

# Bay Area Air Quality Management District

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

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## Proposed

# MAJOR FACILITY REVIEW PERMIT

Issued To:

**Calpine Gilroy Cogen, L. P.**  
**Facility #B1180**

**Facility Address:**

1400 Pacheco Pass Highway  
Gilroy, CA 95020

**Mailing Address:**

P.O. Box 1764  
Gilroy, CA 95021

**Responsible Official**

~~Larry Krumland, Vice President,~~ Robert McCaffery, General Manager  
(408) ~~792-1234~~ 847-5328

**Facility Contact**

Brian Martin  
(408) 847-5328

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**Type of Facility:** Cogeneration Facility  
**Primary SIC:** 4911  
**Product:** Electricity

BAAQMD Permit Division Contact:  
~~Brenda Cabral~~ Dick Wocasek

**ISSUED BY THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

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Ellen Garvey, Air Pollution Control Officer/Executive 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  
5/17/005/17/01);

SIP Regulation 1 - General Provisions and Definitions

(as approved by EPA through 8/27/99);

BAAQMD Regulation 2, Rule 1 - Permits, General Requirements

(as amended by the District Board on 5/17/008/1/01);

SIP Regulation 2, Rule 1 - Permits, General Requirements

(as approved by EPA through 2/25/99);

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

(as amended by the District Board on 5/17/00);

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

(as approved by EPA through 2/25/99); and

BAAQMD Regulation 2, Rule 4 - Permits, Emissions Banking

(as amended by the District Board on 5/17/00).

SIP Regulation 2, Rule 4 - Permits, Emissions Banking

(as approved by EPA through 2/25/99).

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

(as amended by the District Board on ~~10/20/99~~5/17/01).

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

1. This Major Facility Review Permit was issued on May 12, 1998 and expires on May 12, 2003. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than November 12, 2002 and no earlier than May 12, 2002. **If a complete application for renewal has not been submitted in accordance with these deadlines, the facility may not operate after May 12, 2003.** (Regulation 2-6-307, 404.2, & 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. (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 permittee 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, nor 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 required to be maintained pursuant to this permit which the permittee considers to contain 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 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)

**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 which is subject to this permit to the APCO and/or to his or her designee.

## I. Standard Conditions (continued)

(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~~ creation of the record. (Regulation 2-6-501, Regulation 3; MOP Volume II, Part 3, §4.7)

### F. Monitoring Reports

Reports of all required monitoring ~~reports~~ must be submitted to the District at least once every six months, except where an applicable requirement specifies more frequent reporting. The first reporting period for this permit shall be May 12, 1998 to November 11, 1998. Subsequent reports shall be for the following periods: ~~November~~; November 12th through May 11th and May 12th through November 11th, and are due thirty days 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

(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 May 12th to May 11th of the following year. The certification shall be submitted by June 12th 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~~, 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:

## I. Standard Conditions (continued)

Director of the Air Division  
USEPA, Region IX  
75 Hawthorne Street  
San Francisco, CA ~~94105~~ 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 ~~caused by conditions beyond the permit holder's reasonable control~~ 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. ~~Any variance granted by the Hearing Board from any term or condition of this permit which lasts longer than 90 days will be subject to EPA approval.~~ (MOP Volume II, Part 3, §4.8)
3. ~~Notwithstanding the foregoing,~~ 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. (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 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 ~~Exceedence~~ of the maximum allowable capacity for any source is a violation of Regulation 2, Rule 1, Section 301. (Regulation 2-1-301)

### K. Accidental Release

This facility is subject to 40 CFR Part 68, Chemical Accident Prevention Provisions. The permit holder shall submit a risk management plan (RMP) by the date specified in §68.10. The permit holder shall also certify compliance with the requirements of Part 68 as part of

## I. Standard Conditions (continued)

the annual compliance certification, as required by Regulation 2, Rule 6. (40 CFR Part 68, Regulation 2, Rule 6)

### **L. Conditions to Implement Regulation 2, Rule 7, Acid Rain**

1. Every year starting January 30, 2000, the permit holder shall hold one sulfur dioxide allowance on January 30 for each ton of sulfur dioxide emitted during the preceding year from January 1 through December 31. (MOP Volume II, Part 3, §4.9)
2. The equipment installed for the continuous monitoring of CO<sub>2</sub> and NO<sub>x</sub> shall be maintained and operated in accordance with 40 CFR Parts 72 and 75. (Regulation 2-7, Acid Rain)
3. A written Quality Assurance program must be established in accordance with 40 CFR Part 75, Appendix B for NO<sub>x</sub> which includes, but is not limited to: procedures for daily calibration testing, quarterly linearity testing, record keeping and reporting implementation, and relative accuracy testing. (Regulation 2-7, Acid Rain)
4. The permit holder shall monitor SO<sub>2</sub> emissions in accordance with 40 CFR Part 72 and 75. (Regulation 2-7, Acid Rain)
5. The permit holder shall submit quarterly Electronic Data Reports (EDRs) to EPA for Turbines, S-3, S-4, S-5. These reports must be submitted within 30 days following the end of each calendar quarter and shall include all information required in § 75.64. (40 CFR Part 75)

## II. EQUIPMENT LIST

### A. Permitted Source List

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits.

**Table II-A- Permitted Sources**

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

S-#	Description	Make or Type	Model	Capacity
<u>3</u>	<u>Gas Turbine Generator, Natural Gas with water injection or dry low NOx burners</u>	<u>General Electric</u>	<u>LM6000PC</u>	<u>45 MW</u> <u>467.6 MMBtu/hour (HHV)</u>
<u>4</u>	<u>Gas Turbine Generator, Natural Gas with water injection or dry low NOx burners</u>	<u>General Electric</u>	<u>LM6000PC</u>	<u>45 MW</u> <u>467.6 MMBtu/hour (HHV)</u>
<u>5</u>	<u>Gas Turbine Generator, Natural Gas with water injection or dry low NOx burners</u>	<u>General Electric</u>	<u>LM6000PC</u>	<u>45 MW</u> <u>467.6 MMBtu/hour (HHV)</u>
<del>S</del> -100	Gas Turbine Generator, Natural Gas, Fuel Oil	General Electric	Frame 7	87 MW, 1085 MM Btu/hr (HHV) @ 35 F
<del>S</del> -101	Auxiliary Boiler, Natural Gas, Fuel Oil	Nebraska	NSE68	104 MM Btu/hr (natural gas) 101 MM Btu/hr (fuel oil)
<del>S</del> -102	Auxiliary Boiler, Natural Gas, Fuel Oil	Nebraska	NSE68	104 MM Btu/hr (natural gas) 101 MM Btu/hr (fuel oil)
<u>104</u>	<u>Cooling Tower, Counterflow,</u>	<u>Two Cell,</u>		<u>1.2 MM gallons per hour</u>

## II. Equipment List (continued)

### B. Abatement Device List

**Table II-B**

A-#	Description	Source(s) Controlle d	Applicable Requirement	Operating Parameters	Limit or Efficiency
3	<u>Oxidation catalyst</u>	3	<u>BAAQMD Condition #18102 part 19.3 &amp; 19.4</u>	<u>All conditions except startup and shutdown</u>	<u>CO &lt; 6 ppm POC &lt; 2 ppm</u>
4	<u>Selective Catalytic Reduction System</u>	3	<u>BAAQMD Condition #18102 part 19.1</u>	<u>All conditions except startup and shutdown</u>	<u>NOx &lt; 5 ppm</u>
5	<u>Oxidation catalyst</u>	4	<u>BAAQMD Condition #18102 part 19.3 &amp; 19.4</u>	<u>All conditions except startup and shutdown</u>	<u>CO &lt; 6 ppm POC &lt; 2 ppm</u>
6	<u>Selective Catalytic Reduction System</u>	4	<u>BAAQMD Condition #18102 part 19.1</u>	<u>All conditions except startup and shutdown</u>	<u>NOx &lt; 5 ppm</u>
7	<u>Oxidation catalyst</u>	5	<u>BAAQMD Condition #18102 part 19.3 &amp; 19.4</u>	<u>All conditions except startup and shutdown</u>	<u>CO &lt; 6 ppm POC &lt; 2 ppm</u>
8	<u>Selective Catalytic Reduction System</u>	5	<u>BAAQMD Condition #18102 part 19.1</u>	<u>All conditions except startup and shutdown</u>	<u>NOx &lt; 5 ppm</u>

**II. Equipment List (continued)**

**Table II-B**

<u>A-#</u>	<u>Description</u>	<u>Source(s) Controlle d</u>	<u>Applicable Requirement</u>	<u>Operating Parameters</u>	<u>Limit or Efficiency</u>
A- 100	<del>Catalytic Afterburner</del> <u>Oxidation Catalyst</u>	S-100	Cond #2780 part 3	<u>All conditions except startup and shutdown</u> <del>Oxidizing Catalyst shall operate during all periods of turbine operation except during start up, which will not exceed one half hour for warm start, or one hour for cold start.</del>	<u>CO &lt; 10 ppm</u>

### III. GENERALLY 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 ~~will~~ 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.

