

Bay Area Air Quality Management District

939 Ellis Street
San Francisco, CA 94109
(415) 771-6000

Draft Final

MAJOR FACILITY REVIEW PERMIT

Issued To:

Cardinal Cogen, Inc.
Facility #A1629

Facility Address:

Campus and Jordan Way
Palo Alto, CA 94305

Mailing Address:

Stanford University
Building 14-105
Stanford, CA 94305-4114

Responsible Official

Ron Dahlin
(650) 723-1779

Facility Contact

Julia Cabral~~Brian Ross~~
(650) 723-17908519

Type of Facility:	Cogeneration Facility	BAAQMD Permit Division Contact:
Primary SIC:	4931	<u>Arthur Valla</u> Madhav Patil
Product:	Cogeneration of electricity and steam	

ISSUED BY THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT

<u>Signed by Jeff McKay for Jack P. Broadbent</u>	<u>May 7, 2008</u>
Jack P. Broadbent, Executive Officer/Air Pollution Control Officer	Date

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I. STANDARD CONDITIONS

A. Administrative Requirements

The permit holder shall comply with all applicable requirements in the following regulations:

BAAQMD Regulation 1 - General Provisions and Definitions

(as amended by the District Board on ~~7/9/08~~~~5/2/04~~);

SIP Regulation 1 - General Provisions and Definitions

(as approved by EPA through 6/28/99);

BAAQMD Regulation 2, Rule 1 - Permits, General Requirements

(as amended by the District Board on ~~3/4/09~~~~6/15/05~~);

SIP Regulation 2, Rule 1 - Permits, General Requirements

(as approved by EPA through 1/26/99);

BAAQMD Regulation 2, Rule 2 - Permits, New Source Review

(as amended by the District Board on 6/15/05);

SIP Regulation 2, Rule 2 - Permits, New Source Review and Prevention of Significant Deterioration

(as approved by EPA through 1/26/99);

BAAQMD Regulation 2, Rule 4 - Permits, Emissions Banking

(as amended by the District Board on ~~12/21/04~~~~5/17/00~~);

SIP Regulation 2, Rule 4 - Permits, Emissions Banking

(as approved by EPA through 1/26/99); and

BAAQMD Regulation 2, Rule 6 - Permits, Major Facility Review

(as amended by the District Board on 4/16/03).

SIP Regulation 2, Rule 6 – Permits, Major Facility Review

(as approved by EPA through 6/23/95)

B. Conditions to Implement Regulation 2, Rule 6, Major Facility Review

1. This Major Facility Review Permit expires on ~~August 23, 2010~~~~TBD~~. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than ~~February 22, 2010~~~~TBD~~ and no earlier than ~~August 23, 2009~~~~TBD~~. **If a complete application for renewal has not been submitted in accordance with this deadline, the facility may not operate after ~~August 22, 2010~~~~TBD~~.** If the permit renewal has not been issued by ~~August 22, 2010~~~~TBD~~, but a complete application for renewal has been submitted in accordance with the above deadlines, the existing permit will continue in force until the District takes final action on the renewal application. This is the “application shield” pursuant to BAAQMD Regulation 2-6-407. (Regulation 2-6-307, 404.2, 407, & 409.6; MOP Volume II, Part 3, §4.2)

2. The permit holder shall comply with all conditions of this permit. The permit consists of this document and all appendices. Any non-compliance with the terms and conditions of this permit will constitute a violation of the law and will be grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

I. Standard Conditions

(Regulation 2-6-307; MOP Volume II, Part 3, §4.11)

3. In the event any enforcement action is brought as a result of a violation of any term or condition of this permit, the fact that it would have been necessary for the permit holder to halt or reduce the permitted activity in order to maintain compliance with such term or condition shall not be a defense to such enforcement action. (MOP Volume II, Part 3, §4.11)
4. This permit may be modified, revoked, reopened and reissued, or terminated for cause. (Regulation 2-6-307, 409.8, 415; MOP Volume II, Part 3, §4.11)
5. The filing of a request by the facility for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated non-compliance does not stay the applicability of any permit condition. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
6. This permit does not convey any property rights of any sort, or any exclusive privilege. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
7. The permit holder shall supply within 30 days any information that the District requests in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. (Regulation 1-441, Regulation 2-6-409.4 & 501; MOP Volume II, Part 3, §4.11)
8. Any records that must be maintained pursuant to this permit that the permittee considers proprietary or trade secret information shall be prominently designated as such. Copies of any such proprietary or trade secret information which are provided to the District shall be maintained by the District in a locked confidential file, provided, however, that requests from the public for the review of any such information shall be handled in accordance with the District's procedures set forth in Section 11 of the District's Administrative Code. (Regulation 2-6-419; MOP Volume II, Part 3, §4.11)
9. Proprietary or trade secret information provided to EPA will be subject to the requirements of 40 CFR Part 2, Subpart B - Public Information, Confidentiality of Business Information. (40 CFR Part 2)
10. The emissions inventory submitted with the application for this Major Facility Review Permit is an estimate of actual emissions or the potential to emit for the time period stated and is included only as one means of determining applicable requirements for emission sources. It does not establish, or constitute a basis for establishing, any new emission limitations. (MOP Volume II, Part 3, §4.11)
11. The responsible official shall certify all documents submitted by the facility pursuant to the major facility review permit. The certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. The certifications shall be signed by a responsible official for the facility. (MOP Volume II, Part 3, §4.11)

I. Standard Conditions

12. The permit holder is responsible for compliance, and certification of compliance, with all conditions of the permit, regardless whether it acts through employees, agents, contractors, or subcontractors. (Regulation 2-6-307)

C. Requirement to Pay Fees

The permit holder shall pay annual fees in accordance with District Regulation 3, including Schedule P. (Regulation 2-6-402 & 409.13, Regulation 3; MOP Volume II, Part 3, §4.12)

D. Inspection and Entry

Access to Facility: The permit holder shall provide reasonable access to the facility and equipment that is subject to this permit to the APCO and/or to his or her designee. (Regulation 1-440, Regulation 2-6-409.3; MOP Volume II, Part 3, §4.14)

E. Records

1. The permit holder must provide any information, records, and reports requested or specified by the APCO. (Regulation 1-441, Regulation 2-6-409.4)
2. Notwithstanding the specific wording in any requirement, all records for federally enforceable requirements shall be maintained for at least five years from the date of entry. (Regulation 2-6-501, Regulation 3; MOP Volume II, Part 3, §4.7)

F. Monitoring Reports

Reports of all required monitoring must be submitted to the District at least once every six months, except where an applicable requirement specifies more frequent reporting. The reports shall be for the following periods: January 1st through June 30th and July 1st through December 31st, and are due on the last day of the month after the end of the reporting period. All instances of non-compliance shall be clearly identified in these reports. The reports shall be certified by the responsible official as true, accurate, and complete. In addition, all instances of non-compliance with the permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions. The reports shall be sent to the following address:

Director of Compliance and Enforcement
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
Attn: Title V Reports

I. Standard Conditions

(Regulation 2-6-502, Regulation 3; MOP Volume II, Part 3, §4.7)

G. Compliance Certification

Compliance certifications shall be submitted annually by the responsible official of this facility to the Bay Area Air Quality Management District and to the Environmental Protection Agency. The certification period will be July 1st to June 30th. The certification shall be submitted by July 31st of each year. The certification must list each applicable requirement, the compliance status, whether compliance was continuous or intermittent, the method used to determine compliance, and any other specific information required by the permit. The permit holder may satisfy this requirement through submittal of District-generated compliance certification forms. The certification should be directed to the District's Compliance and Enforcement Division at the address above, and a copy of the certification should be sent to the Environmental Protection Agency at the following address:

Director of the Air Division
USEPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
Attention: Air-3

(MOP Volume II, Part 3, §4.5 and 4.15)

H. Emergency Provisions

1. The permit holder may seek relief from enforcement action in the event of a breakdown, as defined by Regulation 1-208 of the District's Rules and Regulations, by following the procedures contained in Regulations 1-431 and 1-432. The District will thereafter determine whether breakdown relief will be granted in accordance with Regulation 1-433. (MOP Volume II, Part 3, §4.8)
2. The permit holder may seek relief from enforcement action for a violation of any of the terms and conditions of this permit by applying to the District's Hearing Board for a variance pursuant to Health and Safety Code Section 42350. The Hearing Board will determine after notice and hearing whether variance relief should be granted in accordance with the procedures and standards set forth in Health and Safety Code Section 42350 et seq. (MOP Volume II, Part 3, §4.8)
3. The granting by the District of breakdown relief or the issuance by the Hearing Board of a variance will not provide relief from federal enforcement unless the Major Facility Review Permit has been modified pursuant to Regulation 2, Rule 6. (MOP Volume II, Part 3, §4.8)

I. Severability

In the event that any provision of this permit is invalidated by a court or tribunal of competent jurisdiction, or by the Administrator of the EPA, all remaining portions of the permit shall remain in full force and effect. (Regulation 2-6-409.5; MOP Volume

I. Standard Conditions

II, Part 3, §4.10)

J. Miscellaneous Conditions

1. The maximum capacity for each source as shown in Table II-A is the maximum allowable capacity. Exceedance of the maximum allowable capacity for any source is a violation of Regulation 2, Rule 1, Section 301. (Regulation 2-1-301)

II. EQUIPMENT LIST

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2-1-302. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-301.

Table II-A

S-#	Description	Make or Type	Model	Capacity
S-1	Multi-fuel Watertube Boiler, No.1 (natural gas, fuel oil)	Bigelow Sterling	FHC 30	99 MM BTU/hr
S-2	Natural Gas Water tube boiler No.2 (natural gas, fuel oil)	Bigelow Sterling	FHC 30	99 MM BTU/hr
S-3	Multi-fuel Watertube Boiler No.3 (natural gas, fuel oil)	Bigelow Sterling	FHC 30	99 MM BTU/hr
S-4	Multi-Fuel Watertube Boiler, Central Energy Facility (natural gas, fuel oil)	Bigelow Sterling	FHC 30	99 MM BTU/hr
S-6	Gas Turbine (natural gas)	General Electric	PG6531B4 S-6004	<u>493.7 MMBTU/hr at</u> <u>ISO conditions</u> <u>549.1555 MM BTU/hr</u> <u>peak firing rate</u>
S-8	Duct Burners (natural gas)	Coen	Low NOX	124 MM BTU/hr
S-9	Turbine Starter Diesel Engine	Detroit Diesel	7123-7300	725-750 bhp 852 CID
S-10	Standby Generator Diesel Engine	Caterpillar	PWMKT13	1818764 bhp 2646 CID
S-11	Standby Generator Diesel Engine	Caterpillar	PWMKT03	349 bhp 524 CID

III. GENERAL APPLICABLE REQUIREMENTS

The permit holder shall comply with all applicable requirements, including those specified in the BAAQMD and SIP Rules and Regulations and other federal requirements cited below. These requirements apply in a general manner to the facility and/or to sources exempt from the requirement to obtain a District Permit to Operate. The District has determined that these requirements would not be violated under normal, routine operations, and that no additional periodic monitoring or reporting to demonstrate compliance is warranted. In cases where a requirement, in addition to being generally applicable, is also specifically applicable to one or more sources, the requirement and the source are also included in Section IV, Source-Specific Applicable Requirements of this permit. This section also contains provisions that may apply to temporary sources.

The dates in parentheses in the Title column identify the versions of the regulations being cited and are, as applicable:

1. BAAQMD regulation(s): The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
2. Any federal requirement, including a version of a District regulation that has been approved into the SIP: The most recent date of EPA approval of any portion of the rule, encompassing all actions on the rule through that date

The full language of SIP requirements is on EPA Region 9's website. The address is:
<http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions>

NOTE: There are differences between the current BAAQMD rules and the version of the rules in the SIP. All sources must comply with both versions of the rules until US EPA has reviewed and approved (or disapproved) the District's revision of the regulations.

**Table III
 Generally Applicable Requirements**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
BAAQMD Regulation 1	General Provisions and Definitions (5/4/11 5/2/01)	N
SIP Regulation 1	General Provisions and Definitions (6/28/99)	Y
BAAQMD Regulation 2, Rule 1	General Requirements (3/4/09 6/15/05)	N
BAAQMD 2-1-429	Federal Emissions Statement (2/21/04 6/7/95)	Y
SIP Regulation 2, Rule 1	General Requirements (1/26/99)	Y
<u>BAAQMD Regulation 2, Rule 2</u>	<u>Permits, New Source Review (06/15/05)</u>	<u>N</u>
<u>SIP Regulation 2, Rule 2</u>	<u>Permits, New Source Review (1/26/99)</u>	<u>Y</u>

III. Generally Applicable Requirements

**Table III
Generally Applicable Requirements**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
BAAQMD Regulation 2, Rule 4	Permits, Emissions Banking (12/21/04)	<u>N</u>
SIP Regulation 2, Rule 4	Permits, Emissions Banking (01/26/99)	<u>Y</u>
BAAQMD Regulation 2, Rule 5	New Source Review of Toxic Air Contaminants (1/6/10)	<u>N</u>
BAAQMD Regulation 2, Rule 6	Permits, Major Facility Review (4/16/03)	<u>N</u>
SIP Regulation 2, Rule 6	Permits, Major Facility Review (6/23/95)	<u>Y</u>
BAAQMD Regulation 3	Fees (6/15/11)	<u>N</u>
SIP Regulation 3	Fees (5/03/84)	<u>Y</u>
BAAQMD Regulation 4	Air Pollution Episode Plan (3/20/91)	Y
BAAQMD Regulation 2, Rule 5	New Source Review of Toxic Air Contaminants (6/15/05)	N
SIP Regulation 4	Air Pollution Episode Plan (8/06/90)	Y
BAAQMD Regulation 5	Open Burning (7/9/083/6/02)	N
SIP Regulation 5	Open Burning (9/4/98)	Y
BAAQMD Regulation 6, Rule 1	Particulate Matter and Visible Emissions (12/5/07)	<u>N</u>
BAAQMD-SIP Regulation 6	Particulate Matter and Visible Emissions (12/19/90)	Y
BAAQMD Regulation 7	Odorous Substances (3/17/82)	N
BAAQMD Regulation 8, Rule 1	Organic Compounds - General Provisions (6/15/94)	Y
BAAQMD Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (7/20/056/45/94)	NY
SIP Regulation 8, Rule 2	Organic Compounds, Miscellaneous Operations (3/22/95)	<u>Y</u>
BAAQMD Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (7/1/0311/21/01)	N
BAAQMD Regulation 8, Rule 40	Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks (6/15/05)	NY
BAAQMD Regulation 8, Rule 47	Organic Compounds – Air Stripping and Soil Vapor-Extraction Operations (6/15/05)	NY
BAAQMD Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (12/20/95)	N
SIP Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (7/17/02)	Y
BAAQMD Regulation 8, Rule 51	Organic Compounds - Adhesive and Sealant Products (7/17/02)	N
SIP Regulation 8, Rule 51	Organic Compounds - Adhesive and Sealant Products (2/26/02)	<u>Y</u>
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)	<u>N</u>
SIP Regulation 9, Rule 1	Inorganic Gaseous Pollutants - Sulfur Dioxide (6/8/99)	Y

III. Generally Applicable Requirements

**Table III
Generally Applicable Requirements**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
BAAQMD Regulation 11, Rule 2	Hazardous Pollutants - Asbestos Demolition, Renovation and Manufacturing (10/7/98 12/4/94)	Y
BAAQMD Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (7/11/90)	N
SIP Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (9/2/81)	Y
California Health and Safety Code Section 41750 et seq.	Portable Equipment	N
California Health and Safety Code Section 44300 et seq.	Air Toxics "Hot Spots" Information and Assessment Act of 1987	N
California Health and Safety Code Title 17, Section 93115	Airborne Toxic Control Measure for Stationary Compression Ignition Engines (5/19/11)	N
<u>California Health and Safety Code Title 17, Section 93116</u>	<u>Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater (2/19/11)</u>	<u>N</u>
40 CFR Part 61, Subpart M	National Emission Standards for Hazardous Air Pollutants – National Emission Standard for Asbestos (7/20/046/49/95)	Y
<u>Subpart ZZZZ, 40 CFR Part 63</u>	<u>National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (6/15/04)</u>	<u>Y</u>
EPA Regulation 40 CFR 82	Protection of Stratospheric Ozone (12/15/092/21/95)	
<u>Subpart E, 40 CFR 82.106</u>	<u>Containers containing a Class I or Class II substance and products containing or manufactured with a Class I substance (4/13/05)</u>	<u>Y</u>
<u>Subpart E, 40 CFR 82.108</u>	<u>Warning statements (4/13/05)</u>	<u>Y</u>
<u>Subpart E, 40 CFR 82.110</u>	<u>Labels (4/13/05)</u>	<u>Y</u>
<u>Subpart E, 40 CFR 82.112</u>	<u>Modification, removal, or interference with warning statements (4/13/05)</u>	<u>Y</u>
Subpart F, 40 CFR 82.156	<u>Recycling and Emissions Reductions - Required Practices (4/13/05)</u> Leak Repair	Y
Subpart F, 40 CFR 82.161	<u>Recycling and Emissions Reductions - Technician Certification (4/13/05)</u> <u>Certification of Technicians</u>	Y

III. Generally Applicable Requirements

Table III
Generally Applicable Requirements

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
Subpart F, 40 CFR 82.166	<u>Recycling and Emissions Reductions - Reporting and Recordkeeping Provisions (4/13/05)</u> <u>Records of Refrigerant</u>	Y

IV. SOURCE-SPECIFIC APPLICABLE REQUIREMENTS

The permit holder shall comply with all applicable requirements, including those specified in the BAAQMD and SIP Rules and Regulations and other federal requirements cited below. The requirements cited in the following tables apply in a specific manner to the indicated source(s).

