND CO OXIDATION CATALYST SYSTEMS 1D

output to any utility power distribution system for sale. It limits PM emissions to 0.03 lb/MMBtu, NOx to 0.20 lb/MMBtu and opacity to 20% (6-minute average) except for one six minute period per hour of not more than 27% opacity.

Compliance Status: The auxiliary boiler is not subject to this rule because it is not an "electric utility steam generating unit" as defined in 40 CFR 60.41Da.

"Electric utility steam generating unit means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW net-electrical output to any utility power distribution system for sale. Also, any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is considered in determining the electrical energy output capacity of the affected facility".

The purpose of the auxiliary boiler is to provide steam to the Procter and Gamble facility, as a backup source, if either of the two combined cycle gas turbines becomes inoperable. None of the steam produced in the auxiliary boilers is used for electric power generation.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
b. Auxiliary Boilers A & B
APC NOx SCR SYSTEM 1D
APC VOC AND CO OXIDATION CATALYST SYSTEMS 1D

40 CFR 60 Subpart Dc (begin at 60.40c) - NSPS for Small Industrial - Commercial - Institutional Steam Generating Units:

Promulgated: 09-12-1990 (55 FR 37683)
02-16-2012 (77 FR 9461)

Rule Description: This federal regulation applies to any steam generating unit capable of combusting between 10 and 100 MMBtu/hour of fuels. The regulation limits PM, SO_2 and opacity emissions.

Compliance Status: The auxiliary boiler is not subject to this rule because it's rated at 108.7 MMBtu/hour, which is greater than the applicability threshold of 10 - 100 MMBtu/hour.

40 CFR 64 (beginning at 64.1) Compliance Assurance Monitoring:

Promulgated: 10-22-1997 (52 FR 54940)

Rule Description: This federal regulation specifies monitoring requirements for Title V sources that will assure compliance with emission limitations or standards.

Compliance Status: **VOC, SO_2, and PM10**

Applicability of the Compliance Assurance Monitoring regulation requires that:

"The unit uses a control device to achieve compliance with any such emission limitation or standard"
[40 CFR 64.2(a)(2)]

The boiler does not use a control device for compliance with VOC, SO_2, and PM10 emissions limits and is therefore not subject to 40 CFR Part 64 Compliance Assurance Monitoring for VOC and PM10.

NOx and CO

This federal regulation exempts pollutant specific emissions units that are regulated by:

"Emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method, as defined in §64.1"
[40 CFR 64.2(b)(1)(vi)]

Since the boiler is subject to a continuous emission monitoring

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
b. Auxiliary Boilers A & B
APC NOx SCR SYSTEM 1D
APC VOC AND CO OXIDATION CATALYST SYSTEMS 1D

requirement for CO and NOx in the Title V permit, it is exempt from 40 CFR Part 64 Compliance Assurance Monitoring for CO and NOx.

40 CFR 63 Subpart JJJJJJ (begin at 63.11194) - NESHAP for Industrial, Commercial and Institutional Boilers:

Promulgated: 2-1-2013 (78 FR 7488)
Last Amended 9-14-2016 (81 FR 63112)

Rule Description: This rule limits the amount of HAPs that may be released from all new boilers (built after 06-04-2010) at existing industrial, commercial and institutional boilers and process heaters that are located at facilities that are not major sources of HAP.

Compliance Status: This rule only applies to boilers that are fired with coal, biomass, or oil. Since the auxiliary boiler is fired exclusively with natural gas, the boiler is exempt per 40 CFR 63.11195(e).

Streamlining Multiple Applicable Requirements:

The auxiliary boilers are subject to the following overlapping Applicable Federally Enforceable Requirements:

A. PM and SO_2 Emission Concentration

Basis of Requirement	Applicable Requirements	
	PM (A)	SO_2
SMAQMD Rule 406 - Combustion Contaminants	< 0.1 grains/dscf corrected to 12% CO_2	< 0.2% by volume (equivalent to ~ 3.9 lb SO_2/MMBtu) (C)
SMAQMD Rule 420 - Sulfur Content of Fuels	Not Applicable	gaseous fuel shall contain < 50 grains of sulfur compounds/100 cf, measured as H_2S

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
b. Auxiliary Boilers A & B
APC NOx SCR SYSTEM 1D
APC VOC AND CO OXIDATION CATALYST SYSTEMS 1D

Basis of Requirement	Applicable Requirements	
	PM (A)	SO_2
SMAQMD Rule 201 permit conditions based on: SMAQMD Rule 202 – New Source Review	< 0.54 lb PM10/hour equivalent to ~ 0.0057 grains/dscf corrected to 12% CO_2 (B)	The auxiliary boiler shall only use natural gas as fuel. Typical natural gas fuel is < 0.5 grains of sulfur compounds/100 cf, measured as H_2S Potential sulfur emissions from the fuel < 0.0006 lb SO_2/MMBtu

(A) Assume that all PM emitted is PM10.

(B) The calculation for determining the equivalent grains PM/dscf based on a lb PM10/hour value is -

76 MMBtu/hour is used in the calculation below because the 2012 source test data that provided the exhaust airflow rate is based on the auxiliary boiler operating at that heat input.

$$\frac{\text{grains PM}}{\text{dscf}} = \frac{(0.54 \text{ lb PM10/hour}) \times (7000 \text{ grains/lb})}{(14{,}962 \text{ cf exhaust air/min}) \times (60 \text{ min/hour})}$$

$$= \frac{3{,}780 \text{ grains PM/hour}}{897{,}720 \text{ cf exhaust air/hour}}$$

= 0.0042 grains/dscf at 8.9% CO_2 (CO_2 concentration from source tests)

= 0.0057 grains PM/dscf at 12% CO_2

(C) The calculation for determining the equivalent lb SO_2/MMBtu based on 0.2% SO_2 by volume in the exhaust gas is -

$$\frac{\text{lb } SO_2}{\text{MMBtu}} = \frac{(0.002 \text{ parts } SO_2/1 \text{ part exhst}) \times (14{,}962 \text{ ft}^3 \text{ exhst/min}) \times (60 \text{ min/hr}) \times (1 \text{ lb mol}/385 \text{ ft}^3) \times (64 \text{ lb } SO_2/\text{lb mol})}{76 \text{ MMBtu/hour}}$$

$$= \frac{298.5 \text{ lb } SO_2/\text{hour}}{76 \text{ MMBtu/hour}}$$

= 3.9 lb SO_2/MMBtu

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule 201 and 202, which will be included in the Title V permit.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
b. Auxiliary Boilers A & B
APC NOx SCR SYSTEM 1D
APC VOC AND CO OXIDATION CATALYST SYSTEMS 1D

B. NOx Emission Concentration

Basis of Requirement	Applicable Requirements NOx
SMAQMD Rule 411 NOx from Boilers, Process Heaters and Steam Generators	9 ppmv at 3% O_2 (equivalent to 0.01 lb NOx/MMBtu)
40 CFR 60 Subpart Db (begin at 60.40b) NSPS for Industrial - Commercial - Institutional Steam Generating Units	0.1 lb/MMBtu
SMAQMD Rule 201 permit conditions based on: SMAQMD Rule 202 – New Source Review	9 ppmv at 3% O_2 (equivalent to 0.01 lb NOx/MMBtu)

(A) The calculation for determining the equivalent lb NOx/MMBtu based on a ppmv concentration value is:

76 MMBtu/hour is used in the calculation below because the 2012 source test data that provided the exhaust airflow rate is based on the auxiliary boiler operating at that heat input.

$$\frac{\text{lb NOx}}{\text{MMBtu}} = \frac{(9 \text{ part NOx}/1\text{x}10^6 \text{ part exhst}) \times (14{,}962 \text{ ft}^3 \text{ exhst/min}) \times (60 \text{ min/hr}) \times (1 \text{ lb mol}/385 \text{ ft3}) \times (46 \text{ lb NOx/lb mol})}{76 \text{ MMBtu/hour}}$$

$$= \frac{0.965 \text{ lb NOx/hour}}{76 \text{ MMBtu/hour}}$$

$$= 0.01 \text{ lb NOx/MMBtu}$$

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule 201 and 202, which will be included in the Title V permit.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements
c. Cooling Tower

SMAQMD Rule 404 - Particulate Matter

SIP approved: 07-13-1987 (52 FR 26148)
[11-20-1984 amended version]

Rule Description: This rule regulates emissions of particulate matter by limiting the emission concentration of particulate matter (PM).

Compliance Status: In the following discussion, all particulate emissions from the cooling tower are assumed to be PM10. If the PM10 concentration complies with the rule limits, then the PM concentration would also comply with the rule limits.

Based on the daily PM10 emission limit in the permit, the maximum allowable PM10 emission concentration from the cooling tower is 0.00004 grains/dscf. The rule limit for PM is 0.1 grains/dscf.

The permit holder complies with the rule requirements.

Permit Conditions - SMAQMD Rule 201 Permit to Operate No. 11431

Condition Description: SMAQMD Permit to Operate No. 11431 for the cooling tower, limits mass emissions and requires recordkeeping and reporting.

[Condition Nos. 1, 2, 3, 4, 5, and 6, of the SMAQMD Rule 201 permit are not federally enforceable.]

Compliance Status: The permit holder complies with the requirements of the permit conditions

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination:

40 CFR 63 Subpart Q - National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers:

Promulgated: 04-07-2006 (71 FR 17729)

Rule Description: This federal regulation prohibits the use of chromium in cooling tower water, at major sources of HAP, beginning September 08, 1994.

Compliance Status: The cooling tower is not subject to the federal NESHAP for Industrial Process Cooling Towers because it is not located at a facility that is a major source for HAP.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
2. Equipment Specific Requirements (continued)
c. Cooling Tower

Streamlining Multiple Applicable Requirements:

The cooling tower is subject to the following overlapping Applicable Federally Enforceable Requirements:

A. PM Emission Concentration

Basis of Requirement	Applicable Requirements PM (A)
SMAQMD Rule 404	0.1 grains/dscf
SMAQMD Rule 201 permit conditions based on: SMAQMD Rule 202 – New Source Review	7.0 lb PM10/day (equivalent to 0.00004 grains PM/dscf)

(A) Assume that all PM emitted is PM10.
(B) The calculation for determining the equivalent grains PM/dscf based on a lb PM10/day mass emission value is:

$$\text{grains PM/dscf} = \frac{(7.0 \text{ lb PM10/day}) \times (7000 \text{ grains/lb})}{(900{,}000 \text{ dscfm}) \times (1{,}440 \text{ minutes/day})}$$

$$= 0.00004 \text{ grains PM/dscf}$$

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirement is the permit condition based on SMAQMD Rule 201 and 202, which will be included in the Title V permit.

J. *NON*-FEDERALLY ENFORCEABLE REQUIREMENTS
Facility-wide Requirement

SMAQMD Rule 201 – General Permit Requirements

SIP Approved: 07-13-1987 (49 FR 47490)
11-20-1984 rule version is SIP approved
08-24-2006 current version

Rule Description: The conditions of operation on the SMAQMD Rule 201 Permits to Operate for the gas turbines 1A, 1B, and 1C and their associated NOx SCR air pollution control devices, CO oxidation catalyst air pollution control devices, and duct burners reflect the conditional permit approval to ensure compliance with all applicable rules and regulations.

The following table indicates the conditions on the SMAQMD Rule 201 permits that are not applicable federally enforceable requirements.

Equipment	SMAQMD Rule 201 Permit No.	Permit Conditions That Are Not Federally Enforceable
Gas Turbine 1A & 1B Duct Burner 1A & 1B and Air Pollution Control Equipment	20734, 20735, 11437, 11438, 11439, 11440, 11441, 11442, 11443 & 11444	Condition Nos. 1, 2, 3, 4, 5, 6, 20, and the NH_3 portion of Condition Nos. 8 and 23. These are requirements not contained in any SIP-approved rule or other federally-enforceable regulation.
Gas Turbine 1C and Air Pollution Control Equipment	20736, 11441, & 11444	Condition Nos. 1, 2, 3, 4, 5, 6, 18, and the NH_3 portion of Condition Nos. 8 and 21. These are requirements not contained in any SIP-approved rule or other federally-enforceable regulation.

Compliance Status: The permit holder's equipment complies with the SMAQMD Rule 201 permit conditions.

SMAQMD Rule 301 - Permit Fees - Stationary Source

SIP Approved: Not SIP approved.

Rule Description: This discussion applies to the sections of the rule that require fees for SMAQMD Rule 201 permits, not to the sections that require fees for Title V permits.

This rule requires the facility to pay fees associated with the issuance and renewal of SMAQMD Rule 201 permits.

Compliance Status: The permit holder complies with the rule requirements.

J. *NON*-FEDERALLY ENFORCEABLE REQUIREMENTS
Facility-wide Requirement

SMAQMD Rule 306 - Air Toxic Fees

SIP Approved: Not SIP approved.

Rule Description: This rule requires the facility to pay fees associated with toxic emissions regulated through the California "Toxic Hotspot" Program.

Compliance Status: The permit holder complies with the rule requirements.

SMAQMD Rule 442 - Architectural Coating

SIP Approved: Not SIP approved.
05-24-2001 version
(NOTE - the 09-05-1996 version of this rule is SIP approved.)

Rule Description: This rule requires the facility to reduce the emission of VOC from solvent cleaning operations.

Compliance Status: The permit holder complies with the rule requirements.

SMAQMD Rule 602 - Breakdown Conditions: Emergency Variance

SIP Approved: Not SIP approved.

Rule Description: This rule requires the facility to notify the SMAQMD of any equipment breakdowns that cause an emission violation and to follow specific procedures.

Compliance Status: The permit holder complies with the rule requirements.

California Code of Regulations, Title 17, Division 3, Chapter 1, Subchapter 7.5, Section 93103, Air Toxic Control Measure (ATCM) - Regulation for Chromate Treated Cooling Towers

SIP Approved: Not SIP approved
03-09-1989 - adopted by California Air Resources Board

Rule Description: The California Air Resources Board's Air Toxic Control Measure (ATCM) - Regulation for Chromate Treated Cooling Towers prohibited the use of hexavalent chromium in cooling tower water beginning September 05, 1989.

Compliance Status: The cooling towers don’t use hexavalent chromium.

K. TITLE V PERMIT RECOMMENDATION

It is recommended that the Sacramento Cogeneration Authority Title V Federal Operating permit be renewed.

See proposed Title V Federal Operating Permit No. TV2012-12-01 for permit conditions.