The dates in parenthesis 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
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 included in Appendix A of this permit if the SIP requirement is different from the current BAAQMD requirement.

**NOTE:**

There are differences between the current BAAQMD rule and the version of the rule in the SIP. ~~For specific information, contact the District's Rule Development Section of the Enforcement Division.~~ All sources must comply with both versions of the rule until US EPA has reviewed and approved the District's revision of the regulation.

**Table III**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
BAAQMD Regulation 1	General Provisions and Definitions (5/47/0005/02/01)	N
SIP Regulation 1	General Provisions and Definitions (8/27/99)	Y
BAAQMD Regulation 4	Air Pollution Episode Plan (3/20/91)	N
SIP Regulation 4	Air Pollution Episode Plan (8/06/90)	Y
BAAQMD Regulation 5	Open Burning (11/2/94)	N
BAAQMD Regulation 6	Particulate Matter and Visible Emissions (12/19/90)	N

### III. Generally Applicable Requirements (continued)

**Table III (continued)**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>
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 3	Organic Compounds - Architectural Coatings (12/20/95)	Y
BAAQMD Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (12/20/95)	N
SIP Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (3/22/95)	Y
BAAQMD Regulation 8, Rule 51	Organic Compounds - Adhesive and Sealant Products (12/20/95)	N
BAAQMD Regulation 11, Rule 2	Hazardous Pollutants - Asbestos Demolition, Renovation and Manufacturing (12/4/91)	Y
BAAQMD Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (7/11/90)	Y
SIP Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (9/2/81)	Y
EPA Regulation 40 CFR 82	Protection of Stratospheric Ozone (2/21/95)	
Subpart F, 40 CFR 82.156	Leak Repair	Y
Subpart F, 40 CFR 82.161	Certification of Technicians	Y
Subpart F, 40 CFR 82.166	Records of Refrigerant	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 parenthesis 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
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 included in Appendix A of this permit if the SIP requirements are different from the current BAAQMD requirements. All other text may be found in the regulations themselves.

**Table IV – A**  
**Source-specific Applicable Requirements**  
**S-3, S-4, S-5, GAS TURBINES**

<b><u>Applicable Requirement</u></b>	<b><u>Regulation Title or Description of Requirement</u></b>	<b><u>Federally Enforceable (Y/N)</u></b>	<b><u>Future Effective Date</u></b>
<b><u>BAAQMD Regulation 1</u></b>	<b><u>General Provisions and Definitions (11/3/93)</u></b>		
<u>1-522</u>	<u>Continuous Emission Monitoring and Recordkeeping Procedures</u>	<u>Y</u>	
<u>1-523</u>	<u>Parametric Monitoring and Recordkeeping Procedures</u>	<u>Y</u>	
<b><u>BAAQMD Regulation 6</u></b>	<b><u>Particulate Matter and Visible Emissions (12/19/90)</u></b>		
<u>6-301</u>	<u>Ringelmann Number 1 Limitation</u>	<u>N</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>6-401</u>	<u>Appearance of Emissions</u>	<u>Y</u>	
<b><u>BAAQMD Regulation 9, Rule 1</u></b>	<b><u>Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)</u></b>		
<u>9-1-301</u>	<u>Limitations on Ground Level Concentrations</u>	<u>Y</u>	
<u>9-1-302</u>	<u>General Emission Limitations</u>	<u>Y</u>	

#### IV. Applicable Requirements (continued)

**Table IV – A**  
**Source-specific Applicable Requirements**  
**S-3, S-4, S-5, GAS TURBINES**

<b><u>Applicable Requirement</u></b>	<b><u>Regulation Title or Description of Requirement</u></b>	<b><u>Federally Enforceable (Y/N)</u></b>	<b><u>Future Effective Date</u></b>
<b><u>BAAQMD Regulation 9, Rule 9</u></b>	<b><u>Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines (9/21/94)</u></b>		
9-9-113	<u>Exemption – Inspection/Maintenance</u>	Y	
9-9-114	<u>Exemption – Start-Up/Shutdown</u>	Y	
9-9-301	<u>Emission Limits, General</u>	Y	
9-9-301.3	<u>Emission Limits- Turbines Rated ≥ 10 MW w/SCR</u>	Y	
9-9-501	<u>Monitoring and recordkeeping requirements</u>	Y	
<b><u>BAAQMD Manual of Procedures, Volume V</u></b>	<b><u>Continuous Emission Monitoring Policy and Procedures (1/20/82)</u></b>	Y	
<b><u>40 CFR 60 Subpart A</u></b>	<b><u>Standards of Performance for New Stationary Sources (12/23/71)</u></b>	Y	
	<b><u>General Provisions</u></b>	Y	
60.7(a)	<u>Written notification</u>	Y	
60.7(b)	<u>Records</u>	Y	
60.8	<u>Performance Tests</u>	Y	
60.9	<u>Availability of Information</u>	Y	
60.11(a)	<u>Compliance with standards and maintenance requirements</u>	Y	
60.11(d)	<u>Minimizing emissions</u>	Y	
60.12	<u>Circumvention</u>	Y	
60.13	<u>Monitoring Requirements</u>	Y	
60.19	<u>General notification and reporting requirements</u>	Y	
<b><u>Subpart GG</u></b>	<b><u>Standards of Performance for Stationary Gas Turbines (1/27/82)</u></b>		
60.332(a)(1)	<u>NOx limit</u>	Y	
60.333	<u>Performance Standards, SO2</u>	Y	
60.334(b)(2)	<u>Sulfur and nitrogen content of fuel</u>	Y	
60.335	<u>Test Methods and Procedures</u>	Y	
<b><u>40 CFR Part 72</u></b>	<b><u>Title IV – Acid Rain Program</u></b>	Y	
<b><u>40 CFR Part 75</u></b>	<b><u>Code of Federal Regulations, Continuous Emissions Monitoring</u></b>	Y	