The dates in parentheses in the Title column identify the versions of the regulations being cited and are, as applicable:

1. BAAQMD regulation(s): The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
2. Any federal requirement, including a version of a District regulation that has been approved into the SIP: The most recent date of EPA approval of any portion of the rule, encompassing all actions on the rule through that date

The full text of each permit condition cited is included in Section VI, Permit Conditions, of this permit. The full language of SIP requirements is on EPA Region 9's website. The address is <http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions>. All other text may be found in the regulations themselves.

Table IV-A
S-1, S-2, S-3, S-4, Boilers

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<u>BAAQMD Regulation 6, Rule 1</u>	<u>Particulate Matter General Requirements (12/5/07)</u>	<u>N</u>	
<u>6-1-301</u>	<u>Ringelmann No. 1 Limitation</u>	<u>N</u>	
<u>6-1-305</u>	<u>Visible Particles</u>	<u>N</u>	
<u>6-1-310</u>	<u>Particulate Weight Limitation</u>	<u>N</u>	
<u>6-1-310.3</u>	<u>0.15 grain per dscf at 6% O₂</u>	<u>N</u>	
<u>6-1-401</u>	<u>Appearance of Emissions</u>	<u>N</u>	
BAAQMD <u>SIP Regulation 6</u>	Particulate Matter and Visible Emissions (12/19/90)		
6-301	Ringelmann Number 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-310.3	Heat Transfer Operations	Y	

IV. Source-Specific Applicable Requirements

**Table IV-A
S-1, S-2, S-3, S-4, Boilers**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
6-401	Appearance of Emissions	Y	
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)		
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-302	General Emission Limitations	Y	
9-1-304	Fuel Burning (Liquid and Solid Fuels)	Y	
<u>BAAQMD Regulation 9, Rule 7</u>	<u>Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters (5/4/11)</u>		
<u>9-7-112</u>	<u>Limited Exemption, Low Fuel Usage, Section 9-7-307</u>	<u>N</u>	
<u>9-7-112.2</u>	<u>NOx and CO limits for devices with rated heat input over 10MMBtu/hr</u>	<u>N</u>	
<u>9-7-113</u>	<u>Limited Exemption, Natural Gas Curtailment and Testing</u>	<u>N</u>	
<u>9-7-114</u>	<u>Limited Exemption, Tune-Up</u>	<u>N</u>	
<u>9-7-115</u>	<u>Limited Exemption, Startup and Shutdown</u>	<u>N</u>	
<u>9-7-301</u>	<u>Interim Emissions Limit, Gaseous Fuel</u>	<u>N</u>	
<u>9-7-301.1</u>	<u>Performance Standard, NOx, Gaseous Fuel</u>	<u>N</u>	
<u>9-7-301.2</u>	<u>Performance Standard, NOx, Non-gaseous Fuel</u>	<u>N</u>	
<u>9-7-301.3</u>	<u>Performance Standard, NOx, Combination of Fuels</u>	<u>N</u>	
<u>9-7-301.4</u>	<u>Performance Standard, CO</u>	<u>N</u>	
<u>9-7-307.6</u>	<u>Final Emission Limits, Gaseous Fuel</u>	<u>N</u>	<u>Per 9-7-112</u>
<u>9-7-307.8</u>	<u>Final Emission Limits, Non-Gaseous Fuel</u>	<u>N</u>	<u>Per 9-7-112</u>
<u>9-7-307.6</u>	<u>Final Emission Limits, Multiple Fuels</u>	<u>N</u>	<u>Per 9-7-112</u>
<u>9-7-310</u>	<u>Prohibition of Commerce in Uncertified Devices</u>	<u>N</u>	
<u>9-7-311</u>	<u>Insulation Requirements</u>	<u>N</u>	
<u>9-7-312</u>	<u>Stack Gas Temperature Limits</u>	<u>N</u>	
<u>9-7-403</u>	<u>Initial Demonstration of Compliance</u>	<u>N</u>	
<u>9-7-501</u>	<u>Combinations of Different Fuels</u>	<u>N</u>	
<u>9-7-503</u>	<u>Records</u>	<u>N</u>	
<u>9-7-503.1</u>	<u>Tune-up Records</u>	<u>N</u>	
<u>9-7-503.2</u>	<u>Documentation verifying natural gas unavailable for use</u>	<u>N</u>	
<u>9-7-503.3</u>	<u>Non-gaseous Fuel Testing and Usage Records</u>	<u>N</u>	
<u>9-7-503.4</u>	<u>Source Testing Results</u>	<u>N</u>	
<u>9-7-506</u>	<u>Periodic Testing</u>	<u>N</u>	

IV. Source-Specific Applicable Requirements

**Table IV-A
 S-1, S-2, S-3, S-4, Boilers**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<u>BAAQMD</u> <u>SIP</u> Regulation 9, Rule 7	Inorganic Gaseous Pollutants – Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters <u>(9/15/93)</u>		
9-7-301	Emission Limits-Gaseous Fuel	Y	
9-7-301.1	NOx limit	Y	
9-7-301.2	CO limit	Y	
9-7-302	Emission Limits-Non-Gaseous Fuel	Y	
9-7-302.1	NOx limit	Y	
9-7-302.2	CO limit	Y	
9-7-303	Emission Limits-Gaseous Fuels-and Non-Gaseous Fuel	Y	
9-7-305	Natural Gas Curtailment-Non-Gaseous Fuel	Y	
9-7-305.1	NOx limit	Y	
9-7-305.2	CO limit	Y	
9-7-306	Equipment Testing Non-Gaseous Fuel	Y	
9-7-306.1	NOx limit	Y	
9-7-306.2	CO limit	Y	
9-7-306.3	Time limit	Y	
9-7-501	Combinations of Different Fuels	Y	
9-7-503	Records	Y	
9-7-503.2	Records of natural gas curtailment	Y	
9-7-503.3	Records of equipment testing	Y	
9-7-503.4	Source test records	Y	
<u>40 CFR 63</u> <u>Subpart</u> <u>JJJJJ</u>	<u>National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.</u>		
<u>63.11195(e)</u>	<u>A gas-fired boiler is not subject to Subpart JJJJJ</u>	<u>Y</u>	
<u>63.11237</u>	<u>Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year</u>	<u>Y</u>	

IV. Source-Specific Applicable Requirements

Table IV-A
S-1, S-2, S-3, S-4, Boilers

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Condition #2878			
Part 1	Boiler Operation limitations and maximum firing rate		
part 1a	Operation during turbine and duct burner downtime (basis: Offsets)	Y	
part 1b	Operation during duct burner downtime due to maintenance or repair. <u>Total boiler combined firing rate limited.</u> (basis: Offsets)	Y	
part 1c	Operation during duct burner downtime due to natural gas curtailment. <u>Total boiler combined firing rate limited.</u> (basis: Offsets)	Y	
part 1d	Operation during power curtailment order. <u>Total boiler combined firing rate and duration limited.</u> (basis: Offsets)	Y	
part 1e	Operation as peaking units. <u>Annual fuel usage limited. NOx and CO emissions limited.</u> (basis: BACT, Offsets)	Y	
part 1f	Operation as fuel delivery test units. <u>Test duration limited. NOx and CO emissions limited.</u> (basis: BACT, Offsets)	Y	
part 1g	Routine operability tests. <u>Total boiler combined firing rate, test frequency and duration limited.</u> (basis: cumulative increase)	Y	
part 1h	Operability tests after maintenance (basis: cumulative increase)	Y	
part 7	Natural gas throughput limit: boilers/duct burner combined (basis: Offsets)	Y	
part 8	Low NOx burners <u>requirements</u> (basis: BACT, Offsets)	Y	
part 9	BACT throughput level (basis: BACT, Offsets)	Y	
part 10	Source test <u>requirements</u> (basis: BACT, Offsets, <u>2-1-403</u>)	Y	
part 11	Fuel meter <u>requirements</u> (basis: BACT, Offsets, <u>2-1-403</u>)	Y	
part 12	Record <u>keeping requirements</u> (basis: BACT, Offsets, cumulative increase)	Y	
part 17	Records <u>-retention requirements (basis: 9-9-501, Cumulative Increase, 2-6-501)(basis: -cumulative-increase)</u>	Y	
PSD Permit			
III	Facilities Operation	Y	
IV	Malfunction	Y	
V	Right to Entry	Y	

IV. Source-Specific Applicable Requirements

Table IV-A
S-1, S-2, S-3, S-4, Boilers

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
VI	Transfer of Ownership	Y	
VII	Severability	Y	
VIII	Other Applicable Regulations	Y	
IX , C, 2	NOx Limitation	Y	
IX , F	Limitations of Boiler Operation	Y	
IX , G, 5	Fuel Metering and Recordkeeping requirements Usage	Y	
<u>BAAQMD Condition #25233</u>			
<u>Part 1</u>	<u>S-1 Boiler annual heat input limit (Basis: 9-7-112.2)</u>	<u>Y</u>	
<u>Part 2</u>	<u>S-2 Boiler annual heat input limit (Basis: 9-7-112.2)</u>	<u>Y</u>	
<u>Part 3</u>	<u>S-3 Boiler annual heat input limit (Basis: 9-7-112.2)</u>	<u>Y</u>	
<u>Part 4</u>	<u>S-4 Boiler annual heat input limit (Basis: 9-7-112.2)</u>	<u>Y</u>	
<u>Part 5</u>	<u>Totalizing Meter (Basis: 9-7-504.1)</u>	<u>Y</u>	
<u>Part 6</u>	<u>Recordkeeping (Basis: 9-7-504.2)</u>	<u>Y</u>	
<u>Part 7</u>	<u>NOx and CO limits if heat input limit in Parts 1, 2, 3, or 4 are exceeded (Basis 9-7-112, 9-7-307.6)</u>	<u>Y</u>	
<u>Part 8</u>	<u>Burden of Proof (Basis: 9-7-112, 9-7-307.6, 9-7-504)</u>	<u>Y</u>	

IV. Source-Specific Applicable Requirements

**Table IV-B
 S-6, Gas Turbine**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 1	General Provisions and Definitions (5/4/115/2/01)		
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	N	
1-522.1	Plans and Specifications	Y	
1-522.2	Installation Scheduling	Y	
1-522.3	Performance Testing	Y	
1-522.4	Periods of Inoperation Greater Than 24 Hours	Y	
1-522.5	Calibration	Y	
1-522.6	Accuracy	Y	
1-522.7	Excesses	N	
1-522.8	Monthly Reports	Y	
1-522.9	Records	Y	
1-522.10	Monitors Required by Sections 1-521 or 2-1-403	Y	
1-602	Area and Continuous Emission Monitoring Requirements	N	
SIP Regulation 1	PROVISIONS NO LONGER IN CURRENT RULE General Provisions and Definitions (6/28/99)		
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y ¹	
1-522.7	Emission limit exceedance reporting requirements	Y ¹	
BAAQMD Regulation 2, Rule 1	Regulation 2, Rule 1 – Permits, General Requirements (3/4/098/1/01)		
2-1-501	Monitors	Y	
<u>BAAQMD Regulation 6 Rule 1</u>	<u>Particulate Matter; General Requirements (12/05/2007)</u>		
<u>6-1-301</u>	<u>Ringelmann No. 1 Limitation</u>	<u>N</u>	
<u>6-1-305</u>	<u>Visible Particles</u>	<u>N</u>	
<u>6-1-310</u>	<u>Particulate Weight Limitation</u>	<u>N</u>	
<u>6-1-401</u>	<u>Appearance of emissions</u>	<u>N</u>	
<u>6-1-601</u>	<u>Particulate Matter, Sampling, Sampling Facilities, Opacity Instruments and Appraisal of Visible Emissions</u>	<u>N</u>	
<u>BAAQMD-SIP Regulation 6</u>	<u>Particulate Matter and Visible Emissions (9/4/9812/19/90)</u>		

IV. Source-Specific Applicable Requirements

**Table IV-B
S-6, Gas Turbine**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
6-301	Ringelmann Number 1 Limitation	N	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-310.3	Heat Transfer Operations	Y	
6-401	Appearance of Emissions	Y	
<u>6-601</u>	<u>Particulate Matter, Sampling, Sampling Facilities, Opacity Instruments and Appraisal of Visible Emissions</u>	<u>Y</u>	
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)		
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-302	General Emission Limitations	Y	
BAAQMD Regulation 9 Rule 9	Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines (<u>12/6/069/21/94</u>)		
9-9-113	Exemption – Inspection/Maintenance	Y N	
9-9-114	Exemption – Start-Up/Shutdown	Y N	
<u>9-9-115</u>	<u>Limited Exemption, Minor Inspection and Maintenance Work</u>	<u>N</u>	
9-9-301	Emission Limits, General	Y N	
<u>9-9-301.2</u>	<u>Turbines over 10 MW without SCR</u>	<u>Y</u>	
<u>9-9-301.2</u>	<u>NOx Emission Limits for Gas Turbines 250- 500 MMBtu/hr (input)</u>	<u>N</u>	
<u>9-9-301.4</u>	<u>Rebuttal Option for Alternative NOx Emission Limits</u>	<u>N</u>	
9-9-401	Certification, Efficiency	Y N	
<u>9-9-402</u>	<u>Compliance Schedule</u>	<u>N</u>	
<u>9-9-404</u>	<u>Compliance Schedule for Future Commercial Availability of Retrofit Technology</u>	<u>N</u>	
<u>9-9-406</u>	<u>Other Useful Heat Recovery</u>	<u>N</u>	
9-9-501	Monitoring and recordkeeping requirements	Y N	
<u>9-9-603</u>	<u>Continuous Emission Monitoring (establishes three-hour averaging period)</u>	<u>N</u>	
<u>9-9-604</u>	<u>Determination of HHV and LHV</u>	<u>N</u>	
<u>9-9-605</u>	<u>Compliance with Output Based NOx Emission Standards</u>	<u>N</u>	

IV. Source-Specific Applicable Requirements

**Table IV-B
S-6, Gas Turbine**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<u>SIP Regulation 9 Rule 9</u>	<u>Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines (12/15/97)</u>		
<u>9-9-113</u>	<u>Exemption – Inspection/Maintenance</u>	<u>Y</u>	
<u>9-9-114</u>	<u>Exemption – Start-Up/Shutdown</u>	<u>Y</u>	
<u>9-9-301</u>	<u>Emission Limits, General</u>	<u>Y</u>	
<u>9-9-301.2</u>	<u>Turbines over 10 MW without SCR</u>	<u>Y</u>	
<u>9-9-401</u>	<u>Certification, Efficiency</u>	<u>Y</u>	
<u>9-9-501</u>	<u>Monitoring and recordkeeping requirements</u>	<u>Y</u>	
<u>9-9-603</u>	<u>Continuous Emission Monitoring</u>	<u>Y</u>	
<u>9-9-604</u>	<u>Determination of HHV and LHV</u>	<u>Y</u>	
BAAQMD Manual of Procedures, Volume V	Continuous Emission Monitoring Policy and Procedures (1/20/82)	Y	
40 CFR 60 Subpart A	Standards of Performance for New Stationary Sources (12/23/71) General Provisions (12/22/2008)	Y ✘	
60.4(a)	Reports to EPA	Y	
60.4(b)	Reports to EPA and District	Y	
60.7(a)	Written notification	Y	
60.7(b)	Records	Y	
60.8	Performance Tests	Y	
60.9	Availability of Information	Y	
60.11(a)	Compliance with standards and maintenance requirements	Y	
60.11(d)	Minimizing emissions	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	
60.19	General notification and reporting requirements	Y	
<u>40 CFR 60 Subpart GG</u>	<u>Standards of Performance for Stationary Gas Turbines (10/17/2000)</u>	Y	
<u>60.330(a)</u>	<u>Applicable to Gas Turbines over 10MMBtu/hr (LHV)</u>	<u>Y</u>	
<u>60.330(b)</u>	<u>And Constructed after October 3, 1977</u>	<u>Y</u>	
60.332(a)(1)	-Nitrogen oxides limit	Y	