Reviewed by: _____ **Date:** _____

Approved by: _____ **Date:** _____

ATTACHMENT A

SMAQMD RULES THAT ARE

"APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS"

FOR THE SACRAMENTO COGENERATION AUTHORITY

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	101	General Provisions and Definitions 10-27-2011 version	**Yes** - No related conditions are included in the permit because of general nature of the rule.
●	●	102	Circumvention 11-29-1983 version	**Yes** - No related conditions are included in the permit because of general nature of the rule.
	●	103	Exceptions 11-29-1983 version	**No** - Source does not operate the type of equipment described in this rule.
	●	104	General Conformity 11-03-1994 version	**No** - The rule's purpose is to have the SMAQMD review federal conformity findings.
●	●	105	Emission Statement 09-05-1996 version	**Yes** - Related conditions are included in the permit.
		107	Alternative Compliance	**No** - It is not a SIP approved rule.
●		108	Minor Violations	**No** - It is not a SIP approved rule.
●	●	201	General Permit Requirements 11-20-1984 version 08-24-2006 version is not SIP approved	**Yes** - No related conditions are included in the permit because of the general nature of the rule.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●		202	New Source Review 8-23-2012 version	**No** - SIP approved version (11-20-1984) was withdrawn from SIP approval on 8-19-2011. Current version (8-23-2012) is not SIP approved.
	●	203	Prevention of Significant Deterioration	**Yes** - Rule became effective on 8-19-2011. Projects processed after this date are evaluated under this rule.
		204	Emission Reduction Credits	**No** - It is not a SIP approved rule.
		205	Community Bank and Priority Reserve Bank	**No** - It is not a SIP approved rule.
		206	Mobile and Transportation Source Emission Reduction Credits	**No** - It is not a SIP approved rule.
●	✱	207	Title V Federal Operating Permit Program	**Yes** - Related conditions are included in the permit. (✱Although this is not a SIP approved rule, it is applicable because it is part of the approved SMAQMD Title V Permit Program.)
		208	Acid Rain	**No** - It is not a SIP approved rule.
		209	Limiting Potential to Emit	**No** - It is not a SIP approved rule.
		210	Synthetic Minor Source Status	**No** - It is not a SIP approved rule.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●		211	MACT at Major Sources of Hazardous Air Pollutants	**No** - It is not a SIP approved rule, but the requirements of this rule are also contained in the CAA. Per EPA guidance, the MACT requirements for boilers are applicable.
●		213	Federal Major Modifications	**No** - It is not a SIP approved rule but the requirements within it are part of EPA's NSR reform and are thus federally applicable
●	●	214	Federal New Source Review 08-23-2012 version	**Yes** - Rule became effective on 8-19-11. Projects processed after the applicable date are evaluated under this rule.
		215	Agricultural Permit Requirements and New Agricultural Permit Review	**No -** It is not a SIP approved rule.
●	●	217	Public Notice Requirements for Permits 08-23-2012 version	**Yes** - no related conditions are included in the permit because of the general nature of the rule.
		250	Sacramento Carbon Exchange Program	**No -** It is not a SIP approved rule.
●	*	301	Stationary Source Permit Fees	**Yes** - Related conditions are included in the permit. (*Although this is not a SIP approved rule it is applicable because it is part of the approved SMAQMD Title V Permit Program.)

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●		302	Hearing Board Fees	**No** - It is not a SIP approved rule.
		303	Agricultural Burning Permit Fees	**No** - It is not a SIP approved rule.
		304	Plan Fees	**No** - It is not a SIP approved rule.
		305	Environmental Document Preparation and Processing Fees	**No** - It is not a SIP approved rule.
●		306	Air Toxics Fees	**No** - It is not a SIP approved rule.
●	●	307	Clean Air Act Fees 09-26-2002 version	**Yes** - Related conditions are included in the permit.
		310	Permit Fees - Agricultural Source	**No** - It is not a SIP approved rule
		311	Registration Fee for Agricultural Compression Ignition Engines	**No -** It is not a SIP approved rule.
		350	Greenhouse Gas Program Fees	**No -** It is not a SIP approved rule.
●	●	401	Ringelmann Chart 04-05-1983 version	**Yes** - Related conditions are included in the permit.
●		402	Nuisance	**No** - It is not a SIP approved rule.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	403	Fugitive Dust 11-29-1983 version	**Yes** - Related conditions are included in the permit.
●	●	404	Particulate Matter 11-20-1984 version	**Yes** - Related conditions are included in the permit. (see discussion of streamlining applicable requirements)
	●	405	Dust and Condensed Fumes 11-29-1983 version	**No** - The source does not operate such a process.
●	●	406	Specific Contaminants 11-29-1983 version	**Yes** - Related conditions are included in the permit. (see discussion of streamlining applicable requirements)
●	●	407	Open Burning 11-29-1983 version	**Yes** - No related conditions are included in the permit because the source does not conduct open burning.
	●	408	Incinerator Burning 11-29-1983 version	**No** - The source does not operate an incinerator.
	●	409	Orchard Heaters 11-29-1983 version	**No** - The source does not operate orchard heaters.
	●	410	Reduction of Animal Matter 11-29-1983 version	**No** - The source does not operate equipment for the reduction of animal matter.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	411	Boiler NOx 08-23-2007 version	**Yes** - Related conditions are included in the permit.
	●	412	Stationary IC Engines at Major Stationary Sources of NOx 06-01-1995 version	**Yes** - The source does not operate an IC engine
●	●	413	Stationary Gas Turbines 03-24-2005 version	**Yes** - Related conditions are included in the permit. (Refer to discussion of streamlining applicable requirements)
●	●	414	Natural Gas Fired Water Heaters 08-01-1996 version 03-25-2010 version is not SIP approved	**Yes** - No related conditions are included in the permit because it applies only to sellers and installers.
	●	417	Wood Burning Appliances	**No -** The source does not operate any wood burning appliances.
		419	NOx from Miscellaneous Combustion Units	**No** - It is not a SIP approved rule.
●	●	420	Sulfur Content of Fuels 11-29-1983 version	**Yes** - Related conditions are included in the permit. (Refer to discussion of streamlining applicable requirements)
	●	421	Mandatory Episodic Curtailment of Wood and Other Solid Fuel Burning	**No -** The source does not operate any equipment subject to this rule

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	441	Organic Solvents 11-29-1983 version	**Yes** - No related conditions are included in the permit because of limited applicability.
●	●	442	Architectural Coatings 09-05-1996 version 05-24-2001 version is not SIP approved	**Yes** - Related conditions are included in the permit.
	●	443	Leaks from Synthetic Organic Chemical and Polymer Manufacturing 09-05-1996 version	**No** - The source does not operate synthetic organic chemical or polymer manufacturing equipment.
	●	444	Petroleum Solvent Dry Cleaning 08-13-1981 version	**No** - The source does not operate petroleum solvent dry cleaning equipment.
	●	446	Storage of Petroleum Products 11-16-1993 version	**No** - The source does not store affected petroleum products.
	●	447	Organic Liquid Loading 04-02-1998 version	**No** - The source does not operate organic liquid loading equipment.
	●	448	Gasoline Transfer into Stationary Storage Containers 02-02-1995 version	**No** - The source does not operate gasoline transfer equipment.
	●	449	Transfer of Gasoline into Vehicle Fuel Tanks 09-26-2002 version	**No** - The source does not operate gasoline transfer equipment.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
	●	450	Graphic Arts Operations 12-05-1996 version	**No** - The source does not operate a graphic arts process as defined in the rule.
●	●	451	Surface Coating of Miscellaneous Metal Parts and Products 10-28-2010 version	**Yes** - No related conditions are included in the permit because of limited applicability.
	●	452	Can Coating 09-05-1996 version	**No** - The source does not operate a can coating process.
	●	453	Cutback and Emulsified Asphalt Paving Materials 11-29-1983 version	**No** - The source does not manufacture or apply cutback or emulsified asphalt paving materials.
	●	454	Degreasing Operations 04-03-1997 version	**No** - The source does not operate degreasers that are subject to this rule.
	●	455	Pharmaceuticals Manufacturing 11-29-1983 version 09-05-1996 version is not SIP approved	**No** - The source does not manufacture pharmaceuticals.
	●	456	Aerospace Coating Operations 10-23-2008 version	**No** - The source does not coat aerospace parts.
		457	Methanol Compatible Tanks	**No** - It is not a SIP approved rule.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
	●	458	Large Commercial Bread Bakeries 09-05-1996 version	**No** - The source does not produce bread products.
	●	459	Automotive, Truck and Heavy Equipment Refinishing Operations 10-02-1997 version	**No** - The source does not refinish vehicles.
●		460	Adhesives and Sealants	**No** - It is not a SIP approved rule.
	●	463	Wood Products Coatings 09-25-2008 version	**No** - The source does not coat wood products.
	●	464	Organic Chemical Manufacturing Operations 07-23-1998 version	**No** - The source does not manufacture organic chemicals.
	●	465	Polyester Resin Operations 09-25-2008 version	**No** - The source does not have a polyester resin operation.
●	●	466	Solvent Cleaning 10-28-2010 version	**Yes** - Related conditions are included in the permit.
		468	Surface Coating of Plastic Parts and Products	**No** - It is not a SIP approved rule.
		485	Municipal Landfill Gas	**No** - It is not a SIP approved rule.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
		496	Large Confined Animal Facilities	**No** - It is not a SIP approved rule.
	●	501	Agricultural Burning 11-29-1983 version	**No** - The source does not conduct agricultural burning.
●		601	Procedure before the Hearing Board	**No** - It is not a SIP approved rule.
●		602	Breakdown Conditions: Emergency Variance	**No** - It is not a SIP approved rule.
●	●	701	Emergency Episode Plan 05-27-1999 version	**Yes** - Related conditions are included in the permit although the source is currently below the rule's applicability levels.
●		801	New Source Performance Standards	**No** - It is not a SIP approved rule. *Note: there are equivalent federal regulations.*
		901	General Requirements	**No** - It is not a SIP approved rule. *Note: there are equivalent federal regulations.*
		902	Asbestos	**No** - It is not a SIP approved rule. *Note: there is an equivalent federal regulation.*
		903	Mercury	**No** - It is not a SIP approved rule. *Note: there is an equivalent federal regulation.*

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●		904	Airborne Toxic Control Measures	**No** - It is not a SIP approved rule. *Note: there are equivalent federal regulations for some of the listed ATCMs.*
		1002	Fleet Inventory	**No** - It is not a SIP approved rule.
		1003	Reduced-Emission Fleet Vehicles/Alternative Fuels	**No** - It is not a SIP approved rule.
		1005	Mobile Source Emission Reduction Credits/Banking	**No** - It is not a SIP approved rule.
		1006	Transportation Conformity	**No** - It is not a SIP approved rule.

ATTACHMENT B

SMAQMD RULE 201 PERMITS TO OPERATE

FOR THE SACRAMENTO COGENERATION AUTHORITY

777 12th Street 3rd Floor
Sacramento, CA 95814

(916) 874-4800

SACRAMENTO METROPOLITAN

AIR QUALITY
MANAGEMENT DISTRICT

647216

PERMIT TO OPERATE

Issued to: Sacramento Cogeneration Authority

Equipment Location: 5000 83rd Street, Sacramento

Permit No.	Equipment Description
11431(rev4)	Hamon Cooling Towers, mechanical draft, counterflow, with drift eliminator, 3 cell, 48,850 gallons/minute

SUBJECT TO THE FOLLOWING CONDITIONS:

GENERAL REQUIREMENTS

1. The equipment shall be properly maintained.

2. The SMAQMD Air Pollution Control Officer and/or authorized representatives, upon the presentation of credentials, shall be permitted:

   A. To enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Permit to Operate, and

   B. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Permit to Operate, and

   C. To inspect any equipment, operation or method required in this Permit to Operate, and

   D. To sample emissions from the source or require samples to be taken.

3. This Permit to Operate does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the rules and regulations of the SMAQMD.

4. A legible copy of this Permit to Operate shall be maintained on the premises with the equipment.

Date Issued: 11-08-2001
Date Revised: 09-17-2009
Date Expires: 08-22-2010 (unless renewed)

Larry Greene
SMAQMD Air Pollution Control Officer

by: Bruce Nixon

REVOCABLE AND NON-TRANSFERABLE

5. Malfunction - the SMAQMD Air Pollution Control Officer shall be notified of any breakdown of the emissions monitoring equipment, any engine equipment or any process which results in an increase in emissions above the allowable emissions limits stated as a condition of this permit or any applicable state or federal regulation which affects the ability of the emissions to be accurately determined. Such breakdowns shall be reported to the SMAQMD in accordance with the procedures and reporting times specified in SMAQMD Rule 602 - Breakdown Conditions; Emergency Variance.

6. Severability - if any provision, clause, sentence, paragraph, section or part of these conditions for any reason is judged to be unconstitutional or invalid, such judgment shall not affect or invalidate the remainder of these conditions.

EMISSION LIMIT REQUIREMENTS

7. The cooling tower shall not discharge into the atmosphere any visible air contaminants other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour, which are as dark or darker than Ringelmann No. 1 or equivalent to or greater than 20% opacity.

8. Emissions from the cooling tower shall not exceed the following:

Pollutant	Maximum Allowable Emissions	
	lb/hour any consecutive 3 hour average	lb/day
PM10	0.29 (A)	7

(A) Based on a water circulation rate of 48,850 gal/min, cooling tower drift rate of 0.0006%, and a TDS level of 2000 ppmw.

9. Combined emissions from all equipment at the Sacramento Cogeneration Authority's facility, including start-ups and shutdowns, shall not exceed the following limits:
(reference A/C Nos. 20734 - 20736, Condition No. 17, for gas turbine modifications)

A. Prior to any gas turbine modification -

Pollutant	Maximum Allowable Emissions does not exclude gas turbine and auxiliary boiler start-ups and shutdowns Combined Emissions from: Gas Turbine 1A, 1B and 1C Duct Burner 1A and 1B Auxiliary Boiler Cooling Tower				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annual lb/year
ROC	8,287	8,380	8,472	8,472	33,611
NOx	49,051	49,590	50,128	50,128	198,897
SO2	1,722	1,741	1,760	1,760	6,983
PM10	17,220	17,411	17,603	17,603	69,837

Pollutant	Maximum Allowable Emissions does not exclude gas turbine and auxiliary boiler start-ups and shutdowns Combined Emissions from: Gas Turbine 1A, 1B and 1C Duct Burner 1A and 1B Auxiliary Boiler Cooling Tower				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annual lb/year
CO	29,758	30,082	30,407	30,407	120,654

B. After the first combined cycle gas turbine is modified -

Pollutant	Maximum Allowable Emissions does not exclude gas turbine and auxiliary boiler start-ups and shutdowns Combined Emissions from: Gas Turbine 1A, 1B and 1C Duct Burner 1A and 1B Auxiliary Boiler Cooling Tower				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annual lb/year
ROC	8,287	8,380	8,472	8,472	33,611
NOx	41,207	41,658	42,110	42,110	167,084
SO2	1,791	1,811	1,831	1,831	7,263
PM10	17,220	17,411	17,603	17,603	69,837
CO	37,041	37,447	37,852	37,852	150,192

C. After the second combined cycle gas turbine is modified -

Pollutant	Maximum Allowable Emissions does not exclude gas turbine and auxiliary boiler start-ups and shutdowns Combined Emissions from: Gas Turbine 1A, 1B and 1C Duct Burner 1A and 1B Auxiliary Boiler Cooling Tower				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annual lb/year
ROC	8,287	8,380	8,472	8,472	33,611
NOx	33,363	33,727	34,091	34,091	135,272
SO2	1,860	1,881	1,901	1,901	7,543
PM10	17,220	17,411	17,603	17,603	69,837

Pollutant	Maximum Allowable Emissions does not exclude gas turbine and auxiliary boiler start-ups and shutdowns Combined Emissions from: Gas Turbine 1A, 1B and 1C Duct Burner 1A and 1B Auxiliary Boiler Cooling Tower				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annual lb/year
CO	44,324	44,811	45,298	45,298	179,731

D. After all three gas turbines have been modified -

Pollutant	Maximum Allowable Emissions does not exclude gas turbine and auxiliary boiler start-ups and shutdowns Combined Emissions from: Gas Turbine 1A, 1B and 1C Duct Burner 1A and 1B Auxiliary Boiler Cooling Tower				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annual lb/year
ROC	8,287	8,380	8,472	8,472	33,611
NOx	28,993	29,305	29,618	29,618	117,534
SO2	1,901	1,923	1,944	1,944	7,712
PM10	17,220	17,411	17,603	17,603	69,837
CO	48,994	49,535	50,075	50,075	198,679

EQUIPMENT OPERATION REQUIREMENTS:

10. The total dissolved solids content of the circulating cooling water shall not exceed 2000 ppmw, averaged over any consecutive three hour period.