#### IV. Applicable Requirements (continued)

**Table IV – A**  
**Source-specific Applicable Requirements**  
**S-3, S-4, S-5, GAS TURBINES**

<b><u>Applicable Requirement</u></b>	<b><u>Regulation Title or Description of Requirement</u></b>	<b><u>Federally Enforceable (Y/N)</u></b>	<b><u>Future Effective Date</u></b>
<b><u>BAAQMD Condition #18102</u></b>			
<u>Definitions</u>	<u>Definitions</u>	<u>Y</u>	
<u>part 1</u>	<u>Minimization of emissions during commissioning period</u>	<u>Y</u>	
<u>part 2</u>	<u>Tuning to minimize emissions</u>	<u>Y</u>	
<u>part 3</u>	<u>Installation of SCR and oxidation catalyst as early as possible</u>	<u>Y</u>	
<u>part 4</u>	<u>Compliance with NOx and CO emission limits</u>	<u>Y</u>	
<u>part 5</u>	<u>Submittal of commissioning plan</u>	<u>Y</u>	
<u>part 6</u>	<u>Continuous emission monitors and recorders for firing hours, fuel flow rates, NOx, CO, and oxygen concentrations</u>	<u>Y</u>	
<u>part 7</u>	<u>Monitors installed prior to first firing.</u>	<u>Y</u>	
<u>part 8</u>	<u>Limit on uncontrolled operation during commissioning</u>	<u>Y</u>	
<u>part 9</u>	<u>Mass emission rates during commissioning included in annual limits</u>	<u>Y</u>	
<u>part 10</u>	<u>Mass emission rates during commissioning</u>	<u>Y</u>	
<u>part 11</u>	<u>Source test</u>	<u>Y</u>	
<u>part 12</u>	<u>Consistency with analyses (2-1-403)</u>	<u>Y</u>	
<u>part 13</u>	<u>Conflicts between conditions (1-102)</u>	<u>Y</u>	
<u>part 14</u>	<u>Reimbursement of costs (2-1-303)</u>	<u>Y</u>	
<u>part 15</u>	<u>Access to Records and Facilities (1-440, 1-441)</u>	<u>Y</u>	
<u>part 16</u>	<u>Notification of Commencement of Operation (2-1-302)</u>	<u>Y</u>	
<u>part 17</u>	<u>Operations (2-1-307)</u>	<u>Y</u>	
<u>part 18</u>	<u>Visible emissions (6-301)</u>	<u>Y</u>	
<u>Part 19</u>	<u>Emission Limits</u>		
<u>Part 19.1</u>	<u>Emission Limit for NOX (BACT)</u>	<u>Y</u>	
<u>Part 19.2</u>	<u>Emission Limit for ammonia (BACT)</u>	<u>N</u>	
<u>Part 19.3</u>	<u>Emission Limit for carbon monoxide (BACT)</u>	<u>Y</u>	
<u>Part 19.4</u>	<u>Emission Limit for precursor organic compounds (BACT)</u>	<u>Y</u>	
<u>Part 19.5</u>	<u>Emission Limit for PM10 (BACT, cumulative increase)</u>	<u>Y</u>	
<u>Part 19.6</u>	<u>Emission Limit for SOX (BACT, cumulative increase)</u>	<u>Y</u>	
<u>Part 20</u>	<u>Turbine Startup (cumulative increase)</u>	<u>Y</u>	
<u>Part 21</u>	<u>Turbine Shutdown (cumulative increase)</u>	<u>Y</u>	
<u>Part 22</u>	<u>Mass emission limits (cumulative increase, record keeping)</u>	<u>Y</u>	

#### IV. Applicable Requirements (continued)

**Table IV – A**  
**Source-specific Applicable Requirements**  
**S-3, S-4, S-5, GAS TURBINES**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
part 23	Operational Limits (cumulative increase)	Y	
part 24	Monitoring requirements (monitoring, record keeping)	Y	
part 25	Source testing/RATA (source test requirements, monitoring)	Y	
part 26	Quality assurance program (CEM requirements)	Y	
part 27	Compliance with 40 CFR 60, Subpart GG (NSPS)	Y	
part 28	Breakdowns (1-208)	Y	
part 29	Breakdown reports (1-208)	Y	
part 30	Recordkeeping (recordkeeping)	Y	
part 31	Records retention for five years (recordkeeping)	Y	
part 32	Reporting (recordkeeping, reporting)	Y	
part 33	Emission offsets (emission offsets)	Y	
part 34	District Operating permit (2-2, 2-6)	Y	
part 35	Title IV and Title V permits (2-6)	Y	

**Table IV-BA (continued)**  
**S-100 – GAS TURBINE**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
<b>BAAQMD Regulation 1</b>	<b>General Provisions and Definitions (11/3/93)</b>		
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 Inoperation 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	
1-522.10	Monitors Required by Sections 1-521 or 2-1-403	Y	

#### IV. Applicable Requirements (continued)

**Table IV-BA (continued)**  
**S-100 – GAS TURBINE**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
1-602	Area and Continuous Emission Monitoring Requirements	N	
<b>BAAQMD Regulation 2, Rule 1</b>	<b>Regulation 2, Rule 1 – Permits, General Requirements (6/7/95)</b>		
2-1-501	Monitors	N	
<b>BAAQMD Regulation 6</b>	<b>Particulate Matter and Visible Emissions (12/19/90)</b>		
6-301	Ringelmann Number 1 Limitation	N	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-401	Appearance of Emissions	Y	
<b>BAAQMD Regulation 9, Rule 1</b>	<b>Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)</b>		
9-1-301	Limitations on Ground Level Concentrations	N	
9-1-302	General Emission Limitations	Y	
9-1-304	Fuel Burning (Liquid and Solid Fuels)	Y	
<b>BAAQMD Regulation 9, Rule 9</b>	<b>Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines (9/21/94)</b>		
9-9-113	Exemption – Inspection/Maintenance	Y	
9-9-114	Exemption – Start-Up/Shutdown	Y	
9-9-305	Emission Limits, Existing Low-NOx Turbines	Y	
9-9-401	Certification, Efficiency	Y	
9-9-501	Monitoring and recordkeeping requirements	Y	
<b>BAAQMD Manual of Procedures, Volume V</b>	<b>Continuous Emission Monitoring Policy and Procedures (1/20/82)</b>	Y	
<b>40 CFR 60</b>	<b>Standards of Performance for New Stationary Sources (12/23/71)</b>	Y	
Subpart A	General Provisions	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	

#### IV. Applicable Requirements (continued)

**Table IV-BA (continued)**  
**S-100 – GAS TURBINE**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
60.11(d)	Minimizing emissions	Y	
60.12	Circumvention	Y	
60.19	General notification and reporting requirements	Y	
Subpart GG	Standards of Performance for Stationary Gas Turbines (1/27/82)		
60.332(a)(1)	NOx limit	Y	
60.333	Performance Standards, SO2	Y	
60.335	Test Methods and Procedures	Y	
<b>BAAQMD Manual of Procedures, Volume V</b>	<b>Continuous Emission Monitoring Policy and Procedures (1/20/82)</b>	Y	
<b>40 CFR 72</b>	<b>Acid Rain Program</b>		
72.6(b)(6)	Exemption from requirements of Acid Rain Program	Y	
<b>BAAQMD Cond# 2780</b>			
Part 1a	BACT NOX Limit (basis: BACT, PSD)	Y	
Part 1b	Startup and shutdowns (basis: BACT)	Y	
Part 1c	Steam Injection (basis: BACT, PSD)	Y	
Part 1e	RACT NOX limit adjusted for capacity increase and efficiency (basis: 2-2-604, 9-9-113, 9-9-114, 9-9-305, 9-9-401)	Y	
Part 1f	Annual NOX limit (basis: BACT, 9-9-305, 2-2-604)	Y	
Part 1g	Daily NOX limit (basis: 2-2-301)	Y	
Part 3a	CO control requirement (basis: BACT)	Y	
Part 3b	Annual CO emission limit (basis: BACT)	Y	
Part 3c	CO concentration limit (basis: BACT)	Y	
Part 3d	CO emissions during Startup and shutdown periods (basis: BACT)	Y	
Part 3e	CO emissions during operation at less than 80 percent load (basis: BACT)	Y	
part 3f	CO emissions during operation at low ambient temperature (basis: BACT)	Y	
part 3g	CO emissions during fuel oil combustion (basis: BACT)	Y	
part 5	Fuel oil sulfur limit (basis: BACT)	Y	
part 6	NMHC/TSP Limit (basis: Cumulative increase)	Y	
part 6a	Particulate monitoring (basis: 2-6-501)	Y	
part 6b	Particulate recordkeeping (basis: 2-6-501)	Y	
part 6c	Particulate emission factor and calculation (basis: 2-6-501)	Y	