IV. Source-Specific Applicable Requirements

**Table IV-B
S-6, Gas Turbine**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
60.332(b)	<u>Electric Utility Stationary Gas Turbine</u> NOx limit in 60.332(a)(1)	Y	
60.333(a)	Comply with Sulfur dioxide standard, or...	Y	
60.333(b)	Performance Standard for sulfur dioxide...Fuel sulfur content standard	Y	
60.334(b)	CEM requirements	Y	
60.334(c)	CEM monitoring option	Y	
60.334(h)(1)	Fuel sulfur content monitoring	Y	
60.334(h)(2)	Exemption from fuel nitrogen monitoring <u>when not adjusting NOx standard by nitrogen content in fuel</u>	Y	
60.334(h)(3)	Monitoring of fuel sulfur content not required for natural gas fuel	Y	
60.334(h)(3)(i)	Current, valid purchase contract, tariff sheet, or transportation contract	Y	
60.334(h)(3)(ii)	Representative fuel sampling data	Y	
60.334(j)(1)	Reports of excess NOx emissions	Y	
60.334(j)(5)	Deadline for excess emission reports	Y	
60.335	Test methods and procedures	Y	
60.335(a)	Performance tests as required by 40 CFR 60.8	Y	
60.335(b)	Performance tests for NOx	Y	
60.335(b)(1)	ISO correction	Y	
60.335(b)(2)	Testing at various loads	Y	
60.335(b)(3)	Optional measurement after duct burner	Y	
60.335(c)(1)	Optional method to adjust NOx emission level	Y	
40 CFR 60 Appendix B	Performance Specifications	Y	
Performance Specification 2	Specifications and test procedures for SO2 and NOx continuous emission monitoring systems in stationary sources	Y	
Performance Specification 3	Specifications and test procedures for O2 and CO2 continuous emission monitoring systems	Y	
40 CFR 60 Appendix F	Quality Assurance Procedures		

IV. Source-Specific Applicable Requirements

**Table IV-B
S-6, Gas Turbine**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Condition #2878			
part 2a	<u>Natural Gas</u> Fuel Limitation (basis: BACT)	Y	
part 2b	Operation during power curtailment <u>annual duration limitation</u> (basis: BACT)	Y	
part 3a	Combined <u>Gas Turbine/Duct Burner</u> NOx Limit (basis: BACT)	Y	
part 3b	Turbine NOx Limit (basis: 9-9-301.2, 9-9-401, <u>Banking</u>)	N	
part 3c	<u>Part 3a and 3b do not apply during</u> Start-up, Shutdown <u>periods not to exceed 3 hours each condition</u> (basis: BACT)	Y	
part 4a	CEM requirement <u>for stack</u> (basis: BACT, <u>2-1-403</u>)	Y	
part 4b	CEM requirement <u>for turbine</u> (basis: 9-9-501, <u>2-1-403</u>)	N	
part 5	<u>Combined CO Mass</u> Limit (basis: BACT, 40 CFR 52.24)	Y	
part 6	Fuel to Air ratio requirement <u>for turndown</u> (Basis: BACT, <u>Offsets</u>)	Y	
part 13	Source test <u>requirements</u> (basis: (basis: <u>Banking, 2-1-403</u> 9-9-301.2, 9-9-401))	N	
part 14	CO <u>CEM</u> monitor (basis: BACT, <u>2-1-403</u>)	Y	
part 15	Petition for banking credits (basis: Banking)	Y	
part 16	Record <u>keeping requirements</u> (basis: BACT)	Y	
part 17	Records <u>retention requirements</u> (basis: 9-9-501, Cumulative Increase, <u>2-6-501</u>)	N	
<u>BAAQMD Condition #14501</u>			
<u>Part 1</u>	<u>PUC Quality Natural Gas Fuel Requirement</u> (basis: <u>2-1-403</u>)	<u>Y</u>	
PSD Permit			
III	Facilities Operation (<u>basis: PSD</u>)	Y	
V	Right to Entry (<u>basis: PSD</u>)	Y	
VI	Transfer of Ownership (<u>basis: PSD</u>)	Y	
VII	Severability (<u>basis: PSD</u>)	Y	
VIII	Other Applicable Regulations (<u>basis: PSD</u>)	Y	
<u>IXI, C, 1</u>	Emission Limits for NOx (<u>basis: PSD</u>)	Y	
<u>IX.D.3</u>	<u>Sampling Port Requirements</u> (basis: PSD)	<u>Y</u>	
<u>IXI, E</u>	Continuous Monitoring (<u>basis: PSD</u>)	Y	

IV. Source-Specific Applicable Requirements

**Table IV-B
 S-6, Gas Turbine**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
IXI , G, 2	Fuel Usage: Natural Gas Annual Limit (basis: PSD)	Y	
IXI , G, 4	Fuel Usage Monitoring (basis: PSD)	Y	
IXI , H	New Source Performance Standards (basis: PSD)	Y	

~~[†]This section has been removed from BAAQMD Regulations because it has been superseded. Nevertheless, the source must comply with this regulation until US EPA has reviewed and approved (or disapproved) the District's revision of the regulation.~~

IV. Source-Specific Applicable Requirements

**Table IV-C
 S-8, Duct Burners**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 1	General Provisions and Definitions (5/4/1111/3/93)		
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y	
1-522.1	Plans and Specifications	Y	
1-522.2	Installation Scheduling	Y	
1-522.3	Performance Testing	Y	
1-522.4	Periods of Non-operation Greater Than 24 Hours	Y	
1-522.5	Calibration	Y	
1-522.6	Accuracy	Y	
1-522.7	Excesses	Y	
1-522.8	Monthly Reports	Y	
1-522.9	Records	Y	
1-602	Area and Continuous Emission Monitoring Requirements	N	
SIP Regulation 1	General Provisions and Definitions (8/28/99)		
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y ¹	
1-522.7	Emission limit exceedance reporting requirements	Y ¹	
BAAQMD Regulation 2, Rule 1	Regulation 2, Rule 1 - Permits, General Requirements (3/4/098/1/01)		
2-1-501	Monitors	Y	
<u>BAAQMD Regulation 6 Rule 1</u>	<u>Particulate Matter; General Requirements (12/05/2007)</u>		
<u>6-1-301</u>	<u>Ringelmann No. 1 Limitation</u>	<u>N</u>	
<u>6-1-305</u>	<u>Visible Particles</u>	<u>N</u>	
<u>6-1-310</u>	<u>Particulate Weight Limitation</u>	<u>N</u>	
<u>6-1-310.3</u>	<u>Heat Transfer Operations</u>	<u>N</u>	
<u>6-1-401</u>	<u>Appearance of emissions</u>	<u>N</u>	
<u>6-1-601</u>	<u>Particulate Matter, Sampling, Sampling Facilities, Opacity Instruments and Appraisal of Visible Emissions</u>	<u>N</u>	
<u>SIP BAAQMD- Regulation 6</u>	<u>Particulate Matter and Visible Emissions (9/4/9812/19/90)</u>		

IV. Source-Specific Applicable Requirements

**Table IV-C
 S-8, Duct Burners**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
6-301	Ringelmann Number 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-310.3	Heat Transfer Operations	Y	
<u>6-401</u>	<u>Appearance of Emissions</u>	<u>Y</u>	
<u>6-601</u>	<u>Particulate Matter, Sampling, Sampling Facilities, Opacity Instruments and Appraisal of Visible Emissions</u>	<u>Y</u>	
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)		
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-302	General Emission Limitations	Y	
<u>BAAQMD Regulation 9, Rule 7</u>	<u>Nitrogen Oxides And Carbon Monoxide From Industrial, Institutional And Commercial Boilers, Steam Generators And Process Heaters (5/4/11)</u>		
<u>9-7-110.5</u>	<u>Waste Heat Recovery Boiler Exemption</u>	<u>Y</u>	
<u>BAAQMD Regulation 9, Rule 9</u>	<u>Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines (12/6/06)</u>		
<u>9-9-301.2</u>	<u>Lb/MW_{hr} NO_x Emission Limits for Gas Turbines 250- 500 MMBtu/hr (input)</u>	<u>N</u>	
BAAQMD Manual of Procedures, Volume V	Continuous Emission Monitoring Policy and Procedures (1/20/82)	Y	
<u>40 CFR 60 Subpart A</u>	<u>Standards of Performance for New Stationary Sources General Provisions (12/22/2008)</u>	<u>Y</u>	
60.4(a)	Reports to EPA	Y	
60.4(b)	Reports to EPA and District	Y	
60.7(a)(1)	Date of construction or reconstruction	Y	
60.7(a)(4)	Physical or operational changes	Y	
60.7(b)	Startup, shutdown, malfunction records	Y	
60.7(f)	Performance test records	Y	
60.8	Performance Tests	Y	

IV. Source-Specific Applicable Requirements

**Table IV-C
 S-8, Duct Burners**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
60.9	Availability of Information	Y	
60.11(a)	Compliance with standards and maintenance requirements	Y	
60.11(d)	Minimizing emissions	Y	
60.12	Circumvention	Y	
60.19	General notification and reporting requirements	Y	
40 CFR 60 Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (12/16/87)		
<u>60.40b(a)</u>	<u>Affected facility -- Heat input greater than 100MMBtu/hr, and</u>	<u>Y</u>	
<u>60.40b(b)</u>	<u>Construction after June 19, 1984</u>	<u>Y</u>	
60.44b(a)	NOx Limit	Y	
60.44b(h)	NOx Limit applies at all times	Y	
60.44b(i)	24-hour rolling average	Y	
60.46b(a)	NOx Limit applies at all times	Y	
60.46b(c)	Performance testing	Y	
60.46b(f)	Performance testing-for duct burners	Y	
<u>60.46b(j)</u>	<u>Compliance with NOx limit is on a 3-hr average if...</u>	<u>Y</u>	
<u>60.46b(j)(1)</u>	<u>...combust natural gas with nitrogen content < 0.30 wt%</u>	<u>Y</u>	
<u>60.46b(j)(2)</u>	<u>...have combined annual capacity factor of 10% or less, and</u>	<u>Y</u>	
<u>60.46b(j)(3)</u>	<u>... have federally enforceable requirement for (j)(1) and (j)(2)</u>	<u>Y</u>	
<u>60.46b(k)</u>	<u>Exemption for input capacity < 250MMBtu/hr</u>	<u>Y</u>	
Appendix A, Method 20	Determination of nitrogen oxides, sulfur dioxide, and diluent emissions from gas turbines	Y	
40 CFR 63 Subpart JJJJJ	<u>National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.</u>		
<u>63.11195(e)</u>	<u>A gas-fired boiler is not subject to Subpart JJJJJ</u>	<u>Y</u>	
<u>63.11237</u>	<u>Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year</u>	<u>Y</u>	
BAAQMD Condition #2878			

IV. Source-Specific Applicable Requirements

**Table IV-C
S-8, Duct Burners**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
part 2a	<u>Natural Gas</u> Fuel Limitation (basis: BACT)	Y	
part 3a	Combined NOx Limit (basis: BACT)	Y	
part 3c	<u>Part 3a does not apply during</u> Start-up, Shutdown <u>periods not to exceed 3 hours each</u> condition (basis: BACT)	Y	
part 4a	CEM requirement <u>after Duct Burner</u> (basis: BACT, <u>2-1-403</u>)	Y	
<u>part 4b</u>	<u>CEM requirement before Duct Burner</u> (basis: BACT, <u>2-1-403</u>)	<u>Y</u>	
part 5	<u>Combined CO Mass</u> Limit (basis: BACT, 40 CFR 52.24)	Y	
part 7	Natural gas throughput limit: boilers/duct burner combined (basis: Offsets)	Y	
part 14	CO <u>CEM</u> monitor (basis: BACT, <u>2-1-403</u>)	Y	
part 16	Record <u>keeping requirements</u> (basis: BACT)	Y	
part 17	Records (basis: <u>9-9-501</u> Cumulative Increase, <u>2-6-501</u>)	Y	
<u>BAAQMD Condition #14501</u>			
<u>Part 1</u>	<u>PUC Quality Natural Gas Fuel Requirement</u> (basis: <u>2-1-403</u>)	<u>Y</u>	
PSD Permit			
III	Facilities Operation <u>(basis: PSD)</u>	Y	
V	Right to Entry <u>(basis: PSD)</u>	Y	
VI	Transfer of Ownership <u>(basis: PSD)</u>	Y	
VII	Severability <u>(basis: PSD)</u>	Y	
VIII	Other Applicable Regulations <u>(basis: PSD)</u>	Y	
IX , B, 2	Air Pollution Control Equipment, Low-NOx Burners <u>(basis: PSD)</u>	Y	
IX , C, 1	Emission Limits for NOx <u>(basis: PSD)</u>	Y	
<u>IX.D.3</u>	<u>Sampling Port Requirements</u> (basis: PSD)	<u>Y</u>	
IX , E	Continuous Monitoring <u>(basis: PSD)</u>	Y	
IX , G, 3	Fuel Usage: <u>Natural Gas Annual Limit</u> (basis: PSD)	Y	
IX , G, 4	Fuel Usage Monitoring <u>(basis: PSD)</u>	Y	
IX , H	New Source Performance Standards <u>(basis: PSD)</u>	Y	

[†]—This section has been removed from BAAQMD Regulations because it has been superseded. Nevertheless, the source must comply with this regulation until US EPA has reviewed and approved (or disapproved) the District's revision of the regulation.

IV. Source-Specific Applicable Requirements

Table IV-D
S-9 TURBINE STARTER DIESEL ENGINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<u>BAAQMD Regulation 6 Rule 1</u>	<u>Particulate Matter; General Requirements (12/05/2007)</u>		
<u>6-1-303</u>	<u>Ringelmann Number 2 Limitation</u>	<u>Y</u>	
<u>6-1-303.1</u>	<u>IC Engine less than 1500 cubic inch displacement</u>	<u>Y</u>	
<u>6-1-305</u>	<u>Visible Particles</u>	<u>N</u>	
<u>6-1-310</u>	<u>Particulate Weight Limitation</u>	<u>N</u>	
<u>6-1-310.3</u>	<u>Heat Transfer Operations</u>	<u>N</u>	
<u>6-1-401</u>	<u>Appearance of emissions</u>	<u>N</u>	
<u>6-1-601</u>	<u>Particulate Matter, Sampling, Sampling Facilities, Opacity Instruments and Appraisal of Visible Emissions</u>	<u>N</u>	
<u>BAAQMD Regulation 6</u>	<u>Particulate Matter and Visible Emissions (12/19/90)</u>		
<u>6-303</u>	<u>Ringelmann Number 2 Limitation</u>	<u>Y</u>	
<u>6-303.1</u>	<u>IC Engine less than 1500 cubic inch displacement</u>	<u>Y</u>	
<u>6-305</u>	<u>Visible Particles</u>	<u>Y</u>	
<u>6-310</u>	<u>Particulate Weight Limitation</u>	<u>Y</u>	
<u>6-310.3</u>	<u>Heat Transfer Operations</u>	<u>Y</u>	
<u>6-401</u>	<u>Appearance of Emissions</u>	<u>Y</u>	
<u>6-601</u>	<u>Particulate Matter, Sampling, Sampling Facilities, Opacity Instruments and Appraisal of Visible Emissions</u>	<u>Y</u>	
<u>BAAQMD Regulation 9, Rule 1</u>	<u>Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)</u>		
<u>9-1-301</u>	<u>Limitations on Ground Level Concentrations</u>	<u>Y</u>	
<u>9-1-304</u>	<u>Fuel Burning (Liquid and Solid Fuels)</u>	<u>Y</u>	
<u>BAAQMD Regulation 9, Rule 8</u>	<u>Inorganic Gaseous Pollutants, NOx and CO from Stationary IC Engines (07/25/2007)</u>		
<u>9-8-111.3</u>	<u>Limited Exemption: Low Use Engines</u>	<u>N</u>	
<u>9-8-502.1</u>	<u>Recordkeeping</u>	<u>N</u>	
<u>9-8-530</u>	<u>Low Use Engine Monitoring and Recordkeeping</u>	<u>N</u>	
<u>9-8-530.1</u>	<u>Hours of operation (total)</u>	<u>N</u>	
<u>9-8-530.2</u>	<u>Hours of operation (emergency)</u>	<u>N</u>	