11. The cooling tower shall not use any chromium containing water treatment chemicals.

MONITORING REQUIREMENTS:

12. The permittee shall operate a continuous parameter monitoring system, that has been approved by the SMAQMD Air Pollution Control Officer, that either measures, or calculates and records the following.

Parameter to be Monitored	Units
A. Total dissolved solids content of the circulating water in the cooling tower	ppmw

RECORDKEEPING AND REPORTING REQUIREMENTS:

13. The following records shall be continuously maintained on site for the most recent five-year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly records shall be made available for inspection within 30 days of the end of the reporting period.

Frequency	Information to be Recorded
Hourly	A. Total dissolved solids content of the circulating water in the cooling tower. (ppmw) B. Cooling tower hourly PM10 mass emission rate. (lb PM10/hour, 3 hour average) i. The hourly emissions shall be calculated based on the cooling water circulation rate multiplied by the cooling tower drift rate, density of water and the measured TDS level.
Daily	C. Cooling tower PM10 daily mass emissions. (lb/day)
Quarterly	D. Total facility PM10 quarterly mass emissions. (lb/quarter)

EMISSION REDUCTION CREDIT (ERC) REQUIREMENTS

14. The permittee shall surrender (and has surrendered - See Condition No. 15) PM10 ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of PM10 emissions:

See Condition No. 16 for the Gas Turbines (PM10 only) in Title V Permit TV2007-12-01

15. The following PM10 ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the PM10 emission offset requirements as stated in Condition No. 14:

See Condition No. 19 for the Gas Turbines in Title V Permit TV2007-12-01

PERMIT TO OPERATE

647216

Your application for this air quality Permit to Operate was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), California Air Resources Board and U.S. Environmental Protection Agency air quality rules. The following listed SMAQMD rules are those that are most applicable to the operation of your equipment. Other rules may also be applicable.

SMAQMD Rule No.	Rule Title
201	General Permit Requirements
202	New Source Review
301	Stationary Source Permit Fees
401	Ringelmann Chart
402	Nuisance
404	Particulate Matter

In addition, the conditions on this Permit to Operate may reflect some, but not all, requirements of these rules. There may be other conditions that are applicable to the operation of your equipment. Future changes in prohibitory rules may establish more stringent requirements which may supersede the conditions listed here.

For further information please consult your SMAQMD rulebook or contact the SMAQMD for assistance.

777 12th Street 3rd Floor
Sacramento, CA 95814

(916) 874-4800

SACRAMENTO METROPOLITAN

AIR QUALITY
MANAGEMENT DISTRICT

647216

PERMIT TO OPERATE

Issued to: Sacramento Cogeneration Authority

Equipment Location: 5000 83rd Street, Sacramento

Permit No.	Equipment Description
12318(rev4)	Boiler, auxiliary, Babcock & Wilcox, Model FM103-88, 90,000 lb/hr steam, 108.7 MMBTU/hr, natural gas fired, with a Todd Ultra Low NOx Rapid Mix Burner System.

SUBJECT TO THE FOLLOWING CONDITIONS:

GENERAL REQUIREMENTS

1. The equipment shall be properly maintained.

2. The SMAQMD Air Pollution Control Officer and/or authorized representatives, upon the presentation of credentials, shall be permitted:

   A. To enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Permit to Operate, and

   B. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Permit to Operate, and

   C. To inspect any equipment, operation or method required in this Permit to Operate, and

   D. To sample emissions from the source or require samples to be taken.

3. This Permit to Operate does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the rules and regulations of the SMAQMD.

4. A legible copy of this Permit to Operate shall be maintained on the premises with the equipment.

Date Issued: 11-08-2001
Date Revised: 09-17-2009
Date Expires: 08-22-2010 (unless renewed)

Larry Greene
SMAQMD Air Pollution Control Officer

by: Bruce Nixon

REVOCABLE AND NON-TRANSFERABLE

5. Malfunction - the SMAQMD Air Pollution Control Officer shall be notified of any breakdown of the emissions monitoring equipment, any engine equipment or any process which results in an increase in emissions above the allowable emissions limits stated as a condition of this permit or any applicable state or federal regulation which affects the ability of the emissions to be accurately determined. Such breakdowns shall be reported to the SMAQMD in accordance with the procedures and reporting times specified in SMAQMD Rule 602 - Breakdown Conditions; Emergency Variance.

6. Severability - if any provision, clause, sentence, paragraph, section or part of these conditions for any reason is judged to be unconstitutional or invalid, such judgment shall not affect or invalidate the remainder of these conditions.

EMISSION LIMIT REQUIREMENTS

7. The auxiliary boiler shall not discharge into the atmosphere any visible air contaminants other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour, which are as dark or darker than Ringelmann No. 1 or equivalent to or greater than 20% opacity.

8. The auxiliary boiler emissions shall not exceed the following limits:

Pollutant	Maximum Allowable Emissions		
	Concentration ppmvd at 3% O2 (averaged over a 3 hour period)	Hourly lb/hour (D) (averaged over a 3 hour period)	Daily lb/day
ROC	-	0.41	9.8
NOx	9 (A)	1.15	27.6
SO2	-	0.08	1.8
PM10	-	0.54	13.1
CO	400 (A)	7.12	170.8

(A) except during periods of startup (B) and shutdown (C)
(B) Startup is defined as the period of time, not to exceed two hours, in which a unit is brought to its operating temperature and pressure immediately after a period in which the gas flow is shut off for a continuous period of 30 minutes or longer.
(C) Shutdown is defined as the period of time a unit is cooled from its normal operating temperature. The shutdown period shall be limited to two hours.
(D) ROC emission based on an ROC emission factor of 0.00377 lb/MMBTU and firing at full capacity.
NOx emission based on NOx data submitted in the permit application and monitoring data from the boiler's NOx CEM system.
SO2 emission based on a SO2 emission factor of 0.0006 lb/MMBTU and firing at full capacity.
PM10 emission based on a PM10 emission factor of 0.00497 lb/MMBTU and firing at full capacity.
CO emission based on CO data submitted in the permit application and monitoring data from the boiler's CO CEM system.

9. Combined emissions from all equipment at the Sacramento Cogeneration Authority's facility, including start-ups and shutdowns, shall not exceed the following limits:
(reference A/C Nos. 20734 - 20736, Condition No. 17, for gas turbine modifications)

A. Prior to any gas turbine modification -

Pollutant	Maximum Allowable Emissions does not exclude gas turbine and auxiliary boiler start-ups and shutdowns Combined Emissions from: Gas Turbine 1A, 1B and 1C Duct Burner 1A and 1B Auxiliary Boiler Cooling Tower				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annual lb/year
ROC	8,287	8,380	8,472	8,472	33,611
NOx	49,051	49,590	50,128	50,128	198,897
SO2	1,722	1,741	1,760	1,760	6,983
PM10	17,220	17,411	17,603	17,603	69,837
CO	29,758	30,082	30,407	30,407	120,654

B. After the first combined cycle gas turbine is modified -

Pollutant	Maximum Allowable Emissions does not exclude gas turbine and auxiliary boiler start-ups and shutdowns Combined Emissions from: Gas Turbine 1A, 1B and 1C Duct Burner 1A and 1B Auxiliary Boiler Cooling Tower				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annual lb/year
ROC	8,287	8,380	8,472	8,472	33,611
NOx	41,207	41,658	42,110	42,110	167,084
SO2	1,791	1,811	1,831	1,831	7,263
PM10	17,220	17,411	17,603	17,603	69,837
CO	37,041	37,447	37,852	37,852	150,192

647216

C. After the second combined cycle gas turbine is modified -

Pollutant	Maximum Allowable Emissions does not exclude gas turbine and auxiliary boiler start-ups and shutdowns Combined Emissions from: Gas Turbine 1A, 1B and 1C Duct Burner 1A and 1B Auxiliary Boiler Cooling Tower				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annual lb/year
ROC	8,287	8,380	8,472	8,472	33,611
NOx	33,363	33,727	34,091	34,091	135,272
SO2	1,860	1,881	1,901	1,901	7,543
PM10	17,220	17,411	17,603	17,603	69,837
CO	44,324	44,811	45,298	45,298	179,731

D. After all three gas turbines have been modified -

Pollutant	Maximum Allowable Emissions does not exclude gas turbine and auxiliary boiler start-ups and shutdowns Combined Emissions from: Gas Turbine 1A, 1B and 1C Duct Burner 1A and 1B Auxiliary Boiler Cooling Tower				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Annual lb/year
ROC	8,287	8,380	8,472	8,472	33,611
NOx	28,993	29,305	29,618	29,618	117,534
SO2	1,901	1,923	1,944	1,944	7,712
PM10	17,220	17,411	17,603	17,603	69,837
CO	48,994	49,535	50,075	50,075	198,679

EQUIPMENT OPERATION AND MONITORING REQUIREMENTS:

10. The auxiliary boiler shall not exceed an annual capacity factor of 80% based on heat input.

11. The auxiliary boiler shall be fired on natural gas only.

12. Sacramento Cogeneration Authority shall operate a continuous emission monitoring (CEM) system, that has been approved by the SMAQMD Air Pollution Control Officer, for the auxiliary boiler emissions.

    A. The CEM system shall monitor and record concentrations of NOx, CO and oxygen.

    B. The CEM system shall comply with the U.S. EPA Performance Specifications (40 CFR 60, Appendix B, Performance Specifications 2, 3 and 4).

13. The Sacramento Cogeneration Authority shall operate a continuous parameter monitoring system that has been approved by the SMAQMD Air Pollution Control Officer that either measures, or calculates and records the following.

Parameter to be Monitored	Units
Fuel consumption of the auxiliary boiler	MMBTU/hr of natural gas

RECORDKEEPING AND REPORTING REQUIREMENTS:

14. The following record shall be continuously maintained on site for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly and yearly records shall be made available for inspection within 30 days of the end of the reporting period.

Frequency	Information to be Recorded
At all times	A. Measurements from the continuous monitoring system. B. Monitoring device and performance testing measurements. C. Continuous monitoring system performance evaluations. D. Continuous monitoring system or monitoring device calibration checks E. Continuous monitoring system adjustments and maintenance.
Hourly	F. Auxiliary boiler natural gas fuel consumption (MMBTU/hr). G. Auxiliary boiler NOx concentration (ppmvd at 3% O2, 3 hour average). H. Auxiliary boiler NOx, CO, ROC, SO2 and PM10 hourly emissions. i. For those pollutants directly monitored (NOx and CO), the hourly emissions shall be calculated based on the CEM system required pursuant to Condition No. 12. ii. For those pollutants that are not directly monitored (ROC, SO2, and PM10), the hourly emissions shall be calculated based on an emission factor derived from the maximum hourly permitted emission rate divided by the maximum heat input capacity and then multiplied by the actual firing rate of the auxiliary boiler.

Frequency	Information to be Recorded
Daily	I. Total daily ROC, NOx, SO2, PM10 and CO emissions from the auxiliary boiler (lb/day).
Quarterly	J. Total quarterly ROC, NOx, SO2, PM10 and CO emissions from all equipment combined at the Sacramento Cogeneration Authority facility (lb/quarter).
Yearly	K. Total yearly ROC, NOx, SO2, PM10 and CO emissions from all equipment combined at the Sacramento Cogeneration Authority facility (lb/year) L. Annual capacity factor of the auxiliary boiler based on heat input (%)

15. Submit to the SMAQMD Air Pollution Control Officer a written report which contains the following information.

Frequency	Information to be submitted
Quarterly - due by: January 30 April 30 July 30 October 30	A. Whenever the CEM system is inoperative except for zero and span checks. i. Date and time of non operation of the CEM system. ii. Nature of the CEM system repairs or adjustments. B. Whenever an emission occurs as measured by the required CEM system that is in excess of any emission limitation. i. Magnitude of the emission which has been determined to be in excess. ii. Date and time of the commencement and completion of each period of excess emissions. iii. Periods of excess emissions due to start-up, shutdown and malfunction shall be specifically identified. iv. The nature and cause of any malfunction (if known). v. The corrective action taken or preventive measures adopted. C. If there were no excess emissions during a reporting quarter. i. A report shall be submitted indicating that there were no excess emissions.

EMISSION REDUCTION CREDIT (ERC) REQUIREMENTS

16. The permittee shall surrender (and has surrendered - See Condition No. 17) PM10 ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of PM10 emissions:

    See Condition No. 16 for the Gas Turbines in Title V Permit TV2007-12-01

17. The following PM10 ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the PM10 emission offset requirements as stated in Condition No. 16:

    See Condition No. 19 for the Gas Turbines in Title V Permit TV2007-12-01

SOURCE TESTING REQUIREMENTS:

18. An ROC, NOx, CO and CEM accuracy source test of the auxiliary boiler shall be performed once every calendar year.

    A. Submit a Source Test Plan to the SMAQMD Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.

    B. The SMAQMD Air Pollution Control Officer shall be notified at least 7 days prior to the emission testing date if the date has changed from that approved in the Source Test Plan.

    C. During the source test the auxiliary boiler shall be operated at greater then 90% of the maximum firing capacity.

    D. The Source Test Report shall be submitted to the SMAQMD Air Pollution Control Officer within 60 days from the completion of the source test(s).

    E. The SMAQMD Air Pollution Control Officer may waive the annual ROC source test requirement if, in the SMAQMD Air Pollution Control Officer's sole judgment, prior test results indicate an adequate compliance margin has been maintained.

Your application for this air quality Permit to Operate was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), California Air Resources Board and U.S. Environmental Protection Agency air quality rules. The following listed SMAQMD rules are those that are most applicable to the operation of your equipment. Other rules may also be applicable.

SMAQMD Rule No.	Rule Title
201	General Permit Requirements
202	New Source Review
301	Stationary Source Permit Fees
401	Ringelmann Chart
402	Nuisance
406	Specific Contaminants
411	Boiler NOx
420	Sulfur Content of Fuels

In addition, the conditions on this Permit to Operate may reflect some, but not all, requirements of these rules. There may be other conditions that are applicable to the operation of your equipment. Future changes in prohibitory rules may establish more stringent requirements which may supersede the conditions listed here.

For further information please consult your SMAQMD rulebook or contact the SMAQMD for assistance.