#### IV. Applicable Requirements (continued)

**Table IV-BA (continued)**  
**S-100 – GAS TURBINE**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
part 7	Natural Gas Curtailment Requirement (basis: BACT, PSD)	Y	
part 8	Steam Injection (basis: BACT)	Y	
part 10a	SO2 Limit (basis: BACT)	Y	
part 10b	SO2 monitoring during fuel oil combustion (basis: 2-6-501)	Y	
part 11	CEM requirement (basis: PSD, BACT, 2-1-403)	Y	
part 13a	Stack height (basis: PSD)	Y	
part 13b	Sampling ports (basis: BAAQMD 1-501)	Y	
part 14	Recordkeeping (basis: PSD, BACT)	Y	
part 15	Fuel oil/NOx limit demonstration (basis: BACT)	Y	
part 17	Fuel Usage limit (basis: Cumulative increase)	Y	
part 18	Hours of Operation (basis: Cumulative increase)	Y	
<b>PSD Permit</b>			
III	Facilities Operation	Y	
V	Right to Entry	Y	
VI	Transfer of Ownership	Y	
VII	Severability	Y	
VIII	Other Applicable Regulations	Y	
IX, C	Emission Limits for NOx	Y	
IX, D	Performance Tests	Y	
IX, E	Continuous Emission Monitoring	Y	
IX, F	Fuel Usage and Sulfur Content/Steam Injection	Y	
IX, G	New Source Performance Standards	Y	

#### IV. Applicable Requirements (continued)

**Table IV-CB**  
**S-101, S-102 – BOILERS**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<b>BAAQMD Regulation 1</b>	<b>General Provisions and Definitions (11/3/93)</b>		
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 Inoperation 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	
1-522.10	Monitors Required by Sections 1-521 or 2-1-403	Y	
1-602	Area and Continuous Emission Monitoring Requirements	Y	
<b>BAAQMD Regulation 2, Rule 1</b>	<b>Regulation 2, Rule 1 - Permits, General Requirements (6/7/95)</b>		
2-1-501	Monitors	N	
<b>BAAQMD Regulation 6</b>	<b>Particulate Matter and Visible Emissions (12/19/90)</b>		
6-301	Ringelmann Number 1 Limitation	N	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-401	Appearance of Emissions	Y	
<b>BAAQMD Regulation 9, Rule 1</b>	<b>Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)</b>		
9-1-301	Limitations on Ground Level Concentrations	N	
9-1-302	General Emission Limitations	Y	
9-1-304	Fuel Burning (Liquid and Solid Fuels)	Y	
<b>BAAQMD Regulation 9, Rule 7</b>	<b>Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters (9/15/93)</b>		

#### IV. Applicable Requirements (continued)

**Table IV-CB**  
**S-101, S-102 – BOILERS**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
9-7-301	Emission Limits-Gaseous Fuel	Y	
9-7-301.1	Emission Limits-NOx	Y	
9-7-301.2	Emission Limits-CO	Y	
9-7-302	Emission Limits-Non-Gaseous Fuel	Y	
9-7-302.1	Emission Limits-NOx	Y	
9-7-302.2	Emission Limits-CO	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	Natural Gas Curtailment-Non-Gaseous Fuel: NOx limit	Y	
9-7-305.2	Natural Gas Curtailment-Non-Gaseous Fuel: CO limit	Y	
9-7-306	Equipment Testing Non-Gaseous Fuel	Y	
9-7-306.1	Emission Limits-NOx	Y	
9-7-306.2	Emission Limits-CO	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	
9-7-603	Compliance Determination	Y	
<b>BAAQMD Manual of Procedures, Volume V</b>	<b>Continuous Emission Monitoring Policy and Procedures (1/20/82)</b>		
40 CFR 60	Standards of Performance for New Stationary Sources (12/23/71)	Y	
Subpart A	General Provisions	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	

#### IV. Applicable Requirements (continued)

**Table IV-CB**  
**S-101, S-102 – BOILERS**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
60.12	Circumvention	Y	
60.19	General notification and reporting requirements	Y	
Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (12/16/87)	Y	
60.40b (b)(3)	NOX limits (Not subject to SO2 and particulate limits)	Y	
60.44b (a)(1)(ii)	NOx limit	Y	
60.44b(h)	NOx limit applicable at all times	Y	
60.44b(i)	Compliance: 24-hr basis	Y	
<b>BAAQMD Cond #2780</b>			
part 3b	Annual CO emission limit (basis: BACT)	Y	
part 4	NOx limit (basis: PSD, BACT)	Y	
part 5	Fuel oil sulfur limit (basis: PSD, BACT)	Y	
part 6	NMHC/TSP Limit (basis: Cumulative increase)	Y	
part 6a	Particulate monitoring (basis: 2-6-501)	Y	
part 6b	Particulate recordkeeping (basis: 2-6-501)	Y	
part 10a	SO <sub>2</sub> Limit (basis: BACT)	Y	
part 10b	SO2 monitoring during fuel oil combustion (basis: 2-6-501)	Y	
part 11	CEM requirement (basis: PSD, BACT, 2-1-403)	Y	
part 13b	Sampling ports (BAAQMD 1-501)	Y	
part 14	Recordkeeping (basis: PSD, BACT)	Y	
part 17	Fuel Usage limit (basis: Cumulative increase)	Y	
part 18	Hours of Operation (basis: Cumulative increase)	Y	
<b>PSD Permit</b>			
III	Facilities Operation	Y	
V	Right to Entry	Y	
VI	Transfer of Ownership	Y	
VII	Severability	Y	
VIII	Other Applicable Regulations	Y	
IX, C	Emission Limits for NOx	Y	
IX, D	Performance Tests	Y	
IX, F	Fuel Usage and Sulfur Content	Y	

**IV. Applicable Requirements (continued)**

**Table IV-D**  
**S-104 – COOLING TOWER**

<u>Applicable Requirement</u>	<u>Regulation Title or Description of Requirement</u>	<u>Federally Enforceable (Y/N)</u>	<u>Future Effective Date</u>
<b><u>BAAQMD Regulation 6</u></b>	<b><u>Particulate Matter and Visible Emissions (12/19/90)</u></b>		
<u>6-301</u>	<u>Ringelmann Number 1 Limitation</u>	<u>Y</u>	
<u>6-305</u>	<u>Visible Particles</u>	<u>Y</u>	
<u>6-311</u>	<u>General Operations</u>	<u>Y</u>	
<u>6-401</u>	<u>Appearance of Emissions</u>	<u>Y</u>	

## 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.

### A. Source-Specific Permit Conditions

Calpine Gilroy Cogen, L. P.  
Facility #B1180

**For S-100 - GAS TURBINE,**  
**S-101 AND S-102, BOILERS**

PERMIT CONDITION #2780 (amended August 29, 1987, June 27, 1989, September 13, 1990 [APPLICATION NO. 5140], May, 1998 [Application #25841], December, 1998 [Application #18872], and January, 2000 [Application #455])

- 1a. Except as provided in condition 7, the oxides of nitrogen (NO<sub>x</sub>) concentration in the gas turbine exhaust shall not exceed ~~25 ppmvd~~ 25 ppmvd at 15% oxygen averaged over any three-hour period whether firing natural gas or fuel oil. (BACT, PSD)
- 1b. The limit in part 1a shall not apply during cold start-up, which is not to exceed four hours, or ~~shut-down~~ shutdown procedure, which is not to exceed two hours. However, for daily start-ups after a ~~shut-down~~ shutdown of twelve (12) hours or less, the start-up period shall be limited to one (1) hour. (BACT)
- 1c. During any mode of operation, the owner or operator shall inject steam for NO<sub>x</sub> control at the turbine when steam of specified pressure and temperature is available. (BACT, PSD)
- 1d. ~~deleted~~ Deleted BAAQMD Application #445
- 1e. Effective after startup of the modification proposed in Application #445, the oxides of nitrogen (NO<sub>x</sub>) concentration in the gas turbine exhaust shall not exceed 21.0 ~~ppmvd~~ ppmvd at 15% oxygen averaged over any calendar day whether firing natural gas or fuel oil, excluding periods of startup or shutdown pursuant to Regulation 9-9-114 or periods of inspection and maintenance pursuant to Regulation 9-9-113. (2-2-604, 9-9-113, 9-9-114, 9-9-305, 9-9-401)
- 1f. Mass emissions of NO<sub>x</sub> at S-100~~1~~, Gas Turbine, shall not exceed 323.7 tons per any