IV. Source-Specific Applicable Requirements

Table IV-D
S-9 TURBINE STARTER DIESEL ENGINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<u>9-8-530.3</u>	<u>Nature of emergency condition</u>	<u>N</u>	
<u>CCR, Title 17, Section 93115</u>	<u>ATCM for Stationary Compression Ignition Engines</u>		
<u>93115.1</u>	<u>Purpose</u>	<u>N</u>	
<u>93115.2</u>	<u>Applicability</u>	<u>N</u>	
<u>93115.3</u>	<u>Exemptions</u>	<u>N</u>	
<u>93115.3(j)</u>	<u>Request for Exemption from 93115.7(b)(1) for Low-Use Prime Engines Outside of School Boundaries if all of the following are met:</u>	<u>N</u>	
<u>93115.3(j)(1)</u>	<u>Engine is a prime engine</u>	<u>N</u>	
<u>93115.3(j)(2)</u>	<u>Engine is more than 500 ft from a school</u>	<u>N</u>	
<u>93115.3(j)(3)</u>	<u>Gas Turbine starter engine operates no more than 20 hrs per year or as approved by district APCO.</u>	<u>N</u>	
<u>93115.4</u>	<u>Definitions</u>	<u>N</u>	
<u>93115.5</u>	<u>Fuel and Fuel Additive Requirements for New and In-Use Stationary CI Engines That Have a Rated Brake Horsepower of Greater than 50 bhp</u>	<u>N</u>	
<u>93115.5(a)</u>	<u>Fuel requirements for in-use prime stationary diesel-fueled CI engines</u>	<u>N</u>	
<u>93115.5(a)(1)</u>	<u>Must use CARB Diesel Fuel</u>	<u>N</u>	
<u>93115.7</u>	<u>ATCM for Stationary CI Engines – Stationary Prime Diesel-Fueled CI Engine (>50 bhp) Emission Standards</u>	<u>N</u>	
<u>93115.7(b)</u>	<u>In-Use Stationary Prime Diesel-Fueled CI Engine (>50 bhp) Emission Standards</u>	<u>N</u>	
<u>93115.7(b)(2)</u>	<u>Additional Standards:</u>	<u>N</u>	
<u>93115.7(b)(2) (A)</u>	<u>Meet the applicable HC, NOx, NMHC+NOx, and CO standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression Ignition Engine Standards (title 13, CCR, section 2423).</u>	<u>N</u>	
<u>93115.7(b)(2) (B)</u>	<u>Not increase CO emission rates by more than 10% above baseline; and Not increase HC or NOx emission rates by more than 10% above baseline, or Not increase the sum of NMHC and NOx emission rates above baseline</u>	<u>N</u>	
<u>93115.10</u>	<u>ATCM for Stationary CI Engines – Recordkeeping, Reporting, and Monitoring Requirements</u>	<u>N</u>	
<u>93115.10(c)</u>	<u>Demonstration of Compliance with Emission Limits</u>	<u>N</u>	

IV. Source-Specific Applicable Requirements

Table IV-D
S-9 TURBINE STARTER DIESEL ENGINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
93115.10(c)(2)	Provide emissions and/or operational data to the District APCO in accordance with the requirements of section 93115.13 for purposes of demonstrating compliance	N	
93115.10(e)	Monitoring Equipment	N	
93115.10(e)(1)	Install non-resettable hour meter with minimum display of 9,999 hours	N	
93115.11	ATCM for Stationary CI Engines – Compliance Schedule for Owners or Operators of Three or Fewer Engines (>50 bhp) Located within a District	N	
93115.11(b)	All owners and operators of three or fewer engines located within a District, which are not in compliance with section 93115.11(a) but are required to meet the requirements of sections 93115.6(b) or 93115.7(b), shall comply with section 93115.6(b) or 93115.7(b), whichever applies, according to the following schedule	N	
93115.11(b)(1)	All pre-1989 through 1989 model year engines, inclusive, shall be in compliance by no later than January 1, 2006	N	
93115.13	ATCM for Stationary CI Engines – Compliance Demonstration	N	
93115.13(a)	Demonstrate Compliance with the following sources of data:	N	
93115.13(a)(1)	...off-road engine certification test data for the stationary diesel-fueled CI engine,	N	
93115.13(a)(2)	...engine manufacturer test data,	N	
93115.13(a)(3)	... emissions test data from a similar engine,	N	
93115.13(a)(4)	...emissions test data used in meeting the requirements of the Verification Procedure for the emission control strategy implemented, or	N	
93115.13(a)(5)	An alternative compliance demonstration as described in section 93115.13(f).	N	
93115.15	Severability	N	
40 CFR 60 Subpart III	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (7/11/2006)		
60.4200	Applicability	Y	
60.4200(a)	Does not apply to engines before model year 2007 or manufactured before April 1, 2006	Y	

IV. Source-Specific Applicable Requirements

Table IV-D
S-9 TURBINE STARTER DIESEL ENGINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<u>40 CFR 63 Subpart ZZZZ</u>	<u>NESHAPS for Stationary Reciprocating Internal Combustion Engines (3/3/2010)</u>		
63.6585	<u>Applicability stationary RICE at a major or area source of HAP emissions</u>	<u>Y</u>	
63.6585(a)	<u>Definition: stationary RICE</u>	<u>Y</u>	
63.6585(c)	<u>Definition: area source of HAPs</u>	<u>Y</u>	
63.6590	<u>Affected sources</u>	<u>Y</u>	
63.6590(a)	<u>Affected source is any existing, new, or reconstructed stationary RICE located at major or area source of HAP emissions</u>	<u>Y</u>	
63.6590(a)(1)	<u>An Existing stationary RICE is:</u>	<u>Y</u>	
63.6590(a)(1)(iii)	<u>constructed before 6/12/2006</u>	<u>Y</u>	
63.6603(a)	<u>If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 1b and Table 2b to this subpart that apply to you.</u>	<u>Y</u>	
63.6605(b)	<u>Operate at all times in a manner consistent with safety and good air pollution control practices.</u>	<u>Y</u>	
63.6625(e)	<u>Maintain the engine and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan that requires (to the extent practical) the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.</u>	<u>Y</u>	
63.6625(i)	<u>An oil analysis program can be used in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart</u>	<u>Y</u>	
63.6655	<u>Recordkeeping</u>	<u>Y</u>	
63.6655(a)(1)	<u>Copy of each notification and report</u>	<u>Y</u>	
63.6655(a)(2)	<u>Records of malfunctions</u>	<u>Y</u>	
63.6655(a)(5)	<u>Records of actions during malfunctions</u>	<u>Y</u>	
63.6655(e)	<u>Recordkeeping – maintenance records</u>	<u>Y</u>	
63.6655(e)(3)	<u>Existing stationary RICE at area source</u>	<u>Y</u>	
63.6675	<u>Black start engine means an engine whose only purpose is to start up a combustion turbine.</u>	<u>Y</u>	
Table 2d to Subpart ZZZZ of Part 63	<u>Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions</u>	<u>Y</u>	

IV. Source-Specific Applicable Requirements

Table IV-D
S-9 TURBINE STARTER DIESEL ENGINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<u>Table 2d Part 4.</u>	<u>For each emergency stationary CI RICE and black start stationary CI RICE</u>	<u>Y</u>	
<u>Part 4a</u>	<u>Change oil and filter every 500 hours of operation or annually, whichever comes first;</u>	<u>Y</u>	
<u>Part 4b</u>	<u>Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and</u>	<u>Y</u>	
<u>Part 4c</u>	<u>Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary</u>	<u>Y</u>	
BAAQMD Condition #21844			
part 1	BAAQMD Regulation 9, Rule 1 and Regulation 6 Applicability (basis: BAAQMD Regulation 9, Rule 1, Regulation 6)	Y	
part 2	Limit on Annual Hours of Operation (Basis: cumulative increase, <u>Regulation 9-8-111.3</u>)	Y	
part 3	Hours of operation totalizing counter (Basis: cumulative increase)	Y	
part 4	Recordkeeping (Basis: cumulative increase) <u>Fuel Sulfur Content Limit (basis: 9-1-304)</u>	Y	
<u>part 5</u>	<u>Fuel Sulfur Content Certification (basis: 9-1-304)</u>	<u>Y</u>	
<u>part 6</u>	<u>Recordkeeping (Basis: cumulative increase)</u>	<u>Y</u>	
<u>BAAQMD Condition #25295</u>			
<u>part 1</u>	<u>Limit on Annual Hours of Operation (Basis: Regulation 9-8-111, ATCM 93115.3(j))</u>	<u>Y</u>	
<u>part 2</u>	<u>CARB Diesel Fuel Requirements (Basis: ATCM 93115.5)</u>	<u>Y</u>	
<u>part 3</u>	<u>Location more than 500 ft from a school (Basis: ATCM 93115.3(j))</u>	<u>Y</u>	
<u>part 4</u>	<u>Maintenance Requirements (Basis: 40 CFR Part 63.6603(a))</u>	<u>Y</u>	
<u>part 5</u>	<u>Totalizing Meter (Basis: Basis: 9-8-530)</u>		
<u>part 6</u>	<u>Recordkeeping (Basis: Cumulative Increase, 9-8-111, ATCM 93115.3(j))</u>		

IV. Source-Specific Applicable Requirements

Table IV-E
S-10 AND S-11 STANDBY GENERATOR DIESEL ENGINES

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<u>BAAQMD Regulation 6 Rule 1</u>	<u>Particulate Matter; General Requirements (12/05/2007)</u>		
<u>6-1-303</u>	<u>Ringelmann Number 2 Limitation</u>	<u>Y</u>	
<u>6-1-303.1</u>	<u>IC Engine less than 1500 cubic inch displacement</u>	<u>Y</u>	
<u>6-1-305</u>	<u>Visible Particles</u>	<u>N</u>	
<u>6-1-310</u>	<u>Particulate Weight Limitation</u>	<u>N</u>	
<u>6-1-310.3</u>	<u>Heat Transfer Operations</u>	<u>N</u>	
<u>6-1-401</u>	<u>Appearance of emissions</u>	<u>N</u>	
<u>6-1-601</u>	<u>Particulate Matter, Sampling, Sampling Facilities, Opacity Instruments and Appraisal of Visible Emissions</u>	<u>N</u>	
BAAQMD Regulation 6	Particulate Matter and Visible Emissions (12/19/90)		
6-303	Ringelmann Number 2 Limitation	Y	
6-303.1	Standby Engine	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-310.3	Heat Transfer Operations	Y	
6-401	Appearance of Emissions	Y	
<u>6-601</u>	<u>Particulate Matter, Sampling, Sampling Facilities, Opacity Instruments and Appraisal of Visible Emissions</u>	<u>Y</u>	
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)		
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-304	Fuel Burning (Liquid and Solid Fuels)	Y	
<u>BAAQMD Regulation 9, Rule 8</u>	<u>Inorganic Gaseous Pollutants, NOx and CO from Stationary IC Engines (07/25/2007)</u>		
<u>9-8-110.5</u>	<u>Limited Exemption: Emergency Stanby Engines</u>	<u>N</u>	
<u>9-8-330</u>	<u>Emergency Standby engines, operation limited to</u>	<u>N</u>	
<u>9-8-330.1</u>	<u>Unlimited emergency use</u>	<u>N</u>	
<u>9-8-330.3</u>	<u>50 hours or as limited by permit for reliability related operation</u>	<u>N</u>	
<u>9-8-501.1</u>	<u>Recordkeeping</u>	<u>N</u>	

IV. Source-Specific Applicable Requirements

Table IV-E
S-10 AND S-11 STANDBY GENERATOR DIESEL ENGINES

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<u>9-8-530</u>	<u>Emergency Standby and Low Use Engine Monitoring and Recordkeeping</u>	<u>N</u>	
<u>9-8-530.1</u>	<u>Hours of operation (total)</u>	<u>N</u>	
<u>9-8-530.2</u>	<u>Hours of operation (emergency)</u>	<u>N</u>	
<u>9-8-530.3</u>	<u>Nature of emergency condition</u>	<u>N</u>	
<u>CCR, Title 17, Section 93115</u>	<u>ATCM for Stationary Compression Ignition Engines</u>		
<u>93115.1</u>	<u>Purpose</u>	<u>N</u>	
<u>93115.2</u>	<u>Applicability</u>	<u>N</u>	
<u>93115.4</u>	<u>Definitions</u>	<u>N</u>	
<u>93115.5</u>	<u>Fuel and Fuel Additive Requirements for New and In-Use Stationary CI Engines That Have a Rated Brake Horsepower of Greater than 50 bhp</u>	<u>N</u>	
<u>93115.5(b)</u>	<u>Fuel requirements for in-use emergency standby stationary diesel-fueled CI engines</u>	<u>N</u>	
<u>93115.5(b)(1)</u>	<u>Must use CARB Diesel Fuel</u>	<u>N</u>	
<u>93115.6</u>	<u>ATCM for Stationary CI Engines – Emergency Standby Diesel-Fueled CI Engine (>50 bhp) Emission Standards</u>	<u>N</u>	
<u>93115.6(b)</u>	<u>In-Use Emergency Standby Diesel-Fueled CI Engine (>50 bhp) Operating Requirements and Emission Standards</u>	<u>N</u>	
<u>93115.6(b)(1)</u>	<u>Rotating Outage Requirements</u>	<u>N</u>	
<u>93115.6(b)(3)</u>	<u>Emission and operation standards.</u>	<u>N</u>	
<u>93115.6(b)(3)(A)</u>	<u>Diesel PM Standard and Hours of Operation Limitations</u>	<u>N</u>	
<u>93115.6(b)(3)(A)(1)</u>	<u>General Requirements</u>	<u>N</u>	
<u>93115.6(b)(3)(A)(1)(a)</u> <u>S-10</u>	<u>Operating for maintenance and testing limited to 20 hrs/year when PM emitted at a rate > 0.40 g/bhp-hr.</u>	<u>N</u>	
<u>93115.6(b)(3)(A)(1)(b)</u> <u>S-11</u>	<u>Operating for maintenance and testing limited to 30 hrs/year when PM emitted at a rate < 0.40 g/bhp-hr</u>	<u>N</u>	

IV. Source-Specific Applicable Requirements

Table IV-E
S-10 AND S-11 STANDBY GENERATOR DIESEL ENGINES

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
93115.6(b)(3)(B)(1)	Additional Standards. Meet the applicable HC, NOx, NMHC+NOx, and CO standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression Ignition Engine Standards (title 13, CCR, section 2423).	N	
93115.10	ATCM for Stationary CI Engines – Recordkeeping, Reporting, and Monitoring Requirements.	N	
93115.10(c)	Demonstration of Compliance with Emission Limits	N	
93115.10(c)(2)	Provide emissions and/or operational data to the District APCO in accordance with the requirements of section 93115.13 for purposes of demonstrating compliance	N	
93115.10(e)	Monitoring Equipment	N	
93115.10(e)(1)	Install non-resettable hour meter with minimum display of 9,999 hours	N	
93115.10(g)	Reporting Requirements for Emergency Standby Engines	N	
93115.11	ATCM for Stationary CI Engines – Compliance Schedule for Owners or Operators of Three or Fewer Engines (>50 bhp) Located within a District	N	
93115.11(b)	All owners and operators of three or fewer engines located within a District, which are not in compliance with section 93115.11(a) but are required to meet the requirements of sections 93115.6(b) or 93115.7(b), shall comply with section 93115.6(b) or 93115.7(b), whichever applies, according to the following schedule	N	
93115.11(b)(1)	All pre-1989 through 1989 model year engines, inclusive, shall be in compliance by no later than January 1, 2006	N	
93115.13	ATCM for Stationary CI Engines – Compliance Demonstration	N	
93115.13(a)	Demonstrate Compliance with the following sources of data:	N	
93115.13(a)(1)	...off-road engine certification test data for the stationary diesel-fueled CI engine,	N	
93115.13(a)(2)	...engine manufacturer test data,	N	
93115.13(a)(3)	... emissions test data from a similar engine.	N	

IV. Source-Specific Applicable Requirements

Table IV-E
S-10 AND S-11 STANDBY GENERATOR DIESEL ENGINES

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
93115.13(a)(4)	...emissions test data used in meeting the requirements of the Verification Procedure for the emission control strategy implemented, or	N	
93115.13(a)(5)	An alternative compliance demonstration as described in section 93115.13(f).	N	
93115.15	Severability	N	
40 CFR 60 Subpart III	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (7/11/2006)		
60.4200	Applicability	Y	
60.4200(a)	Does not apply to engines before model year 2007 or manufactured before April 1, 2006	Y	
40 CFR 63 Subpart ZZZZ	NESHAPS for Stationary Reciprocating Internal Combustion Engines (3/3/2010)		
63.6585	Applicability stationary RICE at a major or area source of HAP emissions	Y	
63.6585(a)	Definition: stationary RICE	Y	
63.6585(c)	Definition: area source of HAPs	Y	
63.6590	Affected sources	Y	
63.6590(a)	Affected source is any existing, new, or reconstructed stationary RICE located at major or area source of HAP emissions	Y	
63.6590(a)(1)	An Existing stationary RICE is:	Y	
63.6590(a)(1)(iii)	_____ constructed before 6/12/2006	Y	
63.6603(a)	If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 1b and Table 2b to this subpart that apply to you.	Y	
63.6605(b)	Operate at all times in a manner consistent with safety and good air pollution control practices.	Y	
63.6625(e)	Maintain the engine and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan that requires (to the extent practical) the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.	Y	
63.6625(i)	An oil analysis program can be used in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart	Y	
63.6640	How do I demonstrate continuous compliance with the emission	Y	