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SACRAMENTO METROPOLITAN

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AIR QUALITY
MANAGEMENT DISTRICT

PERMIT TO OPERATE

ISSUED TO: **SACRAMENTO COGENERATION AUTHORITY – SCA PROJECT**

EQUIPMENT LOCATION: 5000 83RD STREET, SACRAMENTO

PERMIT NO.	EQUIPMENT DESCRIPTION
20734	GAS TURBINE UNIT 1A, COMBINED CYCLE, GENERAL ELECTRIC, LM6000PC SPRINT/EFS, 500 MMBTU/HOUR, NOMINAL 50 MW OUTPUT, NATURAL GAS FIRED.
11437	DUCT BURNER UNIT 1A, HEAT RECOVERY STEAM GENERATOR, 83.2 MMBTU/HR, NATURAL GAS FIRED.
11439	AIR POLLUTION CONTROL SELECTIVE CATALYTIC REDUCTION SYSTEM SERVING THE COMBINED CYCLE TURBINE AND DUCT BURNER UNIT 1A.
11442	AIR POLLUTION CONTROL OXIDATION CATALYST SYSTEM SERVING THE COMBINED CYCLE TURBINE AND DUCT BURNER UNIT 1A.

SUBJECT TO THE FOLLOWING CONDITIONS:

GENERAL

1. THE EQUIPMENT SHALL BE PROPERLY MAINTAINED AND OPERATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AT ALL TIMES.

2. THE AIR POLLUTION CONTROL OFFICER AND/OR AUTHORIZED REPRESENTATIVES, UPON THE PRESENTATION OF CREDENTIALS, SHALL BE PERMITTED:
   A. TO ENTER UPON THE PREMISES WHERE THE SOURCE IS LOCATED OR IN WHICH ANY RECORDS ARE REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
   B. AT REASONABLE TIMES TO HAVE ACCESS TO AND COPY ANY RECORDS REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
   C. TO INSPECT ANY EQUIPMENT, OPERATION, OR METHOD REQUIRED IN THIS PERMIT TO OPERATE, AND
   D. TO SAMPLE EMISSIONS FROM THE SOURCE OR REQUIRE SAMPLES TO BE TAKEN.

3. THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, PART 4, CHAPTER 3, OF THE CALIFORNIA HEALTH AND SAFETY CODE OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.

DATE ISSUED: 08-15-2011
DATE EXPIRES: 08-22-2012 (UNLESS RENEWED)

LARRY GREENE
AIR POLLUTION CONTROL OFFICER

BY: Brian F Krebs

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AIR QUALITY MANAGEMENT DISTRICT

4. THE EQUIPMENT SHALL NOT DISCHARGE SUCH QUANTITIES OF AIR CONTAMINANTS OR OTHER MATERIALS WHICH CAUSE INJURY, DETRIMENT, NUISANCE OR ANNOYANCE TO ANY CONSIDERABLE NUMBER OF PERSONS OR TO THE PUBLIC, OR WHICH ENDANGER THE COMFORT, REPOSE, HEALTH, OR SAFETY OF ANY SUCH PERSONS OR THE PUBLIC, OR WHICH CAUSE, OR HAVE A NATURAL TENDENCY TO CAUSE, INJURY OR DAMAGE TO BUSINESS OR PROPERTY.

5. A LEGIBLE COPY OF THIS PERMIT SHALL BE MAINTAINED ON THE PREMISES WITH THE EQUIPMENT.

6. MALFUNCTION - THE AIR POLLUTION CONTROL OFFICER SHALL BE NOTIFIED OF ANY BREAKDOWN OF THE EMISSIONS MONITORING EQUIPMENT, ANY EQUIPMENT, OR ANY PROCESS WHICH RESULTS IN AN INCREASE IN EMISSIONS ABOVE THE ALLOWABLE EMISSIONS LIMITS STATED AS A CONDITION OF THIS PERMIT OR ANY APPLICABLE STATE OR FEDERAL REGULATION OR WHICH AFFECTS THE ABILITY FOR THE EMISSIONS TO BE ACCURATELY DETERMINED. SUCH BREAKDOWNS SHALL BE REPORTED TO THE DISTRICT IN ACCORDANCE WITH THE PROCEDURES AND REPORTING TIMES SPECIFIED IN RULE 602 - BREAKDOWN CONDITIONS; EMERGENCY VARIANCE.

EMISSIONS LIMITATIONS

7. THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY VISIBLE AIR CONTAMINANTS OTHER THAN UNCOMBINED WATER VAPOR, FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR, WHICH ARE AS DARK OR DARKER THAN RINGELMANN NO. 1 OR EQUIVALENT TO OR GREATER THAN 20% OPACITY.

8. COMBINED EMISSIONS FROM THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER SHALL NOT EXCEED THE FOLLOWING LIMITS:

POLLUTANT	MAXIMUM ALLOWABLE EMISSIONS (A) COMBINED CYCLE GAS TURBINE AND DUCT BURNER COMBINED	
	PPMVD AT 15% O_2 3 HOUR AVERAGE	LB/HOUR 3 HOUR AVERAGE
ROC	NA	1.80(C)
NOx	2.5 (B)	5.37(D)
SOx	NA	0.35(E)
PM10	NA	3.30(F)
CO	NA	7.85(G)
AMMONIA (NH_3)	10	NA

(A) EXCLUDING STARTUPS AS DEFINED IN CONDITION NO. 14.
(B) THE 2.5 PPMVD NOx LIMIT ALSO APPLIES INDIVIDUALLY TO THE COMBINED CYCLE GAS TURBINE AND TO THE DUCT BURNER.
(C) BASED ON FULL CAPACITY AND A TURBINE EMISSION FACTOR OF 0.0024 LB/MMBTU AND A DUCT BURNER EMISSION FACTOR OF 0.0075 LB/MMBTU.
(D) BASED ON DATA SUBMITTED IN THE APPLICATION AND AS MONITORED BY THE TURBINE'S NOx CEM SYSTEM.
(E) BASED ON FULL CAPACITY AND A SOx EMISSION FACTOR OF 0.0006 LB/MMBTU.
(F) BASED ON FULL CAPACITY AND A TURBINE EMISSION FACTOR OF 0.0050 LB/MMBTU AND A DUCT BURNER EMISSION FACTOR OF 0.0096 LB/MMBTU.
(G) BASED ON DATA SUBMITTED IN THE APPLICATION AND AS MONITORED BY THE TURBINE'S CO CEM SYSTEM.

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9. COMBINED EMISSIONS FROM THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER, INCLUDING START-UPS AND SHUTDOWNS, SHALL NOT EXCEED THE FOLLOWING LIMITS:

POLLUTANT	MAXIMUM ALLOWABLE EMISSIONS (A) COMBINED CYCLE GAS TURBINE AND DUCT BURNER COMBINED LB/DAY
ROC	43.2
NOx	144.9
SOx	8.4
PM10	79.2
CO	197.3

10. EMISSIONS FROM THE COMBINED CYCLE GAS TURBINES 1A AND 1B AND DUCT BURNERS 1A AND 1B, INCLUDING START-UPS AND SHUTDOWNS, SHALL NOT EXCEED THE FOLLOWING LIMITS.

POLLUTANT	MAXIMUM ALLOWABLE QUARTERLY EMISSIONS (A) COMBINED CYCLE GAS TURBINES 1A AND 1B AND DUCT BURNERS 1A AND 1B COMBINED			
	QUARTER 1 LB/QUARTER	QUARTER 2 LB/QUARTER	QUARTER 3 LB/QUARTER	QUARTER 4 LB/QUARTER
NOx	21,090	21,320	21,550	21,550

(A) THE PURPOSE OF REQUIRING QUARTERLY NOx MASS EMISSION LIMITS IS TO FACILITATE THE CALCULATION OF NOx EMISSION REDUCTION CREDITS FROM THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER MODIFICATIONS.

11. EMISSIONS FROM ALL EQUIPMENT AT THE SACRAMENTO COGENERATION AUTHORITY'S FACILITY INCLUDING START-UPS AND SHUTDOWNS SHALL NOT EXCEED THE FOLLOWING LIMITS.

POLLUTANT	MAXIMUM ALLOWABLE EMISSIONS				
	QTR 1 (LB/QUARTER)	QTR 2 (LB/QUARTER)	QTR 3 (LB/QUARTER)	QTR 4 (LB/QUARTER)	TOTAL (LB/YEAR)
ROC	8,287	8,380	8,472	8,472	33,611
NOx	28,993	29,305	29,618	29,618	117,534
SOx	1,901	1,923	1,944	1,944	7,712
PM10	17,220	17,411	17,603	17,603	69,837
CO	48,994	49,535	50,075	50,075	198,679

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EQUIPMENT OPERATION REQUIREMENTS

12. THE DUCT BURNER SHALL NOT BE OPERATED UNLESS THE COMBINED CYCLE TURBINE IS OPERATING.

13. THE COMBINED CYCLE GAS TURBINE AND THE DUCT BURNER SHALL NOT BE OPERATED WITHOUT A FULLY FUNCTIONING SELECTIVE CATALYTIC REDUCTION NOx AIR POLLUTION CONTROL SYSTEM (SMAQMD P/O NO. 11439) AND OXIDATION CATALYST CO AIR POLLUTION CONTROL SYSTEM (SMAQMD P/O NO. 11442), EXCLUDING PERIODS OF STARTUPS AND SHUTDOWNS.

14. THE DURATION OF THE COMBINED CYCLE GAS TURBINE STARTUP PERIOD SHALL NOT EXCEED 60 MINUTES.

    A. STARTUP PERIOD IS DEFINED AS THE TIME WHEN FUEL IS FIRST INTRODUCED TO THE COMBINED CYCLE GAS TURBINE TO THE TIME WHEN THE EMISSIONS OF NOx ARE CONTROLLED TO 2.5 PPMVD AT 15% O_2 OR LESS.

MONITORING REQUIREMENTS

15. THE PERMITTEE SHALL OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), THAT HAS BEEN APPROVED BY THE SMAQMD AIR POLLUTION CONTROL OFFICER, FOR THE COMBINED GAS TURBINE AND DUCT BURNER EMISSIONS.

    A. THE CEMS SHALL MONITOR AND RECORD NITROGEN OXIDES, CARBON MONOXIDE AND OXYGEN.

    B. FOR NOx AND O_2, THE CEMS SHALL COMPLY WITH U.S. EPA PERFORMANCE SPECIFICATIONS IN 40 CFR 75 APPENDIX A.

    C. FOR CO, THE CEMS SHALL COMPLY WITH U.S. EPA PERFORMANCE SPECIFICATIONS IN 40 CFR 60 APPENDIX B PERFORMANCE SPECIFICATION 4.

16. THE PERMITTEE SHALL OPERATE A CONTINUOUS PARAMETER MONITORING SYSTEM THAT HAS BEEN APPROVED BY THE SMAQMD AIR POLLUTION CONTROL OFFICER THAT EITHER, MEASURES OR CALCULATES, AND RECORDS THE FOLLOWING.

PARAMETER TO BE MONITORED	UNITS
A. FUEL CONSUMPTION OF THE COMBINED CYCLE GAS TURBINE.	MMBTU/HOUR OF NATURAL GAS
B. FUEL CONSUMPTION OF THE DUCT BURNER.	MMBTU/HOUR OF NATURAL GAS
C.. EXHAUST GAS FLOW RATE OF TURBINE AND DUCT BURNER.	KSCFH OR LB/HR

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RECORDKEEPING REQUIREMENTS

17. THE FOLLOWING RECORDS SHALL BE CONTINUOUSLY MAINTAINED ON SITE FOR THE MOST RECENT FIVE YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE SMAQMD AIR POLLUTION CONTROL OFFICER UPON REQUEST. MONTHLY, QUARTERLY AND YEARLY RECORDS SHALL BE MADE AVAILABLE FOR INSPECTION WITHIN 30 DAYS OF THE END OF THE RESPECTIVE REPORTING PERIOD.

FREQUENCY	INFORMATION TO BE RECORDED
UPON OCCURRENCE	A. DATE AND DURATION OF ANY STARTUP OR SHUTDOWN. B. MALFUNCTION IN OPERATION OF THE COMBINED CYCLE GAS TURBINE. C. MEASUREMENTS FROM THE CONTINUOUS MONITORING SYSTEM. D. MONITORING DEVICE AND PERFORMANCE TESTING RECORDS INCLUDING DATE, LOCATION, TIME OF SAMPLING, DATE ANALYSES WERE PERFORM BY LAB, COMPANY OR ENTITY THAT PERFORMED THE TEST AND ANALYSES, ANALYTICAL TECHNIQUES OR METHODS USED, THE RESULTS OF SUCH ANALYSES AND THE OPERATING CONDITIONS EXISTING AT THE TIME OF SAMPLING. E. ALL CONTINUOUS MONITORING SYSTEM PERFORMANCE EVALUATIONS. F. ALL CONTINUOUS MONITORING SYSTEM OR MONITORING DEVICE CALIBRATION CHECKS. G. ADJUSTMENTS AND MAINTENANCE PERFORMED ON THESE SYSTEMS OR DEVICES.
HOURLY	H. COMBINED CYCLE GAS TURBINE NATURAL GAS FUEL CONSUMPTION (MMBTU/HOUR). I. DUCT BURNER NATURAL GAS FUEL CONSUMPTION (MMBTU/HOUR). J. INDICATE WHEN THE COMBINED CYCLE GAS TURBINE STARTUPS OCCURRED. K. COMBINED CYCLE GAS TURBINE AND DUCT BURNER ROC, NOx, SOx, PM10 AND CO HOURLY MASS EMISSIONS. L. COMBINED CYCLE GAS TURBINE AND DUCT BURNER NOx CONCENTRATION MEASURED IN PPMVD AT 15% O_2.
DAILY	M. COMBINED CYCLE GAS TURBINE AND DUCT BURNER ROC, NOx, SOx, PM10 AND CO DAILY MASS EMISSIONS.
QUARTERLY	N. COMBINED CYCLE GAS TURBINE'S 1A AND 1B AND DUCT BURNER'S 1A AND 1B TOTAL QUARTERLY NOx MASS EMISSIONS. O. TOTAL FACILITY ROC, NOx, SOx, PM10 AND CO QUARTERLY MASS EMISSIONS.

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REPORTING REQUIREMENTS

18. FOR EACH CALENDAR QUARTER SUBMIT TO THE SMAQMD AIR POLLUTION CONTROL OFFICER A WRITTEN REPORT WHICH CONTAINS THE FOLLOWING INFORMATION. EACH QUARTERLY REPORT IS DUE BY THE 30TH DAY FOLLOWING THE END OF THE CALENDAR QUARTER.