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

- consecutive twelve months. The permit holder shall install current Best Available Control Technology if this limit is exceeded or if the permit holder applies for a limit exceeding this limit. (BACT, 9-9-305, 2-2-604)
- 1g. Mass emissions of NO<sub>x</sub> at ~~S-100~~, Gas Turbine, shall not exceed 1876 ~~lbs.~~ in any calendar day. (Regulation 2-2-301)
2. (~~deleted~~Deleted BAAQMD Title V application #25841)
- 3a. An oxidizing catalyst (A100) shall reduce CO emissions from the gas turbine (S-100). The catalyst shall operate during all periods of turbine operation except during start-up, which shall not exceed one hour for warm start, or four hour for a cold start. (9/98 BACT)
- 3b. Annual CO emissions shall not exceed 100 tons in any consecutive twelve months for ~~the entire facility~~ sources S-100, S-101, and S-102. Sampling ports for testing for compliance with this condition shall be maintained as approved by the District's Source Test Section. (6/27/89) (BACT)
- 3c. CO emissions in the gas turbine exhaust shall not exceed 10 ~~ppmv~~ppmvd at 15% oxygen over any three-hour period whether firing natural gas or fuel oil. (9/98 BACT)
- 3d. The limit in paragraph 3c shall not apply during startup and shutdown periods. Emissions during startup and shutdown periods shall be limited to 14670 ~~lbs.~~ per any consecutive twelve months. (6/27/89 BACT)
- 3e. The limit in paragraph 3c shall not apply during operation at less than 80 percent load, which is not to exceed 750 hours in any consecutive twelve months. The emissions during operation at less than 80 percent load shall not exceed 14.8 tons per any consecutive twelve months. (9/98 BACT)
- 3f. The limit in paragraph 3c shall not apply when ambient temperature is less than 35 degrees F. The CO limit when ambient temperature is less than 35 degrees F shall be 15 ~~ppmv~~ppmvd, averaged over one hour. Operation at this alternate limit shall be limited to 100 hours in any consecutive twelve-month period. Emissions of CO while operating under this condition shall be limited to 3120 ~~lbs.~~ in any consecutive twelve-month period. (9/98 BACT)
- 3g. The limit in paragraph 3c shall not apply during periods of natural gas curtailment and for short testing periods using non-gaseous fuel. However, the operator shall shut down ~~sources S-100, S-101, and S-102 the facility~~ sources S-100, S-101, and S-102 and apply for an increase in the CO limit if operating with non-gaseous fuel causes ~~sources S-100, S-101, and S-102 the facility~~ to exceed the annual CO limit in paragraph 3b. (BACT)
4. Nitrogen oxide (NO<sub>x</sub>) emissions from each auxiliary boiler (S-101, S-102) shall not exceed 40 ~~ppmv~~ppmvd at 3% oxygen averaged over any three-hour period. (PSD,

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

BACT)

5. Any fuel oil fired (except as provided in condition #7) shall not exceed a maximum sulfur content of 0.12% (by weight). The owner or operator shall maintain records on the duration of fuel oil firing, the sulfur content, and in which operating sources fuel oil firing took place. All fuel receipts must be certified to 0.12% ~~weight~~ weight sulfur or less. (PSD, BACT)
6. Total emissions from the gas turbine (S-100) and auxiliary boilers (S-101, S-102) shall not exceed 25 ton/year TSP or ~~40-ton/40-ton/yr.~~ NMHC. (Cumulative increase)
  - 6a. As long as natural gas is burned exclusively at the turbine and boilers, particulate emissions shall not be monitored. Within 2 weeks of fuel oil use at S-100, Turbine, or S-101-S-102, Boilers, the permit holder shall have source tests performed to measure TSP from the source or sources burning fuel oil. As a contingency measure, the permit holder shall submit a proposed test protocol to the Source Test group at the District within 3 months of issuance of this permit for approval. The permit holder shall notify the Source Test group at least one week prior to performing the test or tests. The test or tests shall form the basis for the emission factor or factors to be used when burning fuel oil. (basis: Regulation 2-6-501)
  - 6b. After fuel oil firing has commenced, the permit holder shall keep records of fuel oil firing to determine whether the ~~25-tpy~~ 25-tpy limit for TSP has been violated. The permit holder shall use these records to determine the TSP emissions on a rolling ~~twelve month~~ twelve-month basis. In this case, the emission factors used for natural gas burning shall be:  
Turbine: 2.5 ~~lb~~ lb/hr  
Boilers: 5 ~~lb~~ lb/mmscf natural gas  
(basis: Regulation 2-6-501)
  - 6c. After the source test required by part 17 is performed, the permit holder shall use the source test to develop an emission factor for particulate for the turbine and shall use the emission factor to determine the particulate emissions from the turbine on a rolling twelve month basis for compliance with part 6 of this condition. (basis: Regulation 2-6-501)
  - 7a. During periods of natural gas curtailment, the maximum sulfur content of the fuel oil burned shall not exceed 0.25% (by weight), provided that the gas turbine was being fired on natural gas prior to the curtailment.
  - 7b. During such periods, the NO<sub>x</sub> emission limit in condition #1a shall not apply.

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

NOx will be controlled via steam injection at no less than the rate determined by the steam/fuel ratio specified for natural gas firing and no greater than the lesser of the rate determined by the manufacturers recommended maximum steam/fuel ratio or 83,000 ~~lb~~lb/hr (at 59 F). (PSD, BACT)

8. The steam injection to control NOx emissions from the turbine shall be operated during all periods when injection steam is available at the specified pressure and temperature. (BACT)
9. Pursuant to the PSD permit, the owner or operator shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of steam injected to fuel fired in the turbine. (PSD, 2-1-403)
- 10a. The emissions of sulfur dioxide (SO2) shall not exceed 3087 ~~lb~~lb/day from ~~the entire facility~~sources S-100, S-101, and S-102, except under natural gas curtailment as stated in condition #7. (BACT)
- 10b. The daily SO2 limit shall not be monitored when sources S-100, S-101, and S-102 ~~the facility~~ burns natural gas exclusively. When sources S-100, S-101, and S-102 ~~the facility~~ burns fuel oil, and ~~is are~~ not operating under natural gas curtailment, the SO2 limit shall be monitored by calculating the SO2 emitted using the following equation:

$$\begin{aligned} & \text{SO}_2 \text{ emitted/day} = \\ & (\text{fuel oil burned}) \times (\text{density fuel oil}) \times (\%S \text{ by weight}) \times (2.0 \text{ } \text{SO}_2/\text{S}) \end{aligned}$$

Fuel oil shall be measured in gal/day. Density shall be measured in ~~lb~~lb/gal. The owner or operator may measure the density or use a default value of 7.20 ~~lb~~lb/gal. The sulfur content shall be as certified by the supplier. The owner or operator shall calculate the SO2 emitted on a daily basis when sources S-100, S-101, and S-102 ~~the facility~~ burns fuel oil, unless sources S-100, S-101, and S-102 ~~the facility~~ is under natural gas curtailment. In addition to the records required by Condition 6b, the following records shall be kept:

- sulfur content of the fuel by weight
- density of the fuel

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

SO<sub>2</sub> emitted  
(Regulation 2-6-501)