IV. Source-Specific Applicable Requirements

Table IV-E
S-10 AND S-11 STANDBY GENERATOR DIESEL ENGINES

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
	<u>limitations and operating limitations?</u>		
<u>63.6640(f)</u>	<u>Requirements for emergency stationary RICE</u>	<u>Y</u>	
<u>63.6640(f)(1)</u>	<u>... at Area Source of HAPS</u>	<u>Y</u>	
<u>63.6640(f)(1)(i)</u>	<u>Unlimited emergency use</u>	<u>Y</u>	
<u>63.6640(f)(1)(ii)</u>	<u>Maintenance checks and readiness operation limited to 100 hrs per year.</u>	<u>Y</u>	
<u>63.6640(f)(1)(iii)</u>	<u>50 hours per year of non-emergency use included in 100 hours per year maintenance checks and readiness operation</u>	<u>Y</u>	
<u>63.6655</u>	<u>What records must must I keep?</u>	<u>Y</u>	
<u>63.6655(a)(1)</u>	<u>Copy of each notification and report</u>	<u>Y</u>	
<u>63.6655(a)(2)</u>	<u>Records of malfunctions</u>	<u>Y</u>	
<u>63.6655(a)(5)</u>	<u>Records of actions during malfunctions</u>	<u>Y</u>	
<u>63.6655(e)</u>	<u>Recordkeeping – maintenance records</u>	<u>Y</u>	
<u>63.6655(e)(3)</u>	<u>Maintenance records for Table 2d requirements for RICE at Area source.</u>	<u>Y</u>	
<u>63.6655(f)</u>	<u>Hours of operation from non-resettable hour meter for various modes of operation</u>	<u>Y</u>	
<u>63.6655(f)(2)</u>	<u>Existing stationary emergency RICE at area source</u>	<u>Y</u>	
<u>63.6675</u>	<u>Emergency stationary RICE means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc. Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary RICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under §63.6640(f). All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.</u>	<u>Y</u>	

IV. Source-Specific Applicable Requirements

Table IV-E
S-10 AND S-11 STANDBY GENERATOR DIESEL ENGINES

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<u>Table 2d to Subpart ZZZZ of Part 63</u>	<u>Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions</u>	<u>Y</u>	
<u>Table 2d Part 4.</u>	<u>For each emergency stationary CI RICE and black start stationary CI RICE</u>	<u>Y</u>	
<u>Part 4a</u>	<u>Change oil and filter every 500 hours of operation or annually, whichever comes first;</u>	<u>Y</u>	
<u>Part 4b</u>	<u>Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and</u>	<u>Y</u>	
<u>Part 4c</u>	<u>Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary</u>	<u>Y</u>	
<u>Table 6 to Subpart ZZZZ of Part 63</u>	<u>Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices</u>	<u>Y</u>	
<u>Part 9</u>	<u>Operate and maintain according to manufacturer's instructions or develop your own instructions</u>	<u>Y</u>	
BAAQMD Condition #19698			
part 1	BAAQMD Regulation 9, Rule 1 and Regulation 6 Applicability (basis: BAAQMD Regulation 9, Rule 1, Regulation 6)	Y	
part 2	Limit on Annual Hours of Operation (Basis: Regulation 9-8-330.2)	Y	
part 3	Unlimited Emergency Use (Basis: BAAQMD Regulation 9-8-330.1)	Y	
part 4	Fuel Sulfur Content Limit (basis: 9-1-304)Hours of operation-totalizing counter (Basis: Regulation 9-8-530)	Y	
part 5	Fuel Sulfur Content Certification (basis: 9-1-304)Recordkeeping (Basis: Regulation 9-8-530)	Y	
<u>part 6</u>	<u>Hours of operation totalizing counter (Basis: Regulation 9-8-530)</u>	<u>Y</u>	
<u>part 7</u>	<u>Recordkeeping (Basis: Regulation 9-8-530)</u>	<u>Y</u>	
<u>BAAQMD Condition 22820</u>	<u>Applies to S-10</u>		
<u>Part 1</u>	<u>Hours of operation limit for reliability-related activities [Basis: Regulation 2-5]</u>	<u>Y</u>	

IV. Source-Specific Applicable Requirements

Table IV-E
S-10 AND S-11 STANDBY GENERATOR DIESEL ENGINES

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
Part 2	Emergency use [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]	Y	
Part 3	Totalizing Meter [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]	Y	
Part 4	Recordkeeping [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]	Y	
Part 5	At School or Near School Operation [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]	Y	
BAAQMD Condition 22830	Applies to S-11		
Part 1	Hours of operation limit for reliability-related activities [basis: Regulation 2-5]	Y	
Part 2	Emergency use [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]	Y	
Part 3	Totalizing Meter [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]	Y	
Part 4	Recordkeeping [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]	Y	
Part 5	At School or Near School Operation [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]	Y	

V. SCHEDULE OF COMPLIANCE

The permit holder shall continue to comply with all applicable requirements cited in this permit. The permit holder shall also comply with applicable requirements that become effective during the term of this permit on a timely basis.

VI. PERMIT CONDITIONS

Any condition that is preceded by an asterisk is not federally enforceable.

Condition #2878

For Sources S1-S4, Boilers, S6, Turbine, & S8, Duct Burner

1. The owner/operator shall operate the existing four boilers (Sources #1 through #4) at a maximum firing rate of 99MMBtu/hr (each) only during periods when:
 - a. the Gas Turbine (S-6) and Duct Burners (S-8) are not operating due to maintenance or repairs; (basis: Offsets)
 - b. the Gas Turbine is operating but the Duct Burners are not operating due to maintenance or repair and the Stanford University steam demand exceeds the capacity of the gas turbine/unfired heat recovery steam generator (HRSG) system. Under this condition the boilers shall be fired at a combined rate not to exceed 124.3 MM Btu/hr; (basis: Offsets)
 - c. the Gas Turbine is operating but the Duct Burners are not operating due to a natural gas curtailment and the Stanford University steam demand exceeds the capacity of the gas turbine/unfired heat recovery steam generator (HRSG) system. Under this condition the boilers shall be fired at a combined rate not to exceed 146 MMbtu/hr; (basis: Offsets)
 - d. the Gas Turbine and the Duct Burners are operable but the Gas Turbine is limited in power output due to a power curtailment order and the Stanford University steam demand exceeds the capacity of the gas turbine/HRSG/duct burner system operating at the power level permitted by the curtailment order. Under this condition the boilers shall be fired at a combined rate not to exceed 292 MMbtu/hr for a maximum of 1000 hr/yr; (basis: Offsets)

~~The owner/operator shall operate the existing four boilers (Sources #1 through #4) only during periods when:~~

Condition #2878

VI. Permit Conditions

For Sources S1-S4, Boilers, S6, Turbine, & S8, Duct Burner

- e. the Gas Turbine and the Duct Burners are operating and the Stanford University steam demand exceeds the capacity of the gas turbine/unfired heat recovery steam generator (HRSG) and duct burners. Under this condition, either Source 1, Source 2, Source 3, or Source 4 may be used as the peaking unit. Only one of the above sources may be used as a peaking unit at any one time. Source 1, Source 2, Source 3, and Source 4 shall be fired only on natural gas, when used as a peaking unit. The combined fuel usage of Source 1, Source 2, Source 3, and Source 4, when used as a peaking unit or as a fuel delivery test unit, shall not exceed 1,980,000 therms during any consecutive twelve-month period for all four sources. The NO_x concentration in the exhaust of Source 1, Source 2, Source 3, and Source 4 shall not exceed 25 ppmvd at 3% oxygen averaged over any three hour period. The carbon monoxide (CO) concentration in the exhaust of Source 1, Source 2, Source 3, and Source 4 shall not exceed 200 ppmvd at 3% oxygen averaged over any consecutive three hour period; (basis: BACT, Offsets)
- f. the Gas Turbine and the Duct Burners are operating and the fuel delivery system of Source 1, Source 2, Source 3, or Source 4 is being tested. Source 1, Source 2, Source 3, and Source 4 shall be fired only on natural gas during fuel delivery system tests. The combined fuel usage of Source 1, Source 2, Source 3, and Source 4, when used as peaking units or as fuel delivery test units, shall not exceed 1,980,000 therms during any consecutive twelve-month period for all four sources. The combined fuel delivery system tests of Source 1, Source 2, Source 3, and Source 4 shall not exceed 1 hour during any calendar month for all four sources. The NO_x concentration in the exhaust of Source 1, Source 2, Source 3, and Source 4 shall not exceed 25 ppmvd at 3% oxygen averaged over any consecutive three hour period. The CO concentration in the exhaust of Source 1, Source 2, Source 3, and Source 4 shall not exceed 200 ppmvd at 3% oxygen averaged over any consecutive three hour period. (basis: BACT, Offsets)
- g. the Gas Turbine and the Duct Burners are operating, but the Duct Burners are being fired at a rate of 99 million BTU/hour (80% load) or less for the purpose of performing operability testing of the CEF boilers. Under this part, the CEF boilers may be fired at a maximum rate of 30 million BTU/hour for up to 2 hours for each operability test. Each CEF boiler may be tested for operability up to one time per 30 day period with natural gas and two times per any consecutive 12 month period with No. 2 fuel oil. Operability testing of the CEF boilers shall be scheduled such that only one unit is being tested at any one time; (basis: Cumulative Increase)

Condition #2878

For Sources S1-S4, Boilers, S6, Turbine, & S8, Duct Burner

- h. The Gas- Turbine and the Duct Burners are operating, but CEF boiler firing is

VI. Permit Conditions

necessary for the purpose of testing newly repaired or replaced CEF boiler system components to adjust, tune, and verify performance of maintenance activities.

Under this part, maintenance testing of the CEF boilers can only be performed with natural gas unless the testing is needed for maintenance of fuel oil delivery systems, in which case No. 2 fuel oil can be used. Maintenance testing of the CEF boilers shall be scheduled such that only one unit is being tested at any one time. (basis: Cumulative Increase)

2. a. The Gas Turbine (S-6) and Duct Burners (S-8) shall be fired on natural gas only. (basis: BACT)
- b. Gas Turbine shall not operate at less than 80% baseload-for more than 1,000 hours during any consecutive 12-month period. (basis: BACT)
3. a. The NO_x concentration in the combined Gas Turbine/Duct Burner exhaust shall not exceed 42 ppmvd at 15% oxygen averaged over any three hour period. (basis: BACT)
- b. The NO_x concentration in the Gas Turbine shall not exceed 14.6 ppmvd at 15% oxygen averaged over any consecutive three hour period, or 16.9 ppmvd at 15% oxygen averaged over any 24-hour period while firing at less than 80% baseload. (Note: 14.6 ppm and 16.9 ppm are 13 ppm and 15 ppm respectively, corrected for energy efficiency.) (basis: 9-9-301.2, 9-9-401, Banking)
- c. The limits of parts 3a and 3b shall not apply during periods of start-up not to exceed 3 hours each and not more than a total of 6 hours per day (i.e. any consecutive 24-hour period). It shall also not apply during shutdown periods not to exceed 1-hour each. (basis: BACT)
4. a. Cardinal Cogen shall install, calibrate and operate District-approved continuous monitors for NO_x and oxygen or carbon dioxide at the gas turbine/duct burner stack. (basis: BACT, 2-1-403)
- b. Cardinal Cogen shall maintain and operate a District-approved continuous monitor for NO_x and oxygen or carbon dioxide between the gas turbine and duct burner stack. (basis: 9-9-501, 2-1-403)
5. The combined gas turbine/duct burner exhaust carbon monoxide emissions shall not exceed 150 tons per year. (modified in Application No. 14748) (basis: BACT, 40 CFR 52.24)

Condition #2878

For Sources S1-S4, Boilers, S6, Turbine, & S8, Duct Burner

6. The following two-stage turndown procedure shall be followed for the Gas Turbine:

VI. Permit Conditions

- a. Load shall be initially reduced by closing the variable inlet guide vanes (VIGV's) to reduce air flow through the Gas Turbine accompanied by a reduction in fuel flow to maintain an essentially constant fuel-to-air ratio. (basis: Offsets)
- b. When the VIGV's are closed, further load reduction may then be achieved by directly reducing fuel flow. (basis: BACT)
7. The total combined auxiliary natural gas fuel usage at the Duct Burners and existing boilers (operating in the mode stated in part 1b shall not exceed 520 MM cubic feet per year. (basis: Offsets)
8. The NOx emissions from Source 1, Source 2, Source 3, and Source 4 shall be controlled by flue gas recirculation and low-NOx burners. (basis: BACT, Offsets)
9. The current BACT level for the Boilers, S1-S4, is based on limited operation of 1,980,000 therms during any consecutive 12 month period. Should the ~~owner/operator~~ applicant wish to increase the annual fuel usage in the future, any BACT cost- effectiveness determination must be based on the entire operational load, not just an incremental increase from the current limit of 1,980,000 therms during any consecutive 12 month period. (basis: BACT, Offsets)
10. To determine compliance with Conditions 1e and 1f, within 60 days of start-up of Source 1, Source 2, Source 3, or Source 4 as a peaking unit, and annually thereafter, the owner/operator of these sources shall conduct a source test to determine the NOx, CO, and oxygen concentrations. All test results shall be provided to the District within 30 days after testing has occurred. All source test methods shall be subject to the prior approval of the Source Test Section of the District's Technical Division. (basis: BACT, Offsets, 2-1-403)
11. The owner/operator of Source 1, Source 2, Source 3, and Source 4 shall operate and maintain a separate non-resettable totalizing fuel meter that measures the usage of natural gas at Source 1, Source 2, Source 3, and Source 4. (basis: BACT, Offsets, 2-1-403)
12. The owner/operator of Source 1, Source 2, Source 3, and Source 4 shall maintain a file containing all measurements, records, and other data that are required to be collected pursuant to the provisions of this permit. This file shall include:

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Condition #2878

For Sources S1-S4, Boilers, S6, Turbine, & S8, Duct Burner

- a. The results of all source tests conducted on Source 1, Source 2, Source 3, and Source 4.
(basis: BACT, Offsets)
 - b. The monthly therms of fuel used at Source 1, Source 2, Source 3, and Source 4, when operated as a peaking unit or a fuel delivery test unit. (basis: BACT, Offsets, Cumulative Increase)
13. To determine compliance with part 3b, within 60 days of start-up of the dry low-NOx combustor system of S-6, and annually thereafter, the owner/operator of S-6 shall conduct an annual source test of the dry low-NOx combustor system of S-6 to determine the NOx and oxygen concentrations of the S-6 exhaust. All test results shall be provided to the District within 30 days after testing has occurred. All source test methods shall be subject to the prior approval of the Source Test Section of the District's Technical Division. (basis: Banking, 2-1-403)
14. Cardinal Cogen shall install, calibrate and operate a District-approved continuous monitor for carbon monoxide at the gas turbine/duct burner exhaust. (basis: BACT, 2-1-403)
15. The owner/operator of S-6 may submit for District review continuous emission monitor records and other source test data to demonstrate the ability to consistently maintain a lower NOx emission limit than specified in part 3b. If this lower NOx emission is accepted as a permit condition in place of part 3b, then the District will consider adjusting the actual emission reduction credits attributed to this source. (basis: Banking)
16. The owner/operator of Source 6 and Source 8 shall maintain a file containing all measurements, records, and other data that are required to be collected pursuant to the provisions of this permit. This file shall include:

The monthly total number of hours that Source 6 is operated at less than 80% baseload. (Basis: BACT)
17. All measurements, records, and other data required to be maintained by the ~~applicant~~ owner/operator shall be retained for at least five years following the date on which such data are recorded and shall be made available to District staff upon request. (basis: 9-9-501, Cumulative Increase, 2-6-501)

VI. Permit Conditions

Condition #2878

For Sources S1-S4, Boilers, S6, Turbine, & S8, Duct Burner

18. Within 1 month of issuance of the Title V Permit renewal, the ~~permit-~~
~~holder~~owner/operator shall analyze a sample of distillate oil in the fuel oil tank for sulfur content to ensure compliance with Regulation 9-1-304. The sample shall be analyzed using District Method 10, Determination of Sulfur in Fuel Oils. The results of the analysis shall be sent to the Director of Enforcement and compliance at the District. All subsequent shipments of fuel oil to the facility shall have a vendor certification of the sulfur content of the fuel. [Basis: 2-6-409.2]

Condition #14501

For S6, GAS TURBINE, S8, DUCT BURNER

1. All natural gas burned at sources S6, Gas Turbine, and S8, Duct Burner shall be PUC quality gas. (basis: 2-1-403)

PSD CONDITIONS

S1-S4, Boilers, S6, Turbine, & S8, Duct Burner

Following are the PSD conditions imposed by EPA before construction in 1983, amended on January 30, 1985, and on January 25, 1996.