FREQUENCY	INFORMATION TO BE REPORTED
QUARTERLY BY: JANUARY 30 APRIL 30 JULY 30 OCTOBER 30	A. WHENEVER THE CONTINUOUS EMISSIONS MONITORING SYSTEM IS INOPERATIVE EXCEPT FOR ZERO AND SPAN CHECKS: I. DATE AND TIME OF NON OPERATION OF THE CONTINUOUS EMISSION MONITORING SYSTEM II. NATURE OF THE CONTINUOUS EMISSION MONITORING SYSTEM REPAIRS OR ADJUSTMENTS. B. WHENEVER AN EMISSION OCCURS AS MEASURED BY THE REQUIRED CONTINUOUS EMISSION MONITORING SYSTEM THAT IS IN EXCESS OF ANY EMISSION LIMITATION: I. MAGNITUDE OF THE EMISSION WHICH HAS BEEN DETERMINED TO BE IN EXCESS. II. DATE AND TIME OF THE COMMENCEMENT AND COMPLETION OF EACH PERIOD OF EXCESS EMISSIONS. III. PERIODS OF EXCESS EMISSIONS DUE TO STARTUP, SHUTDOWN AND MALFUNCTION SHALL BE SPECIFICALLY IDENTIFIED. IV. THE NATURE AND CAUSE OF ANY MALFUNCTION (IF KNOWN). V. THE CORRECTIVE ACTION TAKEN OR PREVENTIVE MEASURES ADOPTED. C. IF THERE WERE NO EXCESS EMISSIONS FOR A CALENDAR QUARTER: I. A REPORT SHALL BE SUBMITTED INDICATING THAT THERE WERE NO EXCESS EMISSIONS.

EMISSION TESTING REQUIREMENTS

19. AN ROC, NOx, CO, PM10, AND AMMONIA (NH_3) SOURCE TEST AND CEM ACCURACY (RATA) TEST OF THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER SHALL BE PERFORMED ONCE EVERY CALENDAR YEAR. THE AIR POLLUTION CONTROL OFFICER MAY WAIVE THE ANNUAL PM10 AND/OR ROC SOURCE TEST REQUIREMENT IF, IN THE AIR POLLUTION CONTROL OFFICER'S SOLE JUDGMENT, PRIOR TEST RESULTS INDICATE AN ADEQUATE COMPLIANCE MARGIN HAS BEEN MAINTAINED.

    A. SUBMIT A SOURCE TEST PLAN TO THE SMAQMD AIR POLLUTION CONTROL OFFICER FOR APPROVAL AT LEAST 30 DAYS BEFORE THE SOURCE TEST IS TO BE PERFORMED.

    B. NOTIFY THE SMAQMD AIR POLLUTION CONTROL OFFICER, AT LEAST 7 DAYS PRIOR TO THE EMISSION TESTING DATE, IF THE DATE HAS CHANGED FROM THAT APPROVED IN THE SOURCE TEST PLAN.

    C. DURING THE SOURCE TEST, THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER SHALL BE OPERATED AT THE MAXIMUM FIRING CAPACITY, DEFINED AS ≥ 90% OF THE HEAT INPUT CAPACITY ACHIEVABLE AT THE TIME OF THE SOURCE TEST, BASED ON THEN CURRENT AMBIENT CONDITIONS.

    D. DURING THE SOURCE TEST, THE COMBINED CYCLE GAS TURBINE SHALL ALSO BE OPERATED AT 50% OF MAXIMUM TOTAL FIRING CAPACITY FOR ROC AND CO TESTING.

    E. SUBMIT THE SOURCE TEST RESULTS REPORT TO THE SMAQMD AIR POLLUTION CONTROL OFFICER WITHIN 60 DAYS FROM THE COMPLETION OF THE SOURCE TEST.

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SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

YOUR APPLICATION FOR THIS AIR QUALITY PERMIT TO OPERATE WAS EVALUATED FOR COMPLIANCE WITH SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT (SMAQMD), STATE AND FEDERAL AIR QUALITY RULES. THE FOLLOWING LISTED RULES ARE THOSE THAT ARE MOST APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. OTHER RULES MAY ALSO BE APPLICABLE.

SMAQMD RULE NO.	RULE TITLE
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
301	PERMIT FEES - STATIONARY SOURCES
401	RINGELMANN CHART
402	NUISANCE
406	SPECIFIC CONTAMINANTS
413	STATIONARY GAS TURBINES
420	SULFUR CONTENT OF FUELS
801 (NSPS)	STANDARDS OF PERFORMANCE FOR STATIONARY COMBUSTION TURBINES 40 CFR 60 SUBPART KKKK [BEGIN AT 60.4300]

IN ADDITION, THE CONDITIONS ON THIS PERMIT TO OPERATE MAY REFLECT SOME, BUT NOT ALL, REQUIREMENTS OF THESE RULES. THERE MAY BE OTHER CONDITIONS THAT ARE APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. FUTURE CHANGES IN PROHIBITORY RULES MAY ESTABLISH MORE STRINGENT REQUIREMENTS WHICH MAY SUPERSEDE THE CONDITIONS LISTED HERE.

FOR FURTHER INFORMATION PLEASE CONSULT YOUR SMAQMD RULEBOOK OR CONTACT THE SMAQMD FOR ASSISTANCE.

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AIR QUALITY
MANAGEMENT DISTRICT

PERMIT TO OPERATE

ISSUED TO: **SACRAMENTO COGENERATION AUTHORITY – SCA PROJECT**

EQUIPMENT LOCATION: 5000 83RD STREET, SACRAMENTO

PERMIT NO.	EQUIPMENT DESCRIPTION
20735	GAS TURBINE UNIT 1B, COMBINED CYCLE, GENERAL ELECTRIC, LM6000PC SPRINT/EFS, 500 MMBTU/HOUR, NOMINAL 50 MW OUTPUT, NATURAL GAS FIRED.
11438	DUCT BURNER UNIT 1B, HEAT RECOVERY STEAM GENERATOR, 83.2 MMBTU/HR, NATURAL GAS FIRED.
11440	AIR POLLUTION CONTROL SELECTIVE CATALYTIC REDUCTION SYSTEM SERVING THE COMBINED CYCLE TURBINE AND DUCT BURNER UNIT 1B.
11443	AIR POLLUTION CONTROL OXIDATION CATALYST SYSTEM SERVING THE COMBINED CYCLE TURBINE AND DUCT BURNER UNIT 1B.

SUBJECT TO THE FOLLOWING CONDITIONS:

GENERAL

1. THE EQUIPMENT SHALL BE PROPERLY MAINTAINED AND OPERATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AT ALL TIMES.

2. THE AIR POLLUTION CONTROL OFFICER AND/OR AUTHORIZED REPRESENTATIVES, UPON THE PRESENTATION OF CREDENTIALS, SHALL BE PERMITTED:
   A. TO ENTER UPON THE PREMISES WHERE THE SOURCE IS LOCATED OR IN WHICH ANY RECORDS ARE REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
   B. AT REASONABLE TIMES TO HAVE ACCESS TO AND COPY ANY RECORDS REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
   C. TO INSPECT ANY EQUIPMENT, OPERATION, OR METHOD REQUIRED IN THIS PERMIT TO OPERATE, AND
   D. TO SAMPLE EMISSIONS FROM THE SOURCE OR REQUIRE SAMPLES TO BE TAKEN.

3. THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, PART 4, CHAPTER 3, OF THE CALIFORNIA HEALTH AND SAFETY CODE OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.

DATE ISSUED: 08-15-2011
DATE EXPIRES: 08-22-2012 (UNLESS RENEWED)

LARRY GREENE
AIR POLLUTION CONTROL OFFICER

BY: Brian F Hart

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4. THE EQUIPMENT SHALL NOT DISCHARGE SUCH QUANTITIES OF AIR CONTAMINANTS OR OTHER MATERIALS WHICH CAUSE INJURY, DETRIMENT, NUISANCE OR ANNOYANCE TO ANY CONSIDERABLE NUMBER OF PERSONS OR TO THE PUBLIC, OR WHICH ENDANGER THE COMFORT, REPOSE, HEALTH, OR SAFETY OF ANY SUCH PERSONS OR THE PUBLIC, OR WHICH CAUSE, OR HAVE A NATURAL TENDENCY TO CAUSE, INJURY OR DAMAGE TO BUSINESS OR PROPERTY.

5. A LEGIBLE COPY OF THIS PERMIT SHALL BE MAINTAINED ON THE PREMISES WITH THE EQUIPMENT.

6. MALFUNCTION - THE AIR POLLUTION CONTROL OFFICER SHALL BE NOTIFIED OF ANY BREAKDOWN OF THE EMISSIONS MONITORING EQUIPMENT, ANY EQUIPMENT, OR ANY PROCESS WHICH RESULTS IN AN INCREASE IN EMISSIONS ABOVE THE ALLOWABLE EMISSIONS LIMITS STATED AS A CONDITION OF THIS PERMIT OR ANY APPLICABLE STATE OR FEDERAL REGULATION OR WHICH AFFECTS THE ABILITY FOR THE EMISSIONS TO BE ACCURATELY DETERMINED. SUCH BREAKDOWNS SHALL BE REPORTED TO THE DISTRICT IN ACCORDANCE WITH THE PROCEDURES AND REPORTING TIMES SPECIFIED IN RULE 602 - BREAKDOWN CONDITIONS; EMERGENCY VARIANCE.

EMISSIONS LIMITATIONS

7. THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY VISIBLE AIR CONTAMINANTS OTHER THAN UNCOMBINED WATER VAPOR, FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR, WHICH ARE AS DARK OR DARKER THAN RINGELMANN NO. 1 OR EQUIVALENT TO OR GREATER THAN 20% OPACITY.

8. COMBINED EMISSIONS FROM THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER SHALL NOT EXCEED THE FOLLOWING LIMITS:

POLLUTANT	MAXIMUM ALLOWABLE EMISSIONS (A) COMBINED CYCLE GAS TURBINE AND DUCT BURNER COMBINED	
	PPMVD AT 15% O_2 3 HOUR AVERAGE	LB/HOUR 3 HOUR AVERAGE
ROC	NA	1.80(C)
NOx	2.5 (B)	5.37(D)
SOx	NA	0.35(E)
PM10	NA	3.30(F)
CO	NA	7.85(G)
AMMONIA (NH_3)	10	NA

(A) EXCLUDING STARTUPS AS DEFINED IN CONDITION NO. 14.
(B) THE 2.5 PPMVD NOx LIMIT ALSO APPLIES INDIVIDUALLY TO THE COMBINED CYCLE GAS TURBINE AND TO THE DUCT BURNER.
(C) BASED ON FULL CAPACITY AND A TURBINE EMISSION FACTOR OF 0.0024 LB/MMBTU AND A DUCT BURNER EMISSION FACTOR OF 0.0075 LB/MMBTU.
(D) BASED ON DATA SUBMITTED IN THE APPLICATION AND AS MONITORED BY THE TURBINE'S NOx CEM SYSTEM.
(E) BASED ON FULL CAPACITY AND A SOx EMISSION FACTOR OF 0.0006 LB/MMBTU.
(F) BASED ON FULL CAPACITY AND A TURBINE EMISSION FACTOR OF 0.0050 LB/MMBTU AND A DUCT BURNER EMISSION FACTOR OF 0.0096 LB/MMBTU.
(G) BASED ON DATA SUBMITTED IN THE APPLICATION AND AS MONITORED BY THE TURBINE'S CO CEM SYSTEM.

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9. COMBINED EMISSIONS FROM THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER, INCLUDING START-UPS AND SHUTDOWNS, SHALL NOT EXCEED THE FOLLOWING LIMITS:

POLLUTANT	MAXIMUM ALLOWABLE EMISSIONS (A) COMBINED CYCLE GAS TURBINE AND DUCT BURNER COMBINED LB/DAY
ROC	43.2
NOx	144.9
SOx	8.4
PM10	79.2
CO	197.3

10. EMISSIONS FROM THE COMBINED CYCLE GAS TURBINES 1A AND 1B AND DUCT BURNERS 1A AND 1B, INCLUDING START-UPS AND SHUTDOWNS, SHALL NOT EXCEED THE FOLLOWING LIMITS.

POLLUTANT	MAXIMUM ALLOWABLE QUARTERLY EMISSIONS (A) COMBINED CYCLE GAS TURBINES 1A AND 1B AND DUCT BURNERS 1A AND 1B COMBINED			
	QUARTER 1 LB/QUARTER	QUARTER 2 LB/QUARTER	QUARTER 3 LB/QUARTER	QUARTER 4 LB/QUARTER
NOx	21,090	21,320	21,550	21,550

(A) THE PURPOSE OF REQUIRING QUARTERLY NOX MASS EMISSION LIMITS IS TO FACILITATE THE CALCULATION OF NOX EMISSION REDUCTION CREDITS FROM THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER MODIFICATIONS.

11. EMISSIONS FROM ALL EQUIPMENT AT THE SACRAMENTO COGENERATION AUTHORITY'S FACILITY INCLUDING START-UPS AND SHUTDOWNS SHALL NOT EXCEED THE FOLLOWING LIMITS.

POLLUTANT	MAXIMUM ALLOWABLE EMISSIONS				
	QTR 1 (LB/QUARTER)	QTR 2 (LB/QUARTER)	QTR 3 (LB/QUARTER)	QTR 4 (LB/QUARTER)	TOTAL (LB/YEAR)
ROC	8,287	8,380	8,472	8,472	33,611
NOx	28,993	29,305	29,618	29,618	117,534
SOx	1,901	1,923	1,944	1,944	7,712
PM10	17,220	17,411	17,603	17,603	69,837
CO	48,994	49,535	50,075	50,075	198,679

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EQUIPMENT OPERATION REQUIREMENTS

12. THE DUCT BURNER SHALL NOT BE OPERATED UNLESS THE COMBINED CYCLE TURBINE IS OPERATING.

13. THE COMBINED CYCLE GAS TURBINE AND THE DUCT BURNER SHALL NOT BE OPERATED WITHOUT A FULLY FUNCTIONING SELECTIVE CATALYTIC REDUCTION NOx AIR POLLUTION CONTROL SYSTEM (SMAQMD P/O NO. 11440) AND OXIDATION CATALYST CO AIR POLLUTION CONTROL SYSTEM (SMAQMD P/O NO. 11443), EXCLUDING PERIODS OF STARTUPS AND SHUTDOWNS.

14. THE DURATION OF THE COMBINED CYCLE GAS TURBINE STARTUP PERIOD SHALL NOT EXCEED 60 MINUTES.

    A. STARTUP PERIOD IS DEFINED AS THE TIME WHEN FUEL IS FIRST INTRODUCED TO THE COMBINED CYCLE GAS TURBINE TO THE TIME WHEN THE EMISSIONS OF NOx ARE CONTROLLED TO 2.5 PPMVD AT 15% O_2 OR LESS.

MONITORING REQUIREMENTS

15. THE PERMITTEE SHALL OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), THAT HAS BEEN APPROVED BY THE SMAQMD AIR POLLUTION CONTROL OFFICER, FOR THE COMBINED GAS TURBINE AND DUCT BURNER EMISSIONS.

    A. THE CEMS SHALL MONITOR AND RECORD NITROGEN OXIDES, CARBON MONOXIDE AND OXYGEN.

    B. FOR NOx AND O_2, THE CEMS SHALL COMPLY WITH U.S. EPA PERFORMANCE SPECIFICATIONS IN 40 CFR 75 APPENDIX A.

    C. FOR CO, THE CEMS SHALL COMPLY WITH U.S. EPA PERFORMANCE SPECIFICATIONS IN 40 CFR 60 APPENDIX B PERFORMANCE SPECIFICATION 4.