11. The owner or operator shall install, calibrate and operate District approved continuous in-stack emission monitors for nitrogen oxides, carbon monoxide, and either oxygen or carbon dioxide at the turbine and the boilers. (PSD, BACT, 2-1-403)
12. (deleted BAAQMD Title V application #25841)
- 13a. The exhaust stack from the gas turbine (P-100) shall be constructed to a height of at least 80 feet. (PSD)
- 13b. Sampling ports for testing for compliance with these conditions shall be maintained as approved by the District's Source Test Division. (BAAQMD 1-501)
14. All records associated with the above conditions shall be retained by the owner or operator, for at least five years, for review by the District and shall be supplied to the District upon request. The recording format of ~~conditions parts~~ #5, #9, and #17 shall be subject to the approval of the APCO. (PSD, BACT)
15. Prior to burning fuel oil as the primary fuel in the gas turbine, the owner or operator shall demonstrate to the satisfaction of the APCO, during an approved test period, that the "quiet combustor" is capable of meeting the emission requirements for part #1. If within six months of initial start-up of fuel oil as a discretionary fuel, the applicant is unable to achieve the concentration limitation of 25 ppm, the applicant shall take action to install a selective catalytic reduction system, or another APCO approved equivalent control system capable of satisfying the emission limit in condition #1. (BACT)
16. (deleted BAAQMD Title V application #25841)
17. In order to assure that the offset trigger levels for NMHC (40 TPY) and the PSD modeling trigger level for TSP (25 TPY) are not exceeded, total fuel oil usage in the gas turbine (S-100) shall not exceed 0.55 million barrels/year, except as provided below: "If the owner or operator can demonstrate, through the use of District approved source test methods, that the mass emissions of NMHC exiting the catalytic converter are less than those used to establish the above barrel limitation, then that limit may be renegotiated." (Cumulative increase)

## **VI. Permit Conditions (continued)**

### **A. Source-Specific Permit Conditions (continued)**

18. The auxiliary boilers (S-101, S-102) shall not operate simultaneously with the gas turbine more than a combined total of 28 boiler hours/day or 3950 boiler hours/year. The auxiliary boilers may operate any time during period of gas turbine outage.  
(9/13/90) (Cumulative increase)

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

#### Condition #14299

For **S-100 - GAS TURBINE,**  
**S-101 AND S-102, BOILERS**

1. All natural gas burned at sources S-100, Gas Turbine, and S-101-S-102, Boilers shall be PUC quality gas. (basis: 2-1-403)
- 

Following are the PSD conditions imposed by EPA before construction in 1985.

For **S-100 - GAS TURBINE,**  
**S-101 AND S-102, BOILERS**

- I. (deleted BAAQMD Title V application #25841)
- II. (deleted BAAQMD Title V application #25841)
- 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 #25841)

#### 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:

- 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

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

- 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 #25841)

#### B. Air Pollution Control Equipment

On and after the date of startup of the ~~facility~~ S100, Turbine, the owner or operator shall install, continuously operate, and maintain a steam injection system to reduce emission of nitrogen oxides from the gas turbine.

#### C. Emission Limits for NOX

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

On and after the date of startup of the gas turbine, the owner or operator shall not discharge or cause the discharge into the atmosphere NOX in excess of 25 ppmv at 15% O<sub>2</sub> (3-hour average). (PSD)

This limit shall not apply during cold start-up, which is not to exceed four hours, or ~~shut-down~~shutdown procedure, which is not to exceed two hours. However, for daily start-ups after a ~~shut-down~~shutdown of twelve (12) hours or less, the start-up period shall be limited to one (1) hour.

On and after the date of startup of the auxiliary boilers, the owner or operator shall not discharge or cause the discharge into the atmosphere NOX in excess of 40 ppmv at 3% O<sub>2</sub> (3-hour average). (PSD)

#### D. Performance Tests

1. The owner or operator shall conduct performance tests for NOX and furnish the Bay Area Air Quality Management District and the EPA a written report of the results of such tests upon written request of EPA or the District. Any test for NOX shall be conducted at the maximum capacity of the ~~facility~~emission unit being tested. (PSD)
2. Performance tests for the emissions of NO<sub>x</sub>, shall be conducted and the results reported in accordance with the test method set forth in 40 CFR 60, Part 60.8 and Appendix A. Performance tests for the emission of NOX shall be conducted using EPA Methods 7 and 20. (PSD)

The EPA (Attn: A-3-3) shall be notified in writing at least 30 days prior to such tests to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. (PSD)

Such prior approval shall minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from the EPA. (PSD)

#### E. Continuous Emission Monitoring

1. Prior to the date of startup and thereafter, the owner or operator shall install, maintain and operate the following continuous monitoring systems in the heat recovery steam generator exhaust stack:

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

Continuous monitoring systems to measure stack gas NOX concentration, fuel usage, steam-to-fuel ratio, and either O2 or CO2 concentrations. The systems shall meet EPA monitoring performance specifications (40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specifications). (PSD)

2. The owner or operator shall maintain a file of all measurements, including continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurement, maintenance, reports and records. (PSD)
3. The owner or operator shall submit a written report of all excess emissions to EPA (Attn: A-3-3) for every calendar quarter. The report shall include the following:
  - a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions. (PSD)
  - b. Specific identification of each period of excess emissions that occurs during start-ups, shutdowns and malfunctions of the cogeneration gas turbine system. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted shall also be reported. (PSD)
  - c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments. (PSD)
  - d. When no excess emission have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report. (PSD)
  - e. Excess emissions shall be defined as any three-hour period during which the average emissions of NOX, as measured by the continuous monitoring system, exceeds the NOX maximum emission limits set forth in Conditions IX. C. (PSD)

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

4. Excess emission indicated by the CEM system shall be considered violations of the applicable emission limit for the purposes of this permit. (PSD)

#### F. Fuel Usage and Sulfur Content

Any fuel oil fired (except as provided below) shall not exceed a maximum sulfur content 0.12% (by weight). The owner or operator shall maintain records on the duration of fuel oil firing, the sulfur content, and in which operating sources fuel oil firing took place. All fuel oil receipts must be certified to 0.12% weight sulfur or less except as provided below. (PSD)

During periods of natural gas curtailment, the maximum sulfur content of the fuel oil burned shall not exceed 0.25% (by weight), provided that the gas turbine was being fired on natural gas prior to the curtailment. (PSD)

During such periods, the gas turbine NOX emission limit in Special Condition C shall not apply; NOX shall be controlled via steam injection at no less than the rate determined by the steam/fuel ration specified for natural gas firing and no greater than the lesser of the ratio determined by the manufacturer recommended maximum steam/fuel ratio or 83,000 ~~lb~~lb./hr at (59 degrees F). (PSD)

The owner or operator shall not consume more than 193,000 gallons of fuel oil per day or 24.4 million gallons per year when firing fuel oil at sources S-100, S-101, and S-102. (PSD)

The owner or operator shall maintain records of the amount of fuel used in the gas turbine and auxiliary boilers, and the sulfur content of the fuel, in a permanent form suitable for inspection for EPA and the Bay Area AQMD. The record shall be maintained for at least five years following the date of its making. (PSD)

#### G. New Source Performance Standards

The proposed facility is subject to the Federal regulations entitled Standards of Performance for New Stationary Sources (40 CFR 60). The owner or operator shall meet all applicable requirements of Subparts A and GG of this regulation. (PSD)

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

#### Condition #18102:

#### For Sources S-3, S-4, S-5, Turbines

#### Definitions:

Clock Hour:	Any continuous 60-minute period beginning on the hour.
Calendar Day:	Any continuous 24-hour period beginning at 12:00 AM or 0000 hours.
Year:	Any consecutive twelve-month period of time
Heat Input:	All heat inputs refer to the heat input at the higher heating value (HHV) of the fuel, in Btu/scf.
Firing Hours:	Period of time, during which fuel is flowing to a unit, measured in fifteen-minute increments.
MM Btu:	million British thermal units
Gas Turbine Start-up Mode:	The time beginning with the introduction of continuous fuel flow to the Gas Turbine until the requirements listed in Condition 19 are met, but not to exceed 60 minutes.
Gas Turbine Shutdown Mode:	The time from non-compliance with any requirement listed in Condition 19 until termination of fuel flow to the Gas Turbine, but not to exceed 30 minutes.
Corrected Concentration:	The concentration of any pollutant (generally NO <sub>x</sub> , CO or NH <sub>3</sub> ) corrected to a standard stack gas oxygen concentration. For an emission point (exhaust of a Gas Turbine) the standard stack gas oxygen concentration is 15% O <sub>2</sub> by volume on a dry basis
Commissioning Activities:	All testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the construction contractor to insure safe and reliable steady state operation of the gas turbines, heat recovery steam generators, steam turbine, and associated electrical delivery systems.
Commissioning Period:	The Period shall commence when all mechanical, electrical, and control systems are installed and individual system start-up has been completed, or when a gas turbine is first fired, whichever occurs first. The period shall terminate when the plant has completed performance testing, is available for commercial operation, and has initiated sales to the power exchange.
Precursor Organic Compounds (POCs):	Any compound of carbon, excluding methane, ethane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