I. (deleted BAAQMD Title V application #25830)

II. (deleted BAAQMD Title V application #25830)

III. Facilities Operation

All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Approval to Construct/Modify shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. (PSD)

IV. (deleted BAAQMD Title V application #25830)

V. Right to Entry

The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted:

PSD CONDITIONS

VI. Permit Conditions

S1-S4, Boilers, S6, Turbine, & S8, Duct Burner

- 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 Approval to Construct/Modify; and
- B. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Approval to Construct/Modify; and
- C. to inspect any equipment, operation, or method required in this Approval to Construct/Modify; and
- D. to sample emissions from the source. (PSD)

VI. Transfer of Ownership

In the event of any changes in control or ownership of facilities to be constructed or modified, this Approval to Construct/Modify shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this Approval to Construct/Modify and its conditions by letter, a copy of which shall be forwarded to the State and local Air Pollution Control Agency. (PSD)

VII. Severability

The provisions of this Approval to Construct/Modify are severable, and, if any provision of this Approval to Construct/Modify is held invalid, the remainder of this Approval to Construct/Modify shall not be affected thereby. (PSD)

VIII. Other Applicable Regulations

The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable Federal, State and local air quality regulations. (PSD)

IX. Special Conditions

- A. (deleted BAAQMD Title V application #25830)
- B. Air Pollution Control Equipment
 - 1. (deleted BAAQMD Title V application #25830)
 - 2. All duct burners shall be Low-NO_x burners as described in the application. (PSD)

PSD CONDITIONS

S1-S4, Boilers, S6, Turbine, & S8, Duct Burner

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C. Emission Limitations for NOx

1. On and after the date of start-up (as defined in 40 CFR 60.2(o)), Cardinal Cogen shall not discharge or cause to be discharged to the atmosphere NOx from the cogeneration facility exhaust stack in excess of any of the following limits (PSD) (Amended 1/25/96):

<u>Source</u>	<u>Fuel</u>	<u>Maximum Concentration</u>
Gas Turbine and Duct Burners	Natural Gas	42 ppm @ 15% O ₂ (24-hr rolling average)

2. When the CEF boilers are operated pursuant to Special Conditions IX.F.1.d., e., f. or g., Cardinal Cogen shall not discharge or cause to be discharged to the atmosphere NOx from, each CEF boiler exhaust stack in excess of 25 ppm @ 3% O₂ (3-hour rolling average). (Added 1/25/96)

D. Performance Tests

1. (deleted BAAQMD Title V application #25830)
2. (deleted BAAQMD Title V application #25830)
3. For performance test purposes, sampling ports, platforms, and access shall be provided by Cardinal Cogen on the turbine and heat recovery steam generator exhaust stacks in accordance with 40 CFR 60.8(e). (PSD)

E. Continuous Monitoring

1. By the date of startup of the cogeneration facility, Cardinal Cogen shall have installed and thereafter shall maintain and operate the following continuous monitoring systems in the exhaust stack of the HRSG:
 - a. A continuous monitoring system to measure stack gas NOx concentrations. The system shall meet EPA monitoring specification (40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specification 2). (PSD)
 - b. Excess emissions measured by the continuous monitoring system shall be considered violations of the applicable NOx emission limit set forth in Special Condition IX.C.1. above. (PSD) (Amended 1/15/96)

PSD CONDITIONS

S1-S4, Boilers, S6, Turbine, & S8, Duct Burner

2. The applicable emissions limit set forth in Condition IX.C.1. (i.e., 42 ppm

VI. Permit Conditions

corrected to 15% O₂) shall not apply during periods of startup not to exceed 3 hours each and not more than a total of 6 hours per day (i.e., any consecutive 24-hour period). It also shall not apply during shutdown periods not to exceed 1 hour each.

3. (deleted BAAQMD Title V application #25830)

F. Source Shutdown

1. The existing four boilers in the Stanford University Central Energy Facility (boilers S1 through S4) shall only be operated during periods when:
 - a. the gas turbine (S-6) and duct burners (S-8) are not operating due to maintenance or repairs; (PSD) (1/30/85 amendment)
 - b. the gas turbine is operating but the duct burners are not operating due to maintenance or repair or because of gas curtailment and the Stanford University steam demand exceeds the capacity of the gas turbine/unfired heat recovery steam generator (HRSG) system; (PSD) (1/30/85 amendment)
 - c. the gas turbine and the duct burners are operable but the gas turbine is limited in power output due to power curtailment, and the Stanford University steam demand exceeds the capacity of the gas turbine/HRSG/duct burner system operating at the power level permitted by the power curtailment order; (PSD) (1/30/85 amendment)
 - d. the Stanford University steam demand exceeds the capacity of the gas turbine/duct burner; (PSD) (Added 1/25/96)
 - e. the fuel delivery system of any of the CEF boilers is being tested; (PSD) (Added 1/25/96)
 - f. the duct burners are being fired at a rate of 99 million btu/hour (80%) or less for the purpose of performing operability testing of the CEF boilers; or (PSD) (Added 1/25/96)
 - g. CEF boiler firing is necessary for the purpose of testing newly repaired or replaced CEF boiler system components to adjust, tune and verify performance of maintenance activities. (PSD) (Added 1/25/96)
2. Under scenario F.1.d., any of the four CEF boilers may be used as the peaking unit, but only one boiler may be used as the peaking unit at any one time. Under either scenario F.1.d. or F.1.e., the CEF boilers shall be fired only on natural gas and the combined fuel usage of the CEF boilers shall not exceed 1,980,000 therms during any consecutive 12 month period for all four sources. Under scenario F.1.f., the CEF boiler may be tested for operability up to one time per 30 day

PSD CONDITIONS

S1-S4, Boilers, S6, Turbine, & S8, Duct Burner

period with natural gas and two times per any consecutive 12 months period with No. 2 fuel oil. Under scenario F.1.g., maintenance testing of the CEF boilers can

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only be performed with natural gas unless the testing is needed for maintenance of the fuel oil delivery systems, in which case No. 2 fuel oil can be used.

Operability testing and maintenance testing of the CEF boilers under scenarios F.1.f. and F.1.g. shall be scheduled such that only one unit is being tested at any one time. (PSD) (Added 1/25/96)

G. Fuel Use

1. (deleted BAAQMD Title V application #25830)
2. Cardinal Cogen shall not burn natural gas in the turbine in excess of 3,850 million cubic feet in any calendar year. (PSD)
3. Cardinal Cogen shall not burn natural gas in the duct burners in excess of 520 million cubic feet in any calendar year. (PSD)
4. Cardinal Cogen shall, maintain, and operate instrumentation to monitor the flow rates of natural gas to the turbine and to the duct burners. Cardinal Cogen shall record fuel consumption. Fuel consumption records shall be maintained on hand for five years for inspection by EPA, California Air Resources Board, and the Bay Area AQMD. (PSD)
5. Cardinal Cogen shall install, operate and maintain a separate non-resettable totalizing fuel meter that measures the usage of natural gas at the CEF boilers.

Cardinal Cogen shall record the monthly therms of fuel used at the CEF boilers when operated as a peaking unit or a fuel delivery test unit. Such records shall be retained by Cardinal Cogen for at least five years following the date on which such data are recorded and shall be made available to the EPA upon request. (PSD) (Added 1/25/96)

H. New Source Performance Standards

The cogeneration facility shall comply with all portions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines. (PSD)

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Condition #19698

For Sources S-10 & S-11 Standby Generator Diesel Engines

- 1, The S-10 and S-11 engines are subject to the requirements of Regulation 9, Rule 1 ("Sulfur Dioxide"), and the requirements of Regulation 6 ("Particulate Matter and Visible Emissions"). (basis: Regulation 9, Rule 1; Regulation 6)
2. The owner/operator of S-10 and S-11 engines shall operate those engines for no more than ~~50+00~~ hours EACH in any consecutive 12-month period for the purpose of reliability-related activities as defined in Regulation 9-8-232. (basis: Regulation 9-8-330.32)
3. The owner/operator of S-10 and S-11 engines may operate those engines for an unlimited amount of time for the purpose of emergency use as defined in Regulation 9-8-231. (basis: Regulation 9-8-330.1)
4. The owner/operator of the S-10 and S-11 engines shall not operate the engines unless the liquid fuel burned contains no more than 0.5% sulfur by weight. (Basis: Regulation 9-1-304)
5. To demonstrate compliance with part 4, the owner/operator of the S-10 and S-11 engines shall obtain a certification of the fuel sulfur content from the supplier for each fuel delivery. (Basis: Regulation 9-1-304)
 6. The owner/operator shall equip each of the S-10 and S-11 diesel engines with a non-resettable totalizing counter that records hours of operation or fuel usage for each engine. (basis: Regulation 9-8-530)
7. The owner/operator shall maintain the following monthly records in a District-approved log for at least 5 years and shall make those records available to the District upon request:
 - a. hours of operation for reliability-related activities for S-10 and S-11 on an individual basis and a description of the activity
 - b. hours of operation under emergency conditions for S-10 and S-11 on an individual basis and a description of the nature of the emergency condition
 - c. fuel usage at S-10 and S-11 on an individual basis(basis: Regulation 9-8-530)

VI. Permit Conditions

Condition #21844

For Source S-9 Turbine Starter Diesel Engine

1. The S-9 engine is subject to the requirements of Regulation 9, Rule 1 ("Sulfur Dioxide"), and the requirements of Regulation 6 ("Particulate Matter and Visible Emissions"). (basis: Regulation 9, Rule 1; Regulation 6)
2. The owner/operator of S-9 engine shall operate the engine for no more than 2100 hours in any consecutive 12-month period. (basis: cumulative increase, Regulation 9-8-111.3)
3. The owner/operator shall equip S-9 diesel engine with a non-resettable totalizing counter that records hours of operation for each engine. (basis: Cumulative increase)
4. The owner/operator of the S-9 engine shall not operate the engines unless the liquid fuel burned contains less than 0.5% sulfur by weight. (Basis: Regulation 9-1-304)
5. To demonstrate compliance with part 4, the owner/operator of the S-9 engine shall obtain a certification of the fuel sulfur content from the supplier for each fuel delivery. (Basis: Regulation 9-1-304)
6. The owner/operator shall maintain monthly records of the hours of operation of the S-9 engine in a District-approved log for at least 5 years and shall make those records available to the District upon request. (basis: cumulative increase)

Condition # 22820

Applicable to Emergency Diesel Engine S-10

1. The owner/operator shall not exceed 20 hours per year per engine for reliability-related testing. [Basis: Regulation 2-5]
2. The owner/operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, State or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating while mitigating emergency conditions or while emission testing to show compliance with District, State or Federal emission limits is not limited. [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]
3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999

VI. Permit Conditions

hours) that measures the hours of operation for the engine is installed, operated and properly maintained. [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

4. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.
- a. Hours of operation for reliability-related activities (maintenance and testing).
 - b. Hours of operation for emission testing to show compliance with emission limits.
 - c. Hours of operation (emergency).
 - d. For each emergency, the nature of the emergency condition.
 - e. Fuel usage for each engine(s).
- [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

5. At School and Near-School Operation: If the emergency standby engine is located on school grounds or within 500 feet of any school grounds, the following requirements shall apply:
- The owner/operator shall not operate each stationary emergency standby diesel-fueled engine for non-emergency use, including maintenance and testing, during the following periods:
- a. Whenever there is a school sponsored activity (if the engine is located on school grounds)
 - b. Between 7:30 a.m. and 3:30 p.m. on days when school is in session.
- "School" or "School Grounds" means any public or private school used for the purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s). "School" or "School Grounds" includes any building or structure, playground, athletic field, or other areas of school property but does not include unimproved school property.
- [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

Condition # 22830

Applicable to Emergency Diesel Engines S11.

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1. The owner/operator shall not exceed 30 hours per year per engine for reliability-related testing. [Basis: Regulation 2-5]
2. The owner/operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, State or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating while mitigating emergency conditions or while emission testing to show compliance with District, State or Federal emission limits is not limited. [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]
3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained. [Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]
4. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.
 - a. Hours of operation for reliability-related activities (maintenance and testing).
 - b. Hours of operation for emission testing to show compliance with emission limits.
 - c. Hours of operation (emergency).
 - d. For each emergency, the nature of the emergency condition.
 - e. Fuel usage for each engine(s).[Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]
5. At School and Near-School Operation:
If the emergency standby engine is located on school grounds or within 500 feet of any school grounds, the following requirements shall apply:

The owner/operator shall not operate each stationary emergency standby diesel-fueled engine for non-emergency use, including maintenance and testing, during the following periods:
 - a. Whenever there is a school sponsored activity (if the engine is located on school grounds)
 - b. Between 7:30 a.m. and 3:30 p.m. on days when school is in session.

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"School" or "School Grounds" means any public or private school used for the purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s). "School" or "School Grounds" includes any building or structure, playground, athletic field, or other areas of school property but does not include unimproved school property.

[Basis: Title 17, California Code of Regulations, section 93115, ATCM for Stationary CI Engines]

Condition # 25233

Cardinal Cogen Plant 15128
Boilers S-1, S-2, S-3 and S-4
Application 21629 (2012)

1. Beginning 1/1/12, the owner/operator shall operate the S-1 Boiler such that the heat input shall not exceed 867,240 therms in any consecutive 12-month period unless the boiler complies with the requirements of Part 7 below. (Basis: Regulation 9-7-112.2)

2. Beginning 1/1/12, the owner/operator shall operate the S-2 Boiler such that the heat input shall not exceed 867,240 therms in any consecutive 12-month period unless the boiler complies with the requirements of Part 7 below. (Basis: Regulation 9-7-112.2)

3. Beginning 1/1/12, the owner/operator shall operate the S-3 Boiler such that the heat input shall not exceed 867,240 therms in any consecutive 12-month period unless the boiler complies with the requirements of Part 7 below. (Basis: Regulation 9-7-112.2)

4. Beginning 1/1/12, the owner/operator shall operate the S-4 Boiler such that the heat input shall not exceed 867,240 therms in any consecutive 12-month period unless the boiler complies with the requirements of Part 7 below. (Basis: Regulation 9-7-112.2)

5. The owner/operator shall operate a non-resettable totalizing fuel meter or other APCO-approved monitoring method that demonstrates that Boilers S-1, S-2, S-3 and S-4 are operated at or below the heat input level limited by Parts 1, 2, 3 and 4. (Basis: Regulation 9-7-504.1)

6. The owner/operator shall maintain records of the fuel use data and the higher heating value of the fuel for each consecutive 12-month period. These records shall be retained for a period of 5 years from the date the record is made, and shall be made accessible to District staff upon request. (Basis: Regulation 9-7-504.2)

7. If the boiler heat input limits of Part 1, 2, 3 or 4 are exceeded, the owner/operator shall

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comply with the following emission limits (corrected to 3% Oxygen) within 24 months of the heat input exceedance:

NOx: 5 ppmv
CO: 400 ppmv

(Basis: Regulations 9-7-112, 9-7-307.6)

8. If the owner/operator fails to maintain records to allow verification of fuel usage, then the owner/operator shall have the burden of proof to establish eligibility for the low fuel usage exemption described in these Parts 1 through 7. (Basis: Regulations 9-7-112, 9-7-307.6, 9-7-504)

Condition # 25295

1. S9, Engine, is considered to be a low-use prime engine as defined by ATCM Section 93115.3(a)(58). The owner/operator shall not operate S9, Engine, for more than 20 hours in any consecutive 12-month period for any purpose, beginning with the date of issuance of the change in conditions pursuant to Application #24546. [Basis: 9-8-111, ATCM 93115.3(j)]

2. The owner/operator shall comply with the fuel requirements in the CARB Stationary Diesel Engine ATCM Section 93115.5. [Basis: "Stationary Diesel Engine ATCM" section 93115.5]

3. The owner/operator shall ensure that the engine is located more than 500 feet from a school at all times. [Basis: ATCM 93115.3(j)].

4. The owner/operator shall comply with the following operating requirements for black-start CI engines at area sources:

- a. Change oil and filter every 500 hours of operation or annually, whichever comes first;
- b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and
- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
- d. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [Basis: 40 CFR Part 63.6603(a)]

5. The owner/operator shall operate each stationary engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained. [Basis: 9-8-530]

6. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 60 months from the date of entry. Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.

a. Hours of operation

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b. Fuel usage

[Basis: Cumulative Increase, 9-8-111, ATCM 93115.3(j)]

VII. APPLICABLE LIMITS & COMPLIANCE MONITORING REQUIREMENTS

This section has been included only to summarize the applicable emission limits contained in Section IV, Source-Specific Applicable Requirements, of this permit. The following tables show the relationship between each emission limit and the associated compliance monitoring provisions, if any. The monitoring frequency column indicates whether periodic (P) or continuous (C) monitoring is required. For periodic monitoring, the frequency of the monitoring has also been shown, using the following codes: annual (A), quarterly (Q), monthly (M), weekly (W), daily (D), or on an event basis (E). No monitoring (N) has been required if the current applicable rule or regulation does not require monitoring, and the operation is unlikely to deviate from the applicable emission limit based upon the nature of the operation.

This section is only a summary of the limits and monitoring requirements. In the case of a conflict with any requirement in Sections I-VI, the preceding sections take precedence over Section VII.