16. THE PERMITTEE SHALL OPERATE A CONTINUOUS PARAMETER MONITORING SYSTEM THAT HAS BEEN APPROVED BY THE SMAQMD AIR POLLUTION CONTROL OFFICER THAT EITHER, MEASURES OR CALCULATES, AND RECORDS THE FOLLOWING.

PARAMETER TO BE MONITORED	UNITS
A. FUEL CONSUMPTION OF THE COMBINED CYCLE GAS TURBINE.	MMBTU/HOUR OF NATURAL GAS
B. FUEL CONSUMPTION OF THE DUCT BURNER.	MMBTU/HOUR OF NATURAL GAS
C.. EXHAUST GAS FLOW RATE OF TURBINE AND DUCT BURNER.	KSCFH OR LB/HR

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AIR QUALITY MANAGEMENT DISTRICT

RECORDKEEPING REQUIREMENTS

17. THE FOLLOWING RECORDS SHALL BE CONTINUOUSLY MAINTAINED ON SITE FOR THE MOST RECENT FIVE YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE SMAQMD AIR POLLUTION CONTROL OFFICER UPON REQUEST. MONTHLY, QUARTERLY AND YEARLY RECORDS SHALL BE MADE AVAILABLE FOR INSPECTION WITHIN 30 DAYS OF THE END OF THE RESPECTIVE REPORTING PERIOD.

FREQUENCY	INFORMATION TO BE RECORDED
UPON OCCURRENCE	A. DATE AND DURATION OF ANY STARTUP OR SHUTDOWN. B. MALFUNCTION IN OPERATION OF THE COMBINED CYCLE GAS TURBINE. C. MEASUREMENTS FROM THE CONTINUOUS MONITORING SYSTEM. D. MONITORING DEVICE AND PERFORMANCE TESTING RECORDS INCLUDING DATE, LOCATION, TIME OF SAMPLING, DATE ANALYSES WERE PERFORM BY LAB, COMPANY OR ENTITY THAT PERFORMED THE TEST AND ANALYSES, ANALYTICAL TECHNIQUES OR METHODS USED, THE RESULTS OF SUCH ANALYSES AND THE OPERATING CONDITIONS EXISTING AT THE TIME OF SAMPLING. E. ALL CONTINUOUS MONITORING SYSTEM PERFORMANCE EVALUATIONS. F. ALL CONTINUOUS MONITORING SYSTEM OR MONITORING DEVICE CALIBRATION CHECKS. G. ADJUSTMENTS AND MAINTENANCE PERFORMED ON THESE SYSTEMS OR DEVICES.
HOURLY	H. COMBINED CYCLE GAS TURBINE NATURAL GAS FUEL CONSUMPTION (MMBTU/HOUR). I. DUCT BURNER NATURAL GAS FUEL CONSUMPTION (MMBTU/HOUR). J. INDICATE WHEN THE COMBINED CYCLE GAS TURBINE STARTUPS OCCURRED. K. COMBINED CYCLE GAS TURBINE AND DUCT BURNER ROC, NOx, SOx, PM10 AND CO HOURLY MASS EMISSIONS. L. COMBINED CYCLE GAS TURBINE AND DUCT BURNER NOx CONCENTRATION MEASURED IN PPMVD AT 15% O_2.
DAILY	M. COMBINED CYCLE GAS TURBINE AND DUCT BURNER ROC, NOx, SOx, PM10 AND CO DAILY MASS EMISSIONS.
QUARTERLY	N. COMBINED CYCLE GAS TURBINE'S 1A AND 1B AND DUCT BURNER'S 1A AND 1B TOTAL QUARTERLY NOx MASS EMISSIONS. O. TOTAL FACILITY ROC, NOx, SOx, PM10 AND CO QUARTERLY MASS EMISSIONS.

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REPORTING REQUIREMENTS

18. FOR EACH CALENDAR QUARTER SUBMIT TO THE SMAQMD AIR POLLUTION CONTROL OFFICER A WRITTEN REPORT WHICH CONTAINS THE FOLLOWING INFORMATION. EACH QUARTERLY REPORT IS DUE BY THE 30TH DAY FOLLOWING THE END OF THE CALENDAR QUARTER.

FREQUENCY	INFORMATION TO BE REPORTED
QUARTERLY BY: JANUARY 30 APRIL 30 JULY 30 OCTOBER 30	A. WHENEVER THE CONTINUOUS EMISSIONS MONITORING SYSTEM IS INOPERATIVE EXCEPT FOR ZERO AND SPAN CHECKS: I. DATE AND TIME OF NON OPERATION OF THE CONTINUOUS EMISSION MONITORING SYSTEM II. NATURE OF THE CONTINUOUS EMISSION MONITORING SYSTEM REPAIRS OR ADJUSTMENTS. B. WHENEVER AN EMISSION OCCURS AS MEASURED BY THE REQUIRED CONTINUOUS EMISSION MONITORING SYSTEM THAT IS IN EXCESS OF ANY EMISSION LIMITATION: I. MAGNITUDE OF THE EMISSION WHICH HAS BEEN DETERMINED TO BE IN EXCESS. II. DATE AND TIME OF THE COMMENCEMENT AND COMPLETION OF EACH PERIOD OF EXCESS EMISSIONS. III. PERIODS OF EXCESS EMISSIONS DUE TO STARTUP, SHUTDOWN AND MALFUNCTION SHALL BE SPECIFICALLY IDENTIFIED. IV. THE NATURE AND CAUSE OF ANY MALFUNCTION (IF KNOWN). V. THE CORRECTIVE ACTION TAKEN OR PREVENTIVE MEASURES ADOPTED. C. IF THERE WERE NO EXCESS EMISSIONS FOR A CALENDAR QUARTER: I. A REPORT SHALL BE SUBMITTED INDICATING THAT THERE WERE NO EXCESS EMISSIONS.

EMISSION TESTING REQUIREMENTS

19. AN ROC, NOx, CO, PM10, AND AMMONIA (NH_3) SOURCE TEST AND CEM ACCURACY (RATA) TEST OF THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER SHALL BE PERFORMED ONCE EVERY CALENDAR YEAR. THE AIR POLLUTION CONTROL OFFICER MAY WAIVE THE ANNUAL PM10 AND/OR ROC SOURCE TEST REQUIREMENT IF, IN THE AIR POLLUTION CONTROL OFFICER'S SOLE JUDGMENT, PRIOR TEST RESULTS INDICATE AN ADEQUATE COMPLIANCE MARGIN HAS BEEN MAINTAINED.

A. SUBMIT A SOURCE TEST PLAN TO THE SMAQMD AIR POLLUTION CONTROL OFFICER FOR APPROVAL AT LEAST 30 DAYS BEFORE THE SOURCE TEST IS TO BE PERFORMED.

B. NOTIFY THE SMAQMD AIR POLLUTION CONTROL OFFICER, AT LEAST 7 DAYS PRIOR TO THE EMISSION TESTING DATE, IF THE DATE HAS CHANGED FROM THAT APPROVED IN THE SOURCE TEST PLAN.

C. DURING THE SOURCE TEST, THE COMBINED CYCLE GAS TURBINE AND DUCT BURNER SHALL BE OPERATED AT THE MAXIMUM FIRING CAPACITY, DEFINED AS ≥ 90% OF THE HEAT INPUT CAPACITY ACHIEVABLE AT THE TIME OF THE SOURCE TEST, BASED ON THEN CURRENT AMBIENT CONDITIONS.

D. DURING THE SOURCE TEST, THE COMBINED CYCLE GAS TURBINE SHALL ALSO BE OPERATED AT 50% OF MAXIMUM TOTAL FIRING CAPACITY FOR ROC AND CO TESTING.

E. SUBMIT THE SOURCE TEST RESULTS REPORT TO THE SMAQMD AIR POLLUTION CONTROL OFFICER WITHIN 60 DAYS FROM THE COMPLETION OF THE SOURCE TEST.

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SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

YOUR APPLICATION FOR THIS AIR QUALITY PERMIT TO OPERATE WAS EVALUATED FOR COMPLIANCE WITH SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT (SMAQMD), STATE AND FEDERAL AIR QUALITY RULES. THE FOLLOWING LISTED RULES ARE THOSE THAT ARE MOST APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. OTHER RULES MAY ALSO BE APPLICABLE.

SMAQMD RULE NO.	RULE TITLE
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
301	PERMIT FEES - STATIONARY SOURCES
401	RINGELMANN CHART
402	NUISANCE
406	SPECIFIC CONTAMINANTS
413	STATIONARY GAS TURBINES
420	SULFUR CONTENT OF FUELS
801 (NSPS)	STANDARDS OF PERFORMANCE FOR STATIONARY COMBUSTION TURBINES 40 CFR 60 SUBPART KKKK [BEGIN AT 60.4300]

IN ADDITION, THE CONDITIONS ON THIS PERMIT TO OPERATE MAY REFLECT SOME, BUT NOT ALL, REQUIREMENTS OF THESE RULES. THERE MAY BE OTHER CONDITIONS THAT ARE APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. FUTURE CHANGES IN PROHIBITORY RULES MAY ESTABLISH MORE STRINGENT REQUIREMENTS WHICH MAY SUPERSEDE THE CONDITIONS LISTED HERE.

FOR FURTHER INFORMATION PLEASE CONSULT YOUR SMAQMD RULEBOOK OR CONTACT THE SMAQMD FOR ASSISTANCE.

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AIR QUALITY
MANAGEMENT DISTRICT

PERMIT TO OPERATE

ISSUED TO: **SACRAMENTO COGENERATION AUTHORITY – SCA PROJECT**

EQUIPMENT LOCATION: 5000 83RD STREET, SACRAMENTO

PERMIT NO.	EQUIPMENT DESCRIPTION
20736	GAS TURBINE UNIT 1C, SIMPLE CYCLE, GENERAL ELECTRIC, LM6000PC SPRINT/EFS, 500 MMBTU/HOUR, NOMINAL 50 MW OUTPUT, NATURAL GAS FIRED.
11441	AIR POLLUTION CONTROL SELECTIVE CATALYTIC REDUCTION SYSTEM SERVING THE SIMPLE CYCLE TURBINE UNIT 1C.
11444	AIR POLLUTION CONTROL OXIDATION CATALYST SYSTEM SERVING THE SIMPLE CYCLE TURBINE UNIT 1C.

SUBJECT TO THE FOLLOWING CONDITIONS:

GENERAL

1. THE EQUIPMENT SHALL BE PROPERLY MAINTAINED AND OPERATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AT ALL TIMES.

2. THE AIR POLLUTION CONTROL OFFICER AND/OR AUTHORIZED REPRESENTATIVES, UPON THE PRESENTATION OF CREDENTIALS, SHALL BE PERMITTED:
   A. TO ENTER UPON THE PREMISES WHERE THE SOURCE IS LOCATED OR IN WHICH ANY RECORDS ARE REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
   B. AT REASONABLE TIMES TO HAVE ACCESS TO AND COPY ANY RECORDS REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
   C. TO INSPECT ANY EQUIPMENT, OPERATION, OR METHOD REQUIRED IN THIS PERMIT TO OPERATE, AND
   D. TO SAMPLE EMISSIONS FROM THE SOURCE OR REQUIRE SAMPLES TO BE TAKEN.

3. THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, PART 4, CHAPTER 3, OF THE CALIFORNIA HEALTH AND SAFETY CODE OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.

4. THE EQUIPMENT SHALL NOT DISCHARGE SUCH QUANTITIES OF AIR CONTAMINANTS OR OTHER MATERIALS WHICH CAUSE INJURY, DETRIMENT, NUISANCE OR ANNOYANCE TO ANY CONSIDERABLE NUMBER OF PERSONS OR TO THE PUBLIC, OR WHICH ENDANGER THE COMFORT, REPOSE, HEALTH, OR SAFETY OF ANY SUCH PERSONS OR THE PUBLIC, OR WHICH CAUSE, OR HAVE A NATURAL TENDENCY TO CAUSE, INJURY OR DAMAGE TO BUSINESS OR PROPERTY.

DATE ISSUED: 08-15-2011
DATE EXPIRES: 08-22-2012 (UNLESS RENEWED)

LARRY GREENE
AIR POLLUTION CONTROL OFFICER

BY: Brian F Krebs

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5. A LEGIBLE COPY OF THIS PERMIT SHALL BE MAINTAINED ON THE PREMISES WITH THE EQUIPMENT.

6. MALFUNCTION - THE AIR POLLUTION CONTROL OFFICER SHALL BE NOTIFIED OF ANY BREAKDOWN OF THE EMISSIONS MONITORING EQUIPMENT, ANY EQUIPMENT, OR ANY PROCESS WHICH RESULTS IN AN INCREASE IN EMISSIONS ABOVE THE ALLOWABLE EMISSIONS LIMITS STATED AS A CONDITION OF THIS PERMIT OR ANY APPLICABLE STATE OR FEDERAL REGULATION OR WHICH AFFECTS THE ABILITY FOR THE EMISSIONS TO BE ACCURATELY DETERMINED. SUCH BREAKDOWNS SHALL BE REPORTED TO THE DISTRICT IN ACCORDANCE WITH THE PROCEDURES AND REPORTING TIMES SPECIFIED IN RULE 602 - BREAKDOWN CONDITIONS; EMERGENCY VARIANCE.

EMISSIONS LIMITATIONS

7. THE SIMPLE CYCLE GAS TURBINE SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY VISIBLE AIR CONTAMINANTS OTHER THAN UNCOMBINED WATER VAPOR, FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR, WHICH ARE AS DARK OR DARKER THAN RINGELMANN NO. 1 OR EQUIVALENT TO OR GREATER THAN 20% OPACITY.

8. EMISSIONS FROM THE SIMPLE CYCLE GAS TURBINE SHALL NOT EXCEED THE FOLLOWING LIMITS:

POLLUTANT	MAXIMUM ALLOWABLE EMISSIONS (A) SIMPLE CYCLE GAS TURBINE	
	PPMVD AT 15% O2 3 HOUR AVERAGE	LB/HOUR 3 HOUR AVERAGE
ROC	NA	1.18(B)
NOx	2.5	4.60(C)
SOx	NA	0.30(D)
PM10	NA	2.50(E)
CO	NA	6.73(F)
AMMONIA (NH3)	10	NA

(A) EXCLUDING STARTUPS AS DEFINED IN CONDITION NO. 12.
(B) BASED ON FULL CAPACITY AND A TURBINE EMISSION FACTOR OF 0.0024 LB/MMBTU.
(C) BASED ON DATA SUBMITTED IN THE APPLICATION AND AS MONITORED BY THE TURBINE'S NOx CEM SYSTEM.
(D) BASED ON FULL CAPACITY AND A SOx EMISSION FACTOR OF 0.0006 LB/MMBTU.
(E) BASED ON FULL CAPACITY AND A TURBINE EMISSION FACTOR OF 0.0050 LB/MMBTU.
(F) BASED ON DATA SUBMITTED IN THE APPLICATION AND AS MONITORED BY THE TURBINE'S CO CEM SYSTEM.