CEC: carbonates, and ammonium carbonate  
California Energy Commission

#### EQUIPMENT DESCRIPTION:

This Authority To Construct Is Issued And Is Valid For This Equipment Only While It Is In The Configuration Set Forth In The Following Description:

Installation of Three Simple-Cycle Gas Turbine Generators Consisting Of:

1. Simple Cycle Gas Turbine, General Electric, LM6000PC, Maximum Heat Input 467.6 MMBtu/hr, Nominal Electrical Output 45 MW, Natural Gas-Fired.
2. Selective Catalytic Reduction NOx Control System.
3. Ammonia Injection System.  
(including the ammonia storage tank and control system)
4. Oxidation Catalyst System.
5. Continuous emission monitoring system (CEMS) designed to continuously record the measured gaseous concentrations, and calculate and continuously monitor and record the NOx and CO concentrations in ppmvd corrected to 15% oxygen on a dry basis.

#### PERMIT CONDITIONS:

##### Condition #18102

##### *Conditions for the Commissioning Period*

1. The owner/operator of the Gilroy Energy Center shall minimize emissions of carbon monoxide and nitrogen oxides from S-3, S-4 and S-5 Gas Turbines to the maximum extent possible during the commissioning period. Conditions 1 through 11 shall only apply during the commissioning period as defined above.
2. At the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor, the S-3, S-4 & S-5 Gas Turbine combustors shall

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

be tuned to minimize the emissions of carbon monoxide and nitrogen oxides.

3. At the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor, the A-4, A-6 and A-8 SCR Systems and A-3, A-5 & A-7 OC Systems shall be installed, adjusted, and operated to minimize the emissions of nitrogen oxides and carbon monoxide from S-3, S-4 & S-5 Gas Turbines.
4. Coincident with the steady-state operation of A-4, A-6 & A-8 SCR Systems and A-3, A-5 & A-7 OC Systems pursuant to condition 3 the Gas Turbines (S-3, S-4 & S-5) shall comply with the NO<sub>x</sub> and CO emission limitations specified in conditions 19.1 and 19.3.
5. The owner/operator of the Gilroy Energy Center shall submit a plan to the District Permit Services Division at least two weeks prior to first firing of S-3, S-4 & S-5 Gas Turbines describing the procedures to be followed during the commissioning of the turbines. The plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the steam or water injection or Dry-Low-NO<sub>x</sub> combustors, the installation and operation of the required emission control systems, the installation, calibration, and testing of the CO and NO<sub>x</sub> continuous emission monitors, and any activities requiring the firing of the Gas Turbines (S-3, S-4 & S-5) without abatement by their respective SCR Systems. Gas Turbines (S-3, S-4 & S-5) shall be fired no sooner than fourteen days after the District receives the commissioning plan.
6. During the commissioning period, the owner/operator of the Gilroy Energy Center LM6000 project shall demonstrate compliance with conditions 8 through 10 through the use of properly operated and maintained continuous emission monitors and data recorders for the following parameters:

- firing hours
- fuel flow rates
- stack gas nitrogen oxide emission concentrations,
- stack gas carbon monoxide emission concentrations
- stack gas oxygen concentrations.

The monitored parameters shall be recorded at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation) for the Gas Turbines (S-3, S-4 & S-5). The owner/operator shall use District-approved methods to calculate heat input rates, nitrogen dioxide mass emission rates, carbon monoxide mass emission rates, and NO<sub>x</sub> and CO emission concentrations, summarized for each clock hour and each calendar day. All records

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

shall be retained on site for at least 5 years from the date of entry and made available to District personnel upon request.

7. The District-approved continuous monitors specified in condition 6 shall be installed, calibrated, and operational prior to first firing of the Gas Turbines (S-3, S-4 & S-5). After first firing of the turbines, the detection range of these continuous emission monitors shall be adjusted as necessary to accurately measure the resulting range of CO and NOx emission concentrations. The type, specifications, and location of these monitors shall be subject to District review and approval.
8. The combined number of firing hours of S-3, S-4 & S-5 Gas Turbines without abatement by SCR or CO Systems shall not exceed 300 hours during the commissioning period. Such operation of S-3, S-4 & S-5 Gas Turbines without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR or CO system in place. Upon completion of these activities, the owner/operator shall provide written notice to the District Permit Services and Enforcement Divisions and the unused balance of the 300 firing hours without abatement shall expire.
9. The total mass emissions of nitrogen oxides, carbon monoxide, precursor organic compounds, PM<sub>10</sub>, and sulfur dioxide that are emitted by the Gas Turbines (S-3, S-4 & S-5) during the commissioning period shall accrue towards the consecutive twelve-month emission limitations specified in condition 22.
10. Combined pollutant mass emissions from the Gas Turbines (S-3, S-4 & S-5) shall not exceed the following limits during the commissioning period. These emission limits shall include emissions resulting from the start-up and shutdown of the Gas Turbines (S-3, S-4 & S-5).

NO <sub>x</sub> (as NO <sub>2</sub> )	1200 pounds per calendar day	168 pounds per hour
CO	900 pounds per calendar day	92 pounds per hour
POC (as CH <sub>4</sub> )	97 pounds per calendar day	
PM <sub>10</sub>	180 pounds per calendar day	
SO <sub>2</sub>	24 pounds per calendar day	

11. Within sixty days of startup, the Owner/Operator shall conduct a District approved source test using external continuous emission monitors to determine compliance with condition 10. The source test shall determine NOx, CO, and POC emissions during start-up and shutdown of the gas turbines. The POC emissions shall be analyzed for methane and ethane to account for the presence of unburned natural gas. The source test shall include a minimum of three start-up and three shutdown periods. Thirty days before the execution of the source tests, the Owner/Operator

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

shall submit to the District a detailed source test plan designed to satisfy the requirements of this condition. The Owner/Operator shall notify the District within ten days prior to the planned source testing date. Source test results shall be submitted to the District within thirty days of the source testing date. This testing may be part of the testing required by Condition 25.

#### **The Equipment For Which This Authority To Construct Is Issued May Be Operated Only When In Compliance With The Following Conditions:**

12. Consistency with Analyses: Operation of this equipment shall be conducted in accordance with all information submitted with the application (and supplements thereof) and the analyses under which this permit is issued unless otherwise noted below. (2-1-403)
13. Conflicts Between Conditions: In the event that any condition herein is determined to be in conflict with any other condition contained herein, then, if principles of law do not provide to the contrary, the condition most protective of air quality and public health and safety shall prevail to the extent feasible. (1-102)
14. Reimbursement of Costs: All reasonable expenses, as set forth in the District's rules or regulations, incurred by the District for all activities that follow the issuance of this permit, including but not limited to permit condition implementation, compliance verification and emergency response, directly and necessarily related to enforcement of the permit shall be reimbursed by the owner/operator as required by the District's rules or regulations. (2-1-303)
15. Access to Records and Facilities: As to any condition that requires for its effective enforcement the inspection of records or facilities by representatives of the District, the Air Resources Board (ARB), the U.S. Environmental Protection Agency (U.S. EPA), or the California Energy Commission (CEC), the owner/operator shall make such records available or provide access to such facilities upon notice from representatives of the District, ARB, U.S. EPA, or CEC. Access shall mean access consistent with California Health and Safety Code Section 41510 and Clean Air Act Section 114A. (1-440, 1-441)
16. Notification of Commencement of Operation: The owner/operator shall notify the District of the date of anticipated commencement of turbine operation not less than 10 days prior to such date. Temporary operations under this permit is granted consistent with the District's rules and regulations. (2-1-302)
17. Operations: The gas turbine, emissions controls, CEMS and associated equipment shall be

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

properly maintained and kept in good operating condition at all times when the equipment is in operation. (2-1-307)

18. Visible Emissions: No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark or darker than Ringelmann 1 or equivalent 20% opacity. (2-1-307)

19. Emissions Limits:

A 1-hour rolling average is any continuous 60-minute period beginning on the hour.