Table VII-A
S-1, S-2, S-3, S-4, Boilers

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
<u>NOx</u>	<u>BAAQMD</u> <u>9-7-112.2</u>	<u>N</u>		<u>30 ppmvd @ 3% O₂</u>	<u>None</u>	<u>N</u>	<u>None</u>
<u>NOx</u>	<u>BAAQMD</u> <u>9-7-113.2</u>	<u>N</u>		<u>Non-gaseous Fuel: 150 ppmvd @ 3% O₂</u>	<u>None</u>	<u>N</u>	<u>None</u>
<u>NO_x Oxides of Nitrogen</u>	BAAQMD <u>SIP</u> 9-7-301.1	Y		30 ppmv @ 3% O ₂ , dry	<u>None</u>	N	<u>None</u>
<u>NOx</u>	BAAQMD <u>SIP</u> 9-7-302.1	Y		40 ppmv @ 3% O ₂ , dry	<u>None</u>	N	<u>None</u>
<u>NOx</u>	BAAQMD <u>SIP</u> 9-7-303	Y		Weighted average of 9-7-301.1 and 9-7-302.1	BAAQMD 9-7-501	C	Non-resettable fuel meters
<u>NOx</u>	BAAQMD <u>SIP</u> 9-7-305.1	Y		150 ppmv @ 3% O ₂ , dry	<u>None</u>	N	<u>None</u>

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-A
S-1, S-2, S-3, S-4, Boilers

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
<u>NOx</u>	BAAQMD-SIP 9-7-306.1	Y		150 ppmv @ 3% O ₂ , dry	<u>None</u>	N	<u>None</u>
<u>NOx</u>	BAAQMD-Permit Condition 2878 parts <u>1e & 1f</u>	Y		25 ppmv @ 3% O ₂ , dry, averaged over 3 hours	<u>Condition 2878 part 10</u>	<u>P/AN</u>	<u>Source Test</u>
<u>Oxides of Nitrogen NOx</u>	PSD permit part IX, C, 2	Y		25 ppm @ 3% O ₂ , 3-hr rolling average	<u>None</u>	N	<u>None</u>
<u>CO</u>	BAAQMD 9-7-112.2	<u>N</u>		<u>400 ppmvd @ 3% O₂</u>	<u>None</u>	<u>N</u>	<u>None</u>
<u>Carbon Monoxide CO</u>	BAAQMD-SIP 9-7-301.2	Y		400 ppmv @ 3% O ₂ , dry	<u>None</u>	N	<u>None</u>
<u>Carbon Monoxide CO</u>	BAAQMD-SIP 9-7-302.2	Y		400 ppmv @ 3% O ₂ , dry	<u>None</u>	N	<u>None</u>
<u>CO</u>	BAAQMD-SIP 9-7-303	Y		400 ppmv @ 3% O ₂ , dry	<u>None</u>	N	<u>None</u>
<u>CO</u>	BAAQMD-SIP 9-7-305.2	Y		400 ppmv @ 3% O ₂ , dry	<u>None</u>	N	<u>None</u>
<u>CO</u>	BAAQMD-SIP 9-7-306.2	Y		400 ppmv @ 3% O ₂ , dry	<u>None</u>	N	<u>None</u>
<u>CO</u>	BAAQMD-Permit Condition 2878 parts <u>1e & 1f</u>	Y		200 ppmv @ 3% O ₂ , dry, averaged over 3 hours	<u>Condition 2878 part 10</u>	<u>P/AN</u>	<u>Source Test</u>

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-A
S-1, S-2, S-3, S-4, Boilers

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Hours of operation	BAAQMD 9-7-113.1	N		Natural gas curtailment and testing non-gaseous fuel operation no more than 168 hrs per consecutive 12-mo period plus 48 hrs per consecutive 12-month period for oil-burn readiness testing and required performance testing	BAAQMD 9-7-503.2 & 9-7-503.3	P/E	Records
Hours of operation	BAAQMD Permit Condition Number 2878 part 1d	Y		maximum of 1000 hrs/year @ 292 MM BTU/hr for all 4 boilers total when the Gas Turbine and Duct Burners are operable but the Gas Turbine is limited in power output due to a power curtailment order	Condition 2878 part 12None	P/E	Records
Hours of operation	BAAQMD Permit Condition Number 2878 part 1f	Y		1 hr/mo for all 4 boilers total when operating as fuel delivery test units	Condition 2878 part 12None	P/E	Records
Hours of operation	BAAQMD Permit Condition Number 2878 part 1g	Y		Normal operability tests: up to 2 hrs/test, one boiler at a time, each boiler once per rolling 30 day period with natural gas, each boiler twice in rolling 12 months for No. 2 Fuel oil	Condition 2878 part 12None	P/E	Records

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-A
S-1, S-2, S-3, S-4, Boilers

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
<u>Hours of operation</u>	BAAQMD Permit Condition Number 2878 part 1h	Y		Operability tests after maintenance: one boiler at a time	<u>Condition 2878 part 12</u> None	P/E	Records
SO ₂	BAAQMD 9-1-301	N		GLC ⁺ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours	<u>None</u>	N	<u>None</u>
SO ₂	BAAQMD 9-1-302	Y		300 ppm (dry)	<u>None</u>	N	<u>None</u>
Fuel Sulfur Content	BAAQMD 9-1-304 <u>40CFR 60.42c(d)</u>	Y		Sulfur content of fuel <0.5% by weight	BAAQMD-Permit-Condition Number-2878 part 18 40 CFR 60.44c(g)&(h)	P/E	fuel analysis or certification
<u>Fuel usage</u>	<u>Condition 2878 part 1</u>	<u>Y</u>		<u>99 MM BTU/hr limit for each boiler</u>	<u>Condition 2878 parts 11 & 12</u>	<u>C</u>	<u>Non-resettable fuel meters, records</u>
Fuel usage	BAAQMD-Permit-Condition Number-2878 part 1b	Y		up to 124.3 MM BTU/hr for all 4 boilers total when Duct Burners are not operating due to maintenance or repair	BAAQMD-Permit-Condition Number-2878 parts 11 & 12	C	Non-resettable fuel meters, records
<u>Fuel usage</u>	BAAQMD-Permit-Condition Number-2878 part 1c	Y		up to 146 MM BTU/hr for all 4 boilers total when Duct Burners are not operating due to natural gas curtailment	BAAQMD-Permit-Condition Number-2878 parts 11 & 12	C	Non-resettable fuel meters, records

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-A
S-1, S-2, S-3, S-4, Boilers

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Fuel usage	BAAQMD-Permit-Condition Number-2878 part 1d	Y		up to 292 MM BTU/hr for all 4 boilers total for up to 1000 hrs/year when the Gas Turbine and Duct Burners are operable but the Gas Turbine is limited in power output due to a power curtailment order	BAAQMD-Permit-Condition Number-2878 parts 11 & 12	C	Non-resettable fuel meters, records
<u>Fuel usage</u>	BAAQMD-Permit-Condition Number-2878 parts 1e & 1f	Y		1,980,000 therms per rolling 12 months for all 4 boilers total when operating as a peaking unit or fuel delivery test unit	BAAQMD-Permit-Condition Number-2878 parts 11 & 12	C	Non-resettable fuel meters, records
<u>Fuel usage</u>	BAAQMD-Permit-Condition Number-2878 part 1g	Y		Operability tests: up to 30 MM BTU/hr for 2 hrs	BAAQMD-Permit-Condition Number-2878 parts 11 & 12	C	Non-resettable fuel meters, records
	BAAQMD-Permit-Condition Number-2878 part 1h	Y		Operability tests: after maintenance, 1 boiler at a time	BAAQMD-Permit-Condition Number-2878 part 11	C	Non-resettable fuel meters, records
<u>Fuel usage</u>	BAAQMD-Permit-Condition Number-2878 part 7	Y		520 MM cf combined fuel usage for duct burners and boilers (when operating per condition #2878, part 1b) per year	BAAQMD-Permit-Condition Number-2878 parts 11 & 12	C	Non-resettable fuel meters, records

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-A
S-1, S-2, S-3, S-4, Boilers

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
<u>Fuel usage</u>	<u>Condition 25233 parts 1, 2, 3 & 4 BAAQMD 9-7-112.2</u>	<u>Y</u>		<u>867,000 therms per rolling 12 months for each boilers</u>	<u>Condition 25233 parts 5 & 6</u>	<u>C</u>	<u>Non-resettable fuel meters, records</u>
<u>Fuel usage</u>	PSD permit part IX, F, 2	Y		1,980,000 therms per rolling 12 months for all 4 boilers total	PSD permit part IX, G, 5	C	Non-resettable fuel meters, records
Opacity	BAAQMD 6-1-301 <u>SIP 6-301</u>	Y		> Ringelmann No. 1 for no more than 3 minutes in any one hour	<u>None</u>	N	<u>None</u>
<u>Opacity</u>	<u>40 CFR 60.43c(c) & (d)</u>	<u>Y</u>		<u>< 20% opacity (6-min average) except one 6-min period per hour up to 27% opacity, not including periods of strtp, shutdown and malfunction</u>	<u>40 CFR 60.45c(a)</u>	<u>P/when requested</u>	<u>Source Test, Visual Inspection by Certified Observer</u>
FP	BAAQMD 6-1-310.3 <u>SIP 6-310.3</u>	Y		0.15 grain/dscf @ 6% O ₂	<u>None</u>	N	<u>None</u>

⁺ Ground Level Concentration

Table VII-B
S-6, Gas Turbine

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NO _x	BAAQMD 9-9-301.2	Y		<u>0.43 lb/MWhr or Natural Gas ≤ 16.9 ppmv @ 15% O₂ dry (limit includes 9-9-401 efficiency-adjustment)</u>	BAAQMD 9-9-501; BAAQMD Permit Condition 2878 part 4b	C	CEM

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-B
S-6, Gas Turbine

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
<u>NO_x</u>	<u>SIP</u> <u>9-9-301.2</u>	<u>Y</u>		<u>Natural Gas</u> <u>< 16.9 ppmv @ 15%</u> <u>O₂ dry (limit includes</u> <u>9-9-401 efficiency</u> <u>adjustment)</u>	<u>SIP</u> <u>9-9-501</u>	<u>C</u>	<u>CEM</u>
<u>NO_x</u>	BAAQMD Permit Condition 2878, part 3a	Y		≤ 42 ppmv @ 15% O ₂ dry, averaged over 3 hours in combined Gas Turbine/Duct Burner exhaust	BAAQMD Permit Condition 2878 part 4 <u>a</u>	C	CEM
<u>NO_x</u>	BAAQMD Permit Condition 2878, part 3b	N		≤ 14.6 ppmv @ 15% O ₂ dry, averaged over 3 hours in Gas Turbine exhaust	BAAQMD Permit Condition 2878 part 4b	C	CEM
<u>NO_x</u>	BAAQMD Permit Condition 2878, part 3b	N		≤ 16.9 ppmv @ 15% O ₂ dry, averaged over <u>any</u> 24 hours in Gas Turbine exhaust @ less than 80% baseload	BAAQMD Permit Condition 2878 part 4b	C	CEM
<u>NO_x</u>	NSPS Subpart GG 60.332(a) (1)	Y		≤108 ppmv @ 15% O ₂ dry	NSPS Subpart GG, 60.334(c)	C	CEM
NO _x	PSD permit part IX, <u>C.1</u>	Y		42 ppm @ 15% O ₂ combined limits (turbine/duct burner) averaged over <u>rolling</u> 24 hours when burning natural gas	PSD permit part IX, E. <u>1.a</u>	C	CEM
Carbon <u>Monoxide</u> <u>CO</u>	BAAQMD Permit Condition Number 2878 part 5	Y		≤ 150 tons per year from turbine and duct burner combined	BAAQMD Permit Condition Number 2878 part 14	C	CEM

VII. Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-B
S-6, Gas Turbine**

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Hours of operation	BAAQMD Permit Condition Number 2878, part 2b	Y		≤ 1000 hrs/rolling 12 months of operation @ < 80% baseload	BAAQMD Condition #2878, part 16a	P/E	records
SO ₂	BAAQMD 9-1-301	N		GLC ⁺ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours	<u>None</u>	N	<u>None</u>
SO ₂	BAAQMD 9-1-302	Y		300 ppm (dry)	<u>None</u>	N	<u>None</u>
Fuel Sulfur Content	NSPS 40 CFR 60.333(b)	Y		Fuel sulfur content of 0.8 percent by weight	40 CFR 60.334(h)(1)	N	<u>None</u>
Opacity	BAAQMD 6-1-301	Y		> Ringelmann No. 1 for no more than 3 minutes in any one hour	<u>None</u>	N	<u>None</u>
<u>Opacity</u>	<u>SIP 6-301</u>	<u>Y</u>		<u>> Ringelmann No. 1 for no more than 3 min in any hour</u>	<u>None</u>	<u>N</u>	<u>None</u>
FP	BAAQMD 6-1-310	Y		0.15 grain/dscf	<u>None</u>	N	<u>None</u>
<u>FP</u>	<u>SIP 6-310</u>	<u>Y</u>		<u>0.15 grain/dscf</u>	<u>None</u>	<u>N</u>	<u>None</u>
Fuel usage	PSD permit part IX, G,2	Y		3,850 million cf natural gas in any calendar year	PSD permit part IX, G, 4	C	Fuel meter, records

⁺Ground Level Concentration

VII. Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-C
 S-8, Duct Burner**

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NO _x	40 CFR 60.44b(a), <u>(4)(i)</u>	Y		0.2 lb NO ₂ / MM BTU burned	<u>None</u> (Exempt from <u>CEM</u> monitoring per 40 CFR 60.48b(h))	N	<u>None</u>
<u>NO_x</u>	BAAQMD Permit Condition Number 2878 part 3a	Y		≤ 42 ppmv @ 15% O ₂ dry, averaged over 3 hours in combined Gas Turbine/Duct Burner exhaust	BAAQMD Permit Condition 2878 part <u>4a</u>	C	CEM
<u>NO_x</u>	PSD permit part IX, C.1	Y		42 ppm @ 15% O ₂ averaged over <u>rolling</u> 24 hours when burning natural gas	PSD permit part IX, E.1.a	C	CEM
<u>NO_x</u>	<u>BAAQMD 9-9-301.2</u>	<u>N</u>		<u>0.43 lb/MWhr</u>	<u>BAAQMD 9-9-501</u>	<u>C</u>	<u>CEM</u>
<u>NO_x</u>	<u>SIP 9-9-301.2 via SIP 1-107</u>	<u>Y</u>		<u>15 ppm @ 15% O₂</u>	<u>SIP 9-9-501</u>	<u>C</u>	<u>CEM</u>
Carbon Monoxide <u>CO</u>	BAAQMD Permit Condition Number 2878 part 5	Y		< or equal to 150 tons per year from turbine and duct burner combined	BAAQMD Permit Condition Number 2878 part <u>143</u>	C	CEM
Fuel usage	BAAQMD Permit Condition Number 2878 part 7	Y		520 MM cf combined fuel usage for duct burners and boilers (when operating per condition #2878, part 1b) per year	<u>Condition 2878 part 16</u> PSD permit part IX, G, 4	C	Fuel meter, records

VII. Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-C
 S-8, Duct Burner**

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
<u>Fuel usage</u>	PSD permit part IX, G, 3	Y		520 MM cf natural gas in any calendar year	PSD permit part IX, G, 4	C	Fuel meter, records
Opacity	BAAQMD 6-1-301	Y		> Ringelmann No. 1 for no more than 3 min in any hour	<u>None</u>	N	<u>None</u>
<u>Opacity</u>	<u>SIP 6-301</u>	<u>Y</u>		<u>> Ringelmann No. 1 for no more than 3 min in any hour</u>	<u>None</u>	<u>N</u>	<u>None</u>
FP	BAAQMD 6-1-310.3	Y		0.15 grain/dscf @ 6% <u>O2</u>	<u>None</u>	N	<u>None</u>
<u>FP</u>	<u>SIP 6-310.3</u>	<u>Y</u>		<u>0.15 grain/dscf @ 6% O2</u>	<u>None</u>	<u>N</u>	<u>None</u>
SO ₂	BAAQMD 9-1-301	Y		GLC ⁺ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours	<u>None</u>	N	<u>None</u>
<u>SO₂</u>	BAAQMD 9-1-302	Y		300 ppm (dry)	<u>None</u>	N	<u>None</u>

⁺Ground Level Concentration

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII - D
Applicable Limits and Compliance Monitoring Requirements
S-9, TURBINE STARTER ENGINE