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9. EMISSIONS FROM THE SIMPLE CYCLE GAS TURBINE, INCLUDING START-UPS AND SHUTDOWNS, SHALL NOT EXCEED THE FOLLOWING LIMITS:

POLLUTANT	MAXIMUM ALLOWABLE EMISSIONS (A) SIMPLE CYCLE GAS TURBINE LB/DAY
ROC	28.3
NOx	120.3
SOx	7.2
PM10	60
CO	163.9

10 EMISSIONS FROM ALL EQUIPMENT AT THE SACRAMENTO COGENERATION AUTHORITY'S FACILITY INCLUDING START-UPS AND SHUTDOWNS SHALL NOT EXCEED THE FOLLOWING LIMITS.

POLLUTANT	MAXIMUM ALLOWABLE EMISSIONS				
	QTR 1 (LB/QUARTER)	QTR 2 (LB/QUARTER)	QTR 3 (LB/QUARTER)	QTR 4 (LB/QUARTER)	TOTAL (LB/YEAR)
ROC	8,287	8,380	8,472	8,472	33,611
NOx	28,993	29,305	29,618	29,618	117,534
SOx	1,901	1,923	1,944	1,944	7,712
PM10	17,220	17,411	17,603	17,603	69,837
CO	48,994	49,535	50,075	50,075	198,679

EQUIPMENT OPERATION REQUIREMENTS

11. THE SIMPLE CYCLE GAS TURBINE SHALL NOT BE OPERATED WITHOUT A FULLY FUNCTIONING SELECTIVE CATALYTIC REDUCTION NOX AIR POLLUTION CONTROL SYSTEM (SMAQMD P/O NO. 11441) AND OXIDATION CATALYST CO AIR POLLUTION CONTROL SYSTEM (SMAQMD P/O NO. 11444), EXCLUDING PERIODS OF STARTUPS AND SHUTDOWNS.

12. THE DURATION OF THE SIMPLE CYCLE GAS TURBINE STARTUP PERIOD SHALL NOT EXCEED 30 MINUTES.

    A. STARTUP PERIOD IS DEFINED AS THE TIME WHEN FUEL IS FIRST INTRODUCED TO THE SIMPLE CYCLE GAS TURBINE TO THE TIME WHEN THE EMISSIONS OF NOx ARE CONTROLLED TO 2.5 PPMVD AT 15% O_2 OR LESS.

MONITORING REQUIREMENTS

13. THE PERMITTEE SHALL OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), THAT HAS BEEN APPROVED BY THE SMAQMD AIR POLLUTION CONTROL OFFICER, FOR THE GAS TURBINE EMISSIONS.

    A. THE CEMS SHALL MONITOR AND RECORD NITROGEN OXIDES, CARBON MONOXIDE AND OXYGEN.

    B. FOR NOx AND O_2, THE CEMS SHALL COMPLY WITH U.S. EPA PERFORMANCE SPECIFICATIONS IN 40 CFR 75 APPENDIX A.

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C. FOR CO, THE CEMS SHALL COMPLY WITH U.S. EPA PERFORMANCE SPECIFICATIONS IN 40 CFR 60 APPENDIX B PERFORMANCE SPECIFICATION 4.

14. THE PERMITTEE SHALL OPERATE A CONTINUOUS PARAMETER MONITORING SYSTEM THAT HAS BEEN APPROVED BY THE SMAQMD AIR POLLUTION CONTROL OFFICER THAT EITHER, MEASURES OR CALCULATES, AND RECORDS THE FOLLOWING.

PARAMETER TO BE MONITORED	UNITS
A. FUEL CONSUMPTION OF THE SIMPLE CYCLE GAS TURBINE.	MMBTU/HOUR OF NATURAL GAS
B.. EXHAUST GAS FLOW RATE OF TURBINE.	KSCFH OR LB/HR

RECORDKEEPING REQUIREMENTS

15. THE FOLLOWING RECORDS SHALL BE CONTINUOUSLY MAINTAINED ON SITE FOR THE MOST RECENT FIVE YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE SMAQMD AIR POLLUTION CONTROL OFFICER UPON REQUEST. MONTHLY, QUARTERLY AND YEARLY RECORDS SHALL BE MADE AVAILABLE FOR INSPECTION WITHIN 30 DAYS OF THE END OF THE RESPECTIVE REPORTING PERIOD.

FREQUENCY	INFORMATION TO BE RECORDED
UPON OCCURRENCE	A. DATE AND DURATION OF ANY STARTUP OR SHUTDOWN. B. MALFUNCTION IN OPERATION OF THE SIMPLE CYCLE GAS TURBINE. C. MEASUREMENTS FROM THE CONTINUOUS MONITORING SYSTEM. D. MONITORING DEVICE AND PERFORMANCE TESTING RECORDS INCLUDING DATE, LOCATION, TIME OF SAMPLING, DATE ANALYSES WERE PERFORM BY LAB, COMPANY OR ENTITY THAT PERFORMED THE TEST AND ANALYSES, ANALYTICAL TECHNIQUES OR METHODS USED, THE RESULTS OF SUCH ANALYSES AND THE OPERATING CONDITIONS EXISTING AT THE TIME OF SAMPLING. E. ALL CONTINUOUS MONITORING SYSTEM PERFORMANCE EVALUATIONS. F. ALL CONTINUOUS MONITORING SYSTEM OR MONITORING DEVICE CALIBRATION CHECKS. G. ADJUSTMENTS AND MAINTENANCE PERFORMED ON THESE SYSTEMS OR DEVICES.
HOURLY	H. SIMPLE CYCLE GAS TURBINE NATURAL GAS FUEL CONSUMPTION (MMBTU/HOUR). I. INDICATE WHEN THE SIMPLE CYCLE GAS TURBINE STARTUPS OCCURRED. J. SIMPLE CYCLE GAS TURBINE ROC, NOx, SOx, PM10 AND CO HOURLY MASS EMISSIONS. K. SIMPLE CYCLE GAS TURBINE NOx CONCENTRATION MEASURED IN PPMVD AT 15% O_2.
DAILY	L. SIMPLE CYCLE GAS TURBINE ROC, NOx, SOx, PM10 AND CO DAILY MASS EMISSIONS.
QUARTERLY	M. TOTAL FACILITY ROC, NOx, SOx, PM10 AND CO QUARTERLY MASS EMISSIONS.

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REPORTING REQUIREMENTS

16. FOR EACH CALENDAR QUARTER SUBMIT TO THE SMAQMD AIR POLLUTION CONTROL OFFICER A WRITTEN REPORT WHICH CONTAINS THE FOLLOWING INFORMATION. EACH QUARTERLY REPORT IS DUE BY THE 30TH DAY FOLLOWING THE END OF THE CALENDAR QUARTER.

FREQUENCY	INFORMATION TO BE REPORTED
QUARTERLY BY: JANUARY 30 APRIL 30 JULY 30 OCTOBER 30	A. WHENEVER THE CONTINUOUS EMISSIONS MONITORING SYSTEM IS INOPERATIVE EXCEPT FOR ZERO AND SPAN CHECKS: I. DATE AND TIME OF NON OPERATION OF THE CONTINUOUS EMISSION MONITORING SYSTEM II. NATURE OF THE CONTINUOUS EMISSION MONITORING SYSTEM REPAIRS OR ADJUSTMENTS. B. WHENEVER AN EMISSION OCCURS AS MEASURED BY THE REQUIRED CONTINUOUS EMISSION MONITORING SYSTEM THAT IS IN EXCESS OF ANY EMISSION LIMITATION: I. MAGNITUDE OF THE EMISSION WHICH HAS BEEN DETERMINED TO BE IN EXCESS. II. DATE AND TIME OF THE COMMENCEMENT AND COMPLETION OF EACH PERIOD OF EXCESS EMISSIONS. III. PERIODS OF EXCESS EMISSIONS DUE TO STARTUP, SHUTDOWN AND MALFUNCTION SHALL BE SPECIFICALLY IDENTIFIED. IV. THE NATURE AND CAUSE OF ANY MALFUNCTION (IF KNOWN). V. THE CORRECTIVE ACTION TAKEN OR PREVENTIVE MEASURES ADOPTED. C. IF THERE WERE NO EXCESS EMISSIONS FOR A CALENDAR QUARTER: I. A REPORT SHALL BE SUBMITTED INDICATING THAT THERE WERE NO EXCESS EMISSIONS.

EMISSION TESTING REQUIREMENTS

17. AN ROC, NOx, CO, PM10, AND AMMONIA (NH_3) SOURCE TEST AND CEM ACCURACY (RATA) TEST OF THE SIMPLE CYCLE GAS TURBINE SHALL BE PERFORMED ONCE EVERY CALENDAR YEAR. THE AIR POLLUTION CONTROL OFFICER MAY WAIVE THE ANNUAL PM10 AND/OR ROC SOURCE TEST REQUIREMENT IF, IN THE AIR POLLUTION CONTROL OFFICER'S SOLE JUDGMENT, PRIOR TEST RESULTS INDICATE AN ADEQUATE COMPLIANCE MARGIN HAS BEEN MAINTAINED.

A. SUBMIT A SOURCE TEST PLAN TO THE SMAQMD AIR POLLUTION CONTROL OFFICER FOR APPROVAL AT LEAST 30 DAYS BEFORE THE SOURCE TEST IS TO BE PERFORMED.

B. NOTIFY THE SMAQMD AIR POLLUTION CONTROL OFFICER, AT LEAST 7 DAYS PRIOR TO THE EMISSION TESTING DATE, IF THE DATE HAS CHANGED FROM THAT APPROVED IN THE SOURCE TEST PLAN.

C. DURING THE SOURCE TEST, THE SIMPLE CYCLE GAS TURBINE SHALL BE OPERATED AT THE MAXIMUM FIRING CAPACITY, DEFINED AS ≥ 90% OF THE HEAT INPUT CAPACITY ACHIEVABLE AT THE TIME OF THE SOURCE TEST, BASED ON THEN CURRENT AMBIENT CONDITIONS.

D. DURING THE SOURCE TEST, THE SIMPLE CYCLE GAS TURBINE SHALL ALSO BE OPERATED AT 50% OF MAXIMUM TOTAL FIRING CAPACITY FOR ROC AND CO TESTING.

E. SUBMIT THE SOURCE TEST RESULTS REPORT TO THE SMAQMD AIR POLLUTION CONTROL OFFICER WITHIN 60 DAYS FROM THE COMPLETION OF THE SOURCE TEST.

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SACRAMENTO METROPOLITAN
AIR QUALITY MANAGEMENT DISTRICT

YOUR APPLICATION FOR THIS AIR QUALITY PERMIT TO OPERATE WAS EVALUATED FOR COMPLIANCE WITH SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT (SMAQMD), STATE AND FEDERAL AIR QUALITY RULES. THE FOLLOWING LISTED RULES ARE THOSE THAT ARE MOST APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. OTHER RULES MAY ALSO BE APPLICABLE.

SMAQMD RULE NO.	RULE TITLE
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
301	PERMIT FEES - STATIONARY SOURCES
401	RINGELMANN CHART
402	NUISANCE
406	SPECIFIC CONTAMINANTS
413	STATIONARY GAS TURBINES
420	SULFUR CONTENT OF FUELS
801 (NSPS)	STANDARDS OF PERFORMANCE FOR STATIONARY COMBUSTION TURBINES 40 CFR 60 SUBPART KKKK [BEGIN AT 60.4300]

IN ADDITION, THE CONDITIONS ON THIS PERMIT TO OPERATE MAY REFLECT SOME, BUT NOT ALL, REQUIREMENTS OF THESE RULES. THERE MAY BE OTHER CONDITIONS THAT ARE APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. FUTURE CHANGES IN PROHIBITORY RULES MAY ESTABLISH MORE STRINGENT REQUIREMENTS WHICH MAY SUPERSEDE THE CONDITIONS LISTED HERE.

FOR FURTHER INFORMATION PLEASE CONSULT YOUR SMAQMD RULEBOOK OR CONTACT THE SMAQMD FOR ASSISTANCE.

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AIR QUALITY
MANAGEMENT DISTRICT

PERMIT TO OPERATE

ISSUED TO: SAACRAMENTO COGENERATION AUTHORITY

EQUIPMENT LOCATION: 5000 83RD STREET, SACRAMENTO, CA 95826

PERMIT NO.	EQUIPMENT DESCRIPTION
24398	BOILER UNIT 1B, MAKE: CLEAVER BROOKS, MODEL:LD-94-R,H, SERIAL NUMBER: W-3549, 108.7 MMBTU/HR CAPACITY WITH 4.9 MMBTU/HR PILOT BURNER, NATURAL GAS FIRED.
24399	SELECTIVE CATALYTIC REDUCTION SYSTEM FOR P/O 24398

SUBJECT TO THE FOLLOWING CONDITIONS:

GENERAL

1. The equipment must be properly maintained and operated in accordance with the information submitted with the application and the manufacturer's recommendations at all times.
   [Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408.1]

2. The Air Pollution Control Officer and/or authorized representatives must be permitted to do all of the following:
   A. Enter the source premises or any location which any records required by this Permit to Operate are kept.
   B. Access and copy any records required by this Permit to Operate.
   C. Inspect or review any equipment, operation, or method required under this Permit to Operate.
   D. Sample emissions from the source or require samples to be taken.
   [Basis: SMAQMD Rule 201, Section 405]

DATE ISSUED: 08-22-2017
DATE EXPIRES: 08-22-2018 (UNLESS RENEWED)

ALBERTO AYALA, PH.D., M.S.E.
AIR POLLUTION CONTROL OFFICER

BY: _____

REVOCABLE AND NON-TRANSFERABLE

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3. This Permit to Operate does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the SMAQMD Rules and Regulations.
[Basis: SMAQMD Rule 201, Sections 303.1, 405]

4. The facility may not discharge air contaminants or other materials that cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
[Basis: SMAQMD Rule 402, Section 301]

5. A legible copy of this Permit to Operate must be maintained on the premises with the equipment.
[Basis: SMAQMD Rule 201, Section 401]

6. Malfunction: The SMAQMD Air Pollution Control Officer must be notified of any breakdown of the emissions monitoring equipment, any equipment or any process which results in an increase in emissions above the allowable emissions limits stated as a condition of this permit or any applicable state or federal regulation which affects the ability of the emissions to be accurately determined. Such breakdowns must be reported to the SMAQMD in accordance with the procedures and reporting times specified in SMAQMD Rule 602 - Breakdown Conditions; Emergency Variance.
[Basis: SMAQMD Rule 602]

7. Severability: If any provision, clause, sentence, paragraph, section or part of these conditions for any reason is judged to be unconstitutional or invalid, such judgment will not affect or invalidate the remainder of these conditions.
[Basis: SMAQMD Rule 201, Section 405]

EMISSIONS LIMITATIONS

8. The boiler must not discharge into the atmosphere any visible air contaminant other than uncombined water vapor for a period or periods aggregating more than three minutes in any one hour if the discharge is as dark or darker than Ringelmann No. 1 or is equal to or greater than 20% opacity.
[Basis: SMAQMD Rule 401, Section 301]

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9. The boiler must meet the following emission standards:
[Basis: SMAQMD Rule 202, Section 408.2a and Rule 411, Section 301]

Pollutant	**Emission Standard and Work Practice**
NOx	5.0 ppmvd corrected to 3% oxygen, averaged over any three hour period, excluding periods containing startups and shutdowns as defined in **Condition No. 15 (A)**
CO	283.8 ppmvd corrected to 3% oxygen, averaged over any three hour period, excluding periods containing startups and shutdowns as defined in **Condition No. 15**
NH3	20 PPMVD corrected to 3% O2

(A) Based on SMAQMD BACT standard for this size category (BACT determination done in evaluation for P/O 24398)

10. Emissions of VOC, NOx, SOx, PM10, PM2.5 and CO from the auxiliary boiler, including startups and shutdowns, must not exceed the following limits:
[Basis: SMAQMD Rule 201, Section 405 and Rule 202]

Table 1

Pollutant	Emission Limits (A) (lb/day)
VOC	9.8
NOx	23.0
SOx	1.6
PM10	13.0
PM2.5	13.0
CO	547.8

(A) Emissions are based on the main burner operating at 108.7 MMBtu/hr, 1,000 btu/scf, for 24 hr/day and the Emission Factors shown in Table 3. For NOx, the first two hours, the boiler is assumed to operate at 30 ppm at 3% O2, the next hour at 9 ppm at 3% O2 and the remaining 21 hours at 5 ppm at 3% O2.