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD 6-1-303.1	N		> Ringelmann No. 2 for no more than 3 minutes in any hour	<u>None</u>	N	<u>None</u>
<u>Opacity</u>	<u>SIP 6-303.1</u>	<u>Y</u>		<u>> Ringelmann No. 2 for no more than 3 minutes in any hour</u>	<u>None</u>	<u>N</u>	<u>None</u>
<u>Visible Particles</u>	<u>BAAQMD 6-1-305</u>	<u>N</u>		<u>Prohibition of nuisance</u>	<u>None</u>	<u>N</u>	<u>None</u>
<u>Visible Particles</u>	<u>SIP 6-305</u>	<u>Y</u>		<u>Prohibition of nuisance</u>	<u>None</u>	<u>N</u>	<u>None</u>
FP	BAAQMD 6-1-310	N		0.15 grain/dscf	<u>None</u>	N	<u>None</u>
<u>FP</u>	<u>SIP 6-310</u>	<u>Y</u>		<u>0.15 grain/dscf</u>	<u>None</u>	<u>N</u>	<u>None</u>
<u>FP</u>	<u>BAAQMD 6-1-310.3</u>	N		0.15 grain/dscf @ 6% O ₂	<u>None</u>	N	<u>None</u>
<u>FP</u>	<u>SIP 6-310.3</u>	<u>Y</u>		<u>0.15 grain/dscf @ 6% O₂</u>	<u>None</u>	<u>N</u>	<u>None</u>
SO ₂	BAAQMD 9-1-301	Y		GLC ⁺ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours	<u>None</u>	N	<u>None</u>
<u>SO₂</u>	<u>BAAQMD 9-1-304 Condition 21844 part 4</u>	Y		Fuel sulfur content limit of 0.5% by weight	BAAQMD <u>eCondition #21844 part 5</u>	P	Fuel certification
Hours of Operation	BAAQMD condition #21844 part 2	<u>Y</u>		<u>2100</u> hours per year	BAAQMD condition #21844 part 3	C	Totalizing Counter
<u>Hours of Operation</u>	<u>BAAQMD condition 25295 part 1</u>	<u>Y</u>		<u>20 hours per year operation</u>	<u>BAAQMD condition 25295 part 5</u>	<u>C</u>	<u>Totalizing counter, Records</u>

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII - D
Applicable Limits and Compliance Monitoring Requirements
S-9, TURBINE STARTER ENGINE

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
<u>Operation and Maintenance</u>	<u>40 CFR 63 Subpart ZZZZ Table 6 Part 9</u>	<u>Y</u>		<u>Operation and Maintenance according to manufacturer's instructions</u>	<u>40 CFR 63.6655(d)</u>	<u>C</u>	<u>Records</u>
<u>Maintenance Requirements</u>	<u>40 CFR 63 Subpart ZZZZ Table 2d BAAQMD condition 25295 part 4</u>	<u>Y</u>		<u>Oil and filter change</u> <u>Air filter Inspection</u> <u>Hose and belt inspection</u>	<u>40 CFR 63.6655(e)(3) BAAQMD condition 25295 part 6</u>	<u>P</u>	<u>Records</u>

⁺ Ground Level Concentration

Table VII - E
Applicable Limits and Compliance Monitoring Requirements
S-10 AND S-11 STANDBY GENERATOR DIESEL ENGINES

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD 6-1-303.1	<u>NY</u>		> Ringelmann No. 2 for no more than 3 minutes in any hour	<u>None</u>	<u>N</u>	<u>None</u>
<u>Opacity</u>	<u>SIP 6-303.1</u>	<u>Y</u>		<u>> Ringelmann No. 2 for no more than 3 minutes in any hour</u>	<u>None</u>	<u>N</u>	<u>None</u>
<u>Visible Particles</u>	<u>BAAQMD 6-1-305</u>	<u>N</u>		<u>Prohibition of nuisance</u>	<u>None</u>	<u>N</u>	<u>None</u>
<u>Visible Particles</u>	<u>SIP 6-305</u>	<u>Y</u>		<u>Prohibition of nuisance</u>	<u>None</u>	<u>N</u>	<u>None</u>
FP	BAAQMD 6-1-310	<u>Y</u>		0.15 grain/dscf	<u>None</u>	<u>N</u>	<u>None</u>
<u>FP</u>	<u>SIP 6-310</u>	<u>Y</u>		<u>0.15 grain/dscf</u>	<u>None</u>	<u>N</u>	<u>None</u>

VII. Applicable Emission Limits & Compliance Monitoring Requirements

Table VII - E
Applicable Limits and Compliance Monitoring Requirements
S-10 AND S-11 STANDBY GENERATOR DIESEL ENGINES

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
<u>FP</u>	BAAQMD 6-1-310.3	N <u>Y</u>		0.15 grain/dscf @ 6% O ₂		N	
<u>FP</u>	<u>SIP 6-310.3</u>	<u>Y</u>		<u>0.15 grain/dscf</u> <u>@ 6% O₂</u>	<u>None</u>	<u>N</u>	<u>None</u>
SO ₂	BAAQMD 9-1-301	Y		GLC ⁺ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours	<u>None</u>	N	<u>None</u>
Fuel Sulfur Content	BAAQMD 9-1-304 <u>Condition</u> <u>19698</u> <u>Part 4</u>	Y		Fuel sulfur content limit of 0.5% by weight	BAAQMD condition #19698, part 5	P	Fuel certification
Hours of Operation	BAAQMD condition #19698 part 2	<u>Y</u>		40 <u>50</u> hours per year discretionary operation	BAAQMD condition #19698 part 6	C	Totalizing counter
<u>Hours of Operation</u> <u>S-10</u>	<u>BAAQMD</u> <u>condition</u> <u>22820</u> <u>part 1</u>	<u>Y</u>		<u>20 hours per year</u> <u>discretionary operation</u>	<u>BAAQMD</u> <u>condition</u> <u>22820</u> <u>part 3 & 4</u>	<u>C</u>	<u>Totalizing counter,</u> <u>Records</u>
<u>Hours of Operation</u> <u>S-11</u>	<u>BAAQMD</u> <u>condition</u> <u>22830</u> <u>part 1</u>	<u>Y</u>		<u>30 hours per year</u> <u>discretionary operation</u>	<u>BAAQMD</u> <u>condition</u> <u>22830</u> <u>part 3 & 4</u>	<u>C</u>	<u>Totalizing counter,</u> <u>Records</u>
<u>Operation and Maintenance</u>	<u>40 CFR 63</u> <u>Subpart</u> <u>ZZZZ</u> <u>Table 6 Part</u> <u>2</u>	<u>Y</u>		<u>Operation and Maintenance</u> <u>according to manufacturer's</u> <u>instructions</u>	<u>40 CFR</u> <u>63.6655(d)</u>	<u>C</u>	<u>Records</u>
<u>Maintenance Requirements</u>	<u>40 CFR 63</u> <u>Subpart</u> <u>ZZZZ</u> <u>Table 2d</u>	<u>Y</u>		<u>Oil and filter change</u> <u>Air filter Inspection</u> <u>Hose and belt inspection</u>	<u>40 CFR</u> <u>63.6655(e)(3)</u>	<u>P</u>	<u>Records</u>

⁺Ground Level Concentration

VIII. TEST METHODS

The test methods associated with the emission limit of a District regulation are generally found in Section 600 of the regulation. The following table indicates only the test methods associated with the emission limits referenced in Section VII Applicable Emission Limits & Compliance Monitoring Requirements, of this permit.

**Table VIII
 Test Methods**

Applicable Requirement	Description of Requirement	Acceptable Test Methods
BAAQMD 6-301	Ringelmann No. 1 Limitation	Manual of Procedures, Volume I, Evaluation of Visible Emissions
BAAQMD 6-310	Particulate Weight Limitation	Manual of Procedures, Volume IV, ST-15, Particulates Sampling; or USEPA Method 5, Determination of Particulate Matter Emissions from Stationary Sources
BAAQMD 6-310.3	Particulate Weight Limitation	Manual of Procedures, Volume IV, ST-15, Particulates Sampling; or USEPA Method 5, Determination of Particulate Matter Emissions from Stationary Sources
BAAQMD 7-301	General Limit on Odorous Substances	Manual of Procedures, Volume IV, ST-12, Collection of Odorous Samples/BAAQMD Regulation 7-404
BAAQMD 8-5-117	Exemption, Low Vapor Pressure	Manual of Procedures, Volume III, Method 28, Determination of Vapor Pressure of Organic Liquids from Storage Tanks
BAAQMD 9-1-302	General Emission Limitation	Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide, Continuous Sampling, or ST-19B, Total Sulfur Oxides Integrated Sample
BAAQMD 9-1-304	Fuel Burning (Liquid and Solid Fuels)	Manual of Procedures, Volume III, Method 10, Determination of Sulfur in Fuel Oils.
BAAQMD 9-7-301.1	Performance Standard, NOx, Gaseous Fuel	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-7-301.2	Performance Standard, CO, Gaseous Fuel	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-7-302.1	Performance Standard, NOx, Non-Gaseous Fuel	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-7-302.2	Performance Standard, CO, Non-Gaseous Fuel	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling

VIII. Test Methods

**Table VIII
Test Methods**

Applicable Requirement	Description of Requirement	Acceptable Test Methods
BAAQMD 9-7-303	Emission Limits - Gaseous and Non-Gaseous Fuel, NOx and CO (9/16/92)	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and Manual of Procedures, Volume IV, ST-6, and Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-7-305.1	Natural Gas Curtailment Performance Standard, NOx	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-7-305.2	Natural Gas Curtailment Performance Standard, CO	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-7-306.1	Equipment Testing - Non-Gaseous Fuel NOx Performance Standard	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-7-306.2	Equipment Testing - Non-Gaseous Fuel CO Performance Standard	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-7-403	Initial Compliance Demonstration (9/16/92)	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-9-301.2	Emission Limits- Turbines over 10 mw w/o SCR (9/21/94)	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-9-304	Emission Limits, Interim RACT (9/21/94)	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-9-401	Certification, Efficiency	ASTM D240-87 or ASTM D-2382-88 for liquid hydrocarbon fuel or ASTM 1826-88 or ASTM 1945-81 in conjunction w/ASTM D3588-89 for gaseous fuels
SIP 12-4-301	Ringelmann 1 Limitations	Manual of Procedures, Volume I, Part 1, Evaluation of Visible Emissions

VIII. Test Methods

**Table VIII
 Test Methods**

Applicable Requirement	Description of Requirement	Acceptable Test Methods
NSPS Subpart GG, 40 CFR 60.332(a)	Standard for nitrogen oxides	EPA Method 20, Determination of nitrogen oxides, sulfur dioxide, and diluent emissions from gas turbines
NSPS Subpart GG, 40 CFR 60.333	Standard for sulfur dioxide	ASTM D2880-71 for liquid fuels, and ASTM D1072-80, D3031-81, D4084-82, or D3246-81 for gaseous fuels
NSPS Subpart Db, 40 CFR 60.44b(a)	NOx Limit	EPA Method 20, Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Gas Turbines
NSPS Subpart Dc, 40 CFR 60.43c(a), (c) & (d)	Opacity	EPA Method 9, Visual Determination of the Opacity of Emissions From Stationary Sources, NSPS Appendix A-4
Permit Condition 2878 part 1f	NOx Limit	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
Permit Condition 2878 part 1f	CO Limit	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
Permit Condition 2878 part 3a	NOx Limit	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
Permit Condition 2878 part 3b	NOx Limits	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
Permit Condition 2878 part 5	CO limit	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
PSD permit part IX, C	NOx Limits	EPA Method 20, Determination of nitrogen oxides, sulfur dioxide, and diluent emissions from gas turbines

IX. PERMIT SHIELD

A. Non-applicable Requirements

Pursuant to District Regulations 2-6-233 and 2-6-409.12, the federally enforceable regulations and/or standards cited in the following table[s] do not apply to the source or group of sources identified at the top of the table[s]. Enforcement actions and litigation may not be initiated against the source or group of sources covered by this shield based on the regulatory and/or statutory provisions cited, as long as the reasons listed below remain valid for the source or group of sources covered by this shield.

Table IX-A-1
S-1, S-2, S-3, S-4, Boilers

Citation	Title or Description
NSPS Subpart D	Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971 (Boiler capacities below 250 MM BTU/hr)
NSPS Subpart Da	Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978 (Boilers not built for the purposes of generating electricity)
NSPS Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (Boiler capacities below 100 MM BTU)
NSPS Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (Boilers built before 6/9/1989 and not modified or reconstructed since 6/9/1989)
40 CFR 63, subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (Facility is not a major source of HAP emissions)
40 CFR Part 64	Compliance Assurance Monitoring (Sources do not utilize abatement devices)
40 CFR Part 72	Acid Rain Permit Program (Qualifying power production facility)
BAAQMD 1-520	Opacity, NO _x , and CO ₂ or O ₂ Monitoring for steam generators over 250 MM BTU/hr (Boiler capacities below 250 MM BTU/hr)
BAAQMD 6-302	Opacity Limitation (District has not required monitoring)
BAAQMD 9-1-501	Area Monitoring Requirements (District has not required monitoring)
BAAQMD 9-1-502	Emission Monitoring Requirements (District has not required monitoring)

IX. Permit Shield

**Table IX-A-2
 S-6, Gas Turbine**

Citation	Title or Description
40 CFR 63, subpart YYYY	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (Facility is not a major source of HAP emissions)
40 CFR Part 64	Compliance Assurance Monitoring (Source does not utilize an abatement device)
40 CFR Part 72	Acid Rain Permit Program (Qualifying power production facility)
BAAQMD 1-520.1	Opacity Monitoring for steam generators over 250 MM BTU/hr (Requirement does not apply to turbines)
BAAQMD 6-302	Opacity Limitation (District has not required monitoring)
BAAQMD 9-1-501	Area Monitoring Requirements (District has not required monitoring)
BAAQMD 9-1-502	Emission Monitoring Requirements (District has not required monitoring)

**Table IX-A-3
 S-8, Duct Burner**

Citation	Title or Description
<u>40 CFR 60, Subpart GG</u>	<u>Standards of Performance for Stationary Gas Turbines</u> (Source is subject to Subpart Db)
40 CFR Part 64	Compliance Assurance Monitoring (Source does not utilize an abatement device)
40 CFR Part 72	Acid Rain Permit Program (Qualifying power production facility)
BAAQMD 1-520.1	Opacity, NOx, and CO ₂ or O ₂ Monitoring for steam generators over 250 MM BTU/hr (Boiler capacities below 250 MM BTU/hr)
BAAQMD 6-302	Opacity Limitation (District has not required monitoring)
BAAQMD 9-1-501	Area Monitoring Requirements (District has not required monitoring)
BAAQMD 9-1-502	Emission Monitoring Requirements (Duct burner does not burn liquid or solid fuels)

IX. Permit Shield

Table IX-A-4
S-9, Turbine Starter Engine, S-10, S-11 Standby Generator Diesel Engines

Citation	Title or Description
40 CFR 63, subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (Facility is not a major source of HAP emissions)

B. Subsumed requirements

None

X. Revision History

Initial Issuance (Application 17468):	May 11, 1998
Renewal: (Application 6648)	August 24, 2005
Administrative Amendment (Application 17366)	May 7, 2008
<u>Renewal (Application 21629)</u>	<u>TBD</u>
<u>Including Application 24546 (S-9 Engine ATCM)</u>	

XI. GLOSSARY

ACT

Federal Clean Air Act

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CEQA

California Environmental Quality Act

CFR

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

CO

Carbon Monoxide

Cumulative Increase

The sum of permitted emissions from each new or modified source since a specified date. Used to determine whether threshold-based requirements are triggered.

District

The Bay Area Air Quality Management District

EPA

The federal Environmental Protection Agency.

Excluded

Not subject to any District Regulations.

Federally Enforceable, FE

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part

XI. Glossary

52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPS), Part 63 (HAP), and Part 72 (Permits Regulation, Acid Rain), and also including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

FP

Filterable Particulate as measured by BAAQMD Method ST-15, Particulate.

GLC

Ground Level Concentration

HAP

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by 40 CFR Part 63.

Major Facility

A facility with potential emissions of: (1) at least 100 tons per year of any regulated air pollutant, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator.

MFR

Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Act and implemented by District Regulation 2, Rule 6.

MOP

The District's Manual of Procedures.

NAAQS

National Ambient Air Quality Standards

NESHAPS

National Emission Standards for Hazardous Air Pollutants. See in 40 CFR Part 61.

NMHC

Non-methane Hydrocarbons

NO_x

Oxides of nitrogen.

NSPS

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Act, and implemented by 40 CFR Part 60 and District Regulation 10.

NSR

New Source Review. A federal program for preconstruction review and permitting of new and modified sources of air pollutants for which the District is classified "non-attainment".

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Mandated by Title I of the Clean Air Act and implemented by 40 CFR Parts 51 and 52 as well as District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

Offset Requirement

A New Source Review requirement to provide federally enforceable emission offsets at a specified ratio for the emissions from a new or modified source and any pre-existing cumulative increase minus any onsite contemporaneous emission reduction credits. Applies to emissions of POC, NO_x, PM₁₀, and SO₂.

Phase II Acid Rain Facility

A facility that generates electricity for sale through fossil-fuel combustion and is not exempted by 40 CFR 72 from Titles IV and V of the Clean Air Act.

POC

Precursor Organic Compounds

PM

Total Particulate Matter

PM₁₀

Particulate matter with aerodynamic equivalent diameter of less than 10 microns

PSD

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

SIP

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

SO₂

Sulfur dioxide

Title V

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

VOC

Volatile Organic Compounds

Units of Measure:

XI. Glossary

bhp	=	brake-horsepower
BTU	=	British Thermal Unit
g	=	grams
gal	=	gallon
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inches
max	=	maximum
m ²	=	square meter
min	=	minute
mm	=	million
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scfm	=	standard cubic feet per minute
yr	=	year