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Table 2

	Emission Limits				
Pollutant	Quarter 1 (A) (lb/qtr)	Quarter 2 (B) (lb/qtr)	Quarter 3 (C) (lb/qtr)	Quarter 4 (D) (lb/qtr)	Year Lbs
VOC	742	835	235	285	2,097
NOx	1443	1,550	737	658	4,388
Sox	118	133	37	45	333
PM10	978	1100	309	376	2,763
PM2.5	978	1100	309	376	2,763
CO	41329	46483	13064	15879	116,755

(A) Emissions are based on a quarterly fuel usage of 196.8 MMCF/qtr and the emission factors in Table 3.
(B) Emissions are based on a quarterly fuel usage of 221.3 MMCF/qtr and the emission factors in Table 3.
(C) Emissions are based on a quarterly fuel usage of 62.2 MMCF/qtr and the emission factors in Table 3.
(D) Emissions are based on a quarterly fuel usage of 75.6 MMCF/qtr and the emission factors in Table 3.

Table 3 - The following emission factors are used in calculating the daily and quarterly emissions

	Emission Factors	
Pollutant	Pilot Burner (A) (lb/MMCF)	Main Burner (B) (lb/MMCF)
VOC	5.4	3.77
NOx (C)	As monitored by the CEM System	As monitored by the CEM System
SOx	0.6	0.6
PM10	7.5	4.97
PM2.5	7.5	4.97
CO (C)	As monitored by the CEM System	As monitored by the CEM System

(A) Emission factors for VOC, SOx, and PM10 (assume all of the PM10 is PM2.5) are from AP-42, Tables 1.4-1 & 1.4-2 (07/98) assuming 1,000 btu/scf.
(B) Emission factors for SOx are from AP-42, Tables 1.4-1 & 1.4-2 (07/98) assuming 1,000 btu/scf. VOC and PM10 (assume all of the PM10 is PM2.5) are per the applicant request. NOx and CO emissions will be determined as monitored by the Continuous Emission Monitor System
(C) NOx and CO are monitored by the CEM system therefore do not have an emission factor.

11. Emissions from all equipment at the Sacramento Cogeneration Authority facility (Gas Turbine 1A, 1B, 1C, Duct Burners 1A and 1B, APC NOx SCR System 1A, 1B, 1C, APC CO Oxidation Catalyst 1A, 1B and 1C, Auxiliary Boiler 1A and 1B, Cooling Tower), including periods of startups and shutdowns, must not exceed the following limits.
[Basis: SMAQMD Rule 201, Section 405 and Rule 202]

	Emission Limits				
Pollutant	Quarter 1 (lb/qtr)	Quarter 2 (lb/qtr)	Quarter 3 (lb/qtr)	Quarter 4 (lb/qtr)	Year Lbs
CO	48,994	49,535	50,075	50,075	198,679

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12. Emissions of ammonia (NH3) from the auxiliary boiler, including startups, must not exceed the following limits:
[Basis: SMAQMD Rule 201, Section 405 and Rule 202]

Maximum Ammonia Emissions (A)								
Pollutant	Emission Factor (ppmvd at 3% O2)	Hourly (lb/hr)	Daily (lb/day)	Q1 (lb/qtr)	Q2 (lb/qtr)	Q3 (lb/qtr)	Q4 (lb/qtr)	Year (lb/yr)
NH3	20 ppmvd (B)	0.98	23.4	2107	2130	2154	2154	8545

(A) Emissions are based on 20 ppmvd @ 3% O2, 24 hr/day, 90, 91, 92, and 92 days for quarters 1 through 4 respectively.
(B) Compliance with the 20 ppmvd corrected to 3% O2 NH3 limit is determined based on source test data as required by **Condition No. 18**.

EQUIPMENT OPERATION

13. The boiler must be fired only on pipeline-quality natural gas.
[Basis: SMAQMD Rule 202, Section 408.1]

14. The maximum fuel usage ,must not exceed the following
[Basis: SMAQMD Rule 202, Section 301]

Natural Gas Fuel Usage				Year MMCF
Q1 MMCF	Q2 MMCF	Q3 MMCF	Q4 MMCF	
196.8	221.3	62.2	75.6	556

15. The auxiliary boiler is subject to two startup periods and a shutdown period.
A. The total duration of the auxiliary boiler's startup period must not exceed 180 minutes. Startups are defined as time periods commencing with the introduction of fuel to the boiler (pilot burner and/or main burner), and ending at the time that the 15-minute average NOx and CO concentrations do not exceed 5.0 ppmvd at 3% O2 and 283.8 ppmvd at 3% O2 respectively, but in no case exceeding 180 consecutive minutes. During this startup period the NOx and CO mass emissions must not exceed 9.1 lb and 68.5 lb respectively.
B. In order to determine compliance with startup provisions specified in Rule 411, the boiler must be constrained to an additional startup period not to exceed 120 minutes. For this additional startup provision, the time period commences with the introduction of fuel to the boiler (pilot burner and/or main burner), and ending at the time that the 15-minute average NOx and CO concentrations do not exceed 9.0 ppmvd at 3% O2 and 283.8 ppmvd at 3% O2 respectively, but in no case exceeding 120 consecutive minutes. During this startup period the NOx and CO mass emissions must not exceed 7.9 lb and 45.7 lb respectively.
C. The total duration of the auxiliary boiler's shutdown period must not exceed 60 minutes. Shutdowns are defined as time periods commencing with the reduction of fuel flow to the boiler (pilot burner and/or main burner), and ending at the time that all fuel flow has ceased. During this shutdown period the NOx and CO mass emissions must not exceed 0.7 lb and 22.8 lb respectively.
[Basis: SMAQMD Rule 202, Section 301 and Rule 411, Section 222]

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16. The Sacramento Cogeneration Authority must operate a continuous emission monitoring system (CEMS) that has been approved by the SMAQMD Air Pollution Control Officer, for the boiler emissions.
    A. The CEM system must monitor and record concentrations of NOx, CO and oxygen.
    B. The CEM system must comply with the U.S. EPA Performance Specifications (40 CFR 60, Appendix B, Performance Specifications 2, 3 and 4).
    [Basis: SMAQMD Rule 201, Section 405 and Rule 202]

17. The Sacramento Cogeneration Authority must operate a continuous parameter monitoring system that has been approved by the SMAQMD Air Pollution Control Officer that either measures, or calculates and records the following.
    [Basis: SMAQMD Rule 201, Section 405 and Rule 202]

Parameter to be Monitored	Units
Fuel consumption of the boiler	MMCF/hr of natural gas

EMISSIONS TESTING

18. Emissions of nitrogen oxides, carbon monoxide, volatile organic compounds, ammonia, and oxygen and CEM accuracy must be tested once every calendar year to verify compliance.
    A. Submit a source test plan to the Air Pollution Control Officer for approval at least 30 days before the test is to be performed.
    B. Notify the Air Pollution Control Officer at least 7 days prior to the source test date of the exact date and time of test if the date has changed from that approved in the source test plan.
    C. During source testing, the boiler must be operated at a firing rate that is as close as physically possible to the rated capacity.
    D. Submit the source test report to the Air Pollution Control Officer within 60 days from the completion of the test(s).
    E. The SMAQMD Air Pollution Control Officer may waive the annual PM10, PM2.5 and VOC source test requirement if, in the SMAQMD Air Pollution Control Officer's sole judgment, prior test results indicate an adequate compliance margin has been maintained.
    [Basis: SMAQMD Rule 201, Section 303.2 and Rule 411, Sections 404.1]

19. Emission testing must be performed in accordance with the following test methods:
    A. Oxides of Nitrogen – ARB Method 100 or EPA Method 7E.
    B. Carbon Monoxide – ARB Method 100 or EPA Method 10.
    C. Stack Gas Oxygen – ARB Method 100 or EPA Method 3A.
    D. Carbon Dioxide – ARB Method 100 or EPA Method 3A.
    E. Ammonia – BAAQMD ST1B or approved equivalent.
    [Basis: SMAQMD Rule 411, Section 501]

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SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

RECORDKEEPING & REPORTING

20. The following record must be continuously maintained on-site for the most recent five year period and must be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly and yearly records must be made available for inspection within 30 days of the end of the reporting period. **[Basis: SMAQMD Rule 201, Section 405 and Rule 202]**

Frequency	Information to be Record
At all times	A. Measurements from the continuous emissions monitoring system and the continuous parameter monitoring system. B. Monitoring device and performance testing measurements. C. Continuous monitoring system performance evaluations D. Continuous monitoring system device calibration checks. E. Continuous monitoring system adjustments and maintenance. F. Any previous source test results.
Hourly	G. The boiler's natural gas fuel consumption (MMCF/hr). H. The boiler's NOx and CO concentration (ppmvd at 3% O_2, 3 hour average). I. The boiler's NOx, VOC, SOx, PM10, PM2.5, and CO hourly emissions. i. For those pollutants directly monitored (NOx and CO), the hourly emissions must be calculated based on the CEM system. ii. For those pollutants that are not directly monitored (VOC, SOx, PM10 and PM2.5), the hourly emissions must be calculated based on the emission factors specified in **Condition No. 10, Table 3** multiplied by the actual fuel flow rate of the auxiliary boiler.
Daily	J. Total daily VOC, NOx, SOx, PM10, PM2.5 and CO emissions from the auxiliary boiler (lb/day).
Monthly	K. The boiler's natural gas fuel consumption (MMCF/month).
Quarterly	L. Total quarterly VOC, NOx, SOx, PM10, PM2.5 and CO emissions from the auxiliary boiler (lb/quarter). M. The boiler's natural gas fuel consumption (MMCF/qtr).
Yearly	N. Total yearly VOC, NOx, SOx, PM10, PM2.5, and CO emissions from all equipment combined at the Sacramento Cogeneration Authority facility (lb/year).

21. Submit to the SMAQMD Air Pollution Control Officer a written report which contains the following information. **[Basis: SMAQMD Rule 201, Section 405 and Rule 202]**

Frequency	Information to be Submitted
Quarterly - Due by: January 30 April 30 July 30	A. Whenever the CEM system is inoperative except for zero and span checks. i. Date and time of non-operation of the CEM system. ii. Nature of the CEM system repairs or adjustments. B. Whenever an emission occurs as measured by the required CEM system that is in excess of any emission limitation. i. Magnitude of the emission which has been determined to be in excess.

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Frequency	Information to be Submitted
October 30	ii. Date and time of the commencement and completion of each period of excess emissions. iii. Periods of excess emissions due to start-up, shutdown and malfunction must be specifically identified. iv. The nature and cause of any malfunction (if known). v. The corrective action taken or preventive measures adopted. C. If there were no excess emissions during a reporting quarter. i. A report must be submitted indicating that there were no excess emissions.

22. The permit holder must, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.).
[Basis: SMAQMD Rule 201, Section 303.1]

EMISSION REDUCTION CREDIT (ERC) REQUIREMENTS

23. Prior to commencing operation, the permittee has surrender sufficient ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of emissions:
[SMAQMD Rule 202]

	Quarter 1 (lb/qtr)	Quarter 2 (lb/qtr)	Quarter 3 (lb/qtr)	Quarter 4 (lb/qtr)
VOC	742 lbs.	835 lbs.	235 lbs.	285 lbs.
NOx	1,443 lbs.	1,550 lbs.	737 lbs.	658 lbs.
PM10	978 lbs.	1,100 lbs.	309 lbs.	376 lbs.
PM2.5	978 lbs.	1,100 lbs.	309 lbs.	376 lbs.

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Offsets for VOC, NOx, PM10 and PM2.5 will be provided from an emission reduction credit certificate for the reduction in rice straw burning originating in the Feather River Air Quality Management District (FRAQMD). The locations of the reduction in rice straw burning are located greater than 15 miles from SCA but less than 50 miles, therefore, the total quantity of offsets that need to be surrendered for the project are as follows:

Emission Reduction Credit Certificate No. (A)	Pollutant	Amount of ERC's Surrendered lb/quarter				Offset Ratio	Value Applied To The Project Emission Liability lb/quarter			
		Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
FRAQMD #99001-T2	VOC	1,484	1,670	470	570	2.0	742	835	235	285
	NOX	2,886	3,100	1,474	1,316	2.0	1,443	1,550	737	658
	PM10	1,956	2,200	618	752	2.0	978	1,100	309	376
	PM2.5	1,956	2,200	618	752	2.0	978	1,100	309	376

(A) Certificate #99001-T2 has been submitted by the applicant to the Feather River Air Quality Management District for recertification with Rule 10.9. Though the recertification has not been completed by FRAQMD, an analysis performed by the SMAQMD in support of this application determined that there is sufficient credits available to sufficiently offset the emissions shown above.

24. Emission test reports must be maintained on-site for a continuous 5-year period and must be made available to the Air Pollution Control Officer upon request.
[Basis: SMAQMD Rule 411, Section 502]

25. The permit holder must, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.).
[Basis: SMAQMD Rule 201, Section 303.1]

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SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Your application for this air quality Permit to Operate was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), state and federal air quality rules. The following list identifies the rules that most commonly apply to the operation of your equipment. Other rules may also be applicable.

SMAQMD RULE NO.	RULE TITLE
201	GENERAL PERMIT REQUIREMENTS (08-24-2006)
202	NEW SOURCE REVIEW (08-23-2012)
401	RINGELMANN CHART (04-19-1983)
402	NUISANCE (08-03-1977)
406	SPECIFIC CONTAMINANTS (12-06-1978)
411	NOx FROM BOILERS, PROCESS HEATERS AND STEAM GENERATORS (08-23-2007)
420	SULFUR CONTENT OF FUELS (08-13-1981)
801	NEW SOURCE PERFORMANCE STANDARDS (40 CFR 60 SUBPART Db) (05-26-2011)

The conditions on this Permit to Operate reflect some, but not all, of the requirements of these rules. Because other rule requirements may apply to the operation, the permit holder should be familiar with all of the rules and related requirements. In addition, because future changes in prohibitory rules may establish more stringent requirements that may supersede the conditions listed here, the permit holder should monitor proposed rules and rule adoption actions at SMAQMD.

For further information please consult your SMAQMD rulebook or contact the SMAQMD for assistance.