19.1 Oxides of nitrogen (NO<sub>x</sub>) emissions from the gas turbine shall not exceed 5 ppmvd @ 15% O<sub>2</sub> (1-hour rolling average), except during periods of startup and shutdown as defined in this permit. The NO<sub>x</sub> emission concentration shall be verified by a District-approved continuous emission monitoring system (CEMS) and during any required source test. (basis: BACT)

19.2 Ammonia emissions from the gas turbine shall not exceed 10 ppmvd @ 15% O<sub>2</sub> ( 3-hour rolling average), except during periods of startup and shutdown as defined in this permit. The ammonia emission concentration shall be verified by the continuous recording of the ratio of the ammonia injection rate to the NO<sub>x</sub> inlet rate to the SCR control system (molar ratio). The maximum allowable NH<sub>3</sub>/NO<sub>x</sub> molar ratio shall be determined during any required source test, and shall not be exceeded until reestablished through another valid source test. (basis: BACT)

19.3 Carbon monoxide (CO) emissions from the gas turbine shall not exceed 6 ppmvd @ 15 % O<sub>2</sub> ( 3-hour rolling average), except during periods of startup and shutdown as defined in this permit. The CO emission concentration shall be verified by a District-approved CEMS and during any required source test. (basis: BACT)

19.4 Precursor organic compound (POC) emissions from the gas turbine shall not exceed 2 ppmvd @ 15% O<sub>2</sub> ( 3-hour rolling average), except during periods of startup and shutdown as defined in this permit. The POC emission concentration shall be verified during any required source test. (basis: BACT)

19.5 Particulate matter emissions less than ten microns in diameter (PM<sub>10</sub>) from the gas turbine shall not exceed 2.5 pounds per hour, except during periods of startup and shutdown as

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

defined in this permit. The PM10 mass emission rate shall be verified during any required source test. (basis: BACT & cumulative increase)

- 19.6 Oxides of sulfur emissions (SOx) from the gas turbine shall not exceed 0.33 pounds per hour, except during periods of startup and shutdown as defined in this permit. The SOx emission rate shall be verified during any required source test. (basis: BACT & cumulative increase)
20. Turbine Startup: Startup of the gas turbine shall not exceed a time period of 60 minutes each per occurrence, or another time period based on good engineering practice and approved in advance by the District. The startup clock begins with the turbine's initial firing and continues until the unit meets the emission concentration limits. (Basis: Cumulative increase)
21. Turbine Shutdown: Shutdown of the gas turbine shall not exceed a time period of 30 minutes each per occurrence, or another time period based on good engineering practice and approved in advance by the District. Shutdown begins with initiation of the turbine shutdown sequence and ends with the cessation of turbine firing. (Basis: Cumulative increase)
22. Mass Emission Limits: Total mass emissions from the three gas turbines shall not exceed the daily, and annual mass emission limits listed in Table 1 below.

Table 1 – Mass Emission Limits (Including Startups and Shutdowns)

Pollutant	Daily (lb.)	Annual (tons)
NOx (as NO <sub>2</sub> )	201.6	39.5
POC	28.1	6.9
CO	148.7	36.0
SOx (as SO <sub>2</sub> )	7.9	1.9
PM10	60.0	14.7

The daily and annual mass limits are on a calendar basis. Compliance shall be based on calendar average one-hour readings through the use of process monitors (e.g., fuel use meters), CEMS, and source test results; and the monitoring, recordkeeping and reporting conditions of this permit. (Basis: Cumulative increase & record keeping)

23. Operational Limits: In order to comply with the emission limits of this rule, the owner/operator shall comply with the following operational limits:

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

- (a) The heat input to each gas turbine shall not exceed:

Hourly: 468 MMBtu/hr  
Daily: 11,222 MMBtu/day

The heat input to the three gas turbines shall not exceed:

Annual: 5,494,300 MMBtu/year

- (b) Only PUC Quality natural gas (General Order 58-a) shall be used to fire the gas turbine. The natural gas shall not contain total sulfur in concentrations exceeding 0.25 gr./100 scf.
- (c) The owner/operator of the gas turbine shall comply with the daily and annual emission limits listed in Table 1 by keeping running totals based on CEM data. (Basis: Cumulative increase)

24. Monitoring Requirements: The owner/operator shall comply with the following monitoring requirements for each gas turbine:

- (a) The gas turbine exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods.
- (b) The ammonia injection system shall be equipped with an operational ammonia flowmeter and injection pressure indicator accurate to plus or minus five percent at full scale and calibrated once every twelve months.
- (c) The gas turbine exhaust shall be equipped with continuously recording emissions monitor(s) for NO<sub>x</sub>, CO and O<sub>2</sub>. Continuous emissions monitors shall comply with the requirements of 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, and shall be capable of monitoring concentrations and mass emissions during normal operating conditions and during startups and shutdowns.
- (d) The fuel heat input rate shall be continuously recorded using District-approved fuel flow meters along with quarterly fuel compositional analyses for the fuel's higher heating value (wet basis).

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

- (e) The total sulfur and hydrogen sulfide content of the fuel gas shall be analyzed on a quarterly basis.

(Basis: Monitoring & record keeping)

25. Source Testing/RATA: Within sixty days after startup of the gas turbines, and at a minimum on an annual basis thereafter, a relative accuracy test audit (RATA) must be performed on the CEMS in accordance with 40 CFR Part 60 Appendix B Performance Specifications and a source test shall be performed. Additional source testing may be required at the discretion of the District to address or ascertain compliance with the requirements of this permit. The written test results of the source tests shall be provided to the District within thirty days after testing. A complete test protocol shall be submitted to the District no later than 30 days prior to testing, and notification to the District at least ten days prior to the actual date of testing shall be provided so that a District observer may be present. The source test protocol shall comply with the following: measurements of NO<sub>x</sub>, CO, POC, and stack gas oxygen content shall be conducted in accordance with ARB Test Method 100; measurements of PM<sub>10</sub> shall be conducted in accordance with ARB Test Method 5; and measurements of ammonia shall be conducted in accordance with Bay Area Air Quality Management District test method ST-1B. Alternative test methods, and source testing scope, may also be used to address the source testing requirements of the permit if approved in advance by the District. The initial and annual source tests shall include those parameters specified in the approved test protocol, and shall at a minimum include the following:

- a. NO<sub>x</sub> (as NO<sub>2,x</sub>) – ppmvd at 15% O<sub>2</sub> and ~~lb~~lb./MMBtu(as NO<sub>2</sub>);
- b. Ammonia – ppmvd at 15% O<sub>2</sub> (Exhaust);
- c. CO – ppmvd at 15% O<sub>2</sub> and ~~lb~~lb./MMBtu (Exhaust);
- d. POC – ppmvd at 15% O<sub>2</sub> and ~~lb~~lb./MMBtu (Exhaust);
- e. PM<sub>10</sub> – ~~lb~~lb./hr (Exhaust);
- f. SO<sub>x</sub> – ~~lb~~lb./hr (Exhaust);
- g. Natural gas consumption, fuel High Heating Value (HHV), and total fuel sulfur content;
- h. Turbine load in megawatts;
- i. Stack gas flow rate (SDCFM) calculated according to procedures in U.S. EPA Method 19.
- j. Exhaust gas temperature (°F)
- k. Ammonia injection rate (~~lb~~lb./hr or moles/hr)

(Basis: source test requirements & monitoring)

26. A written quality assurance program, for the CEM, must be established in accordance with 40 CFR Part 75, Appendix B and 40 CFR Part 60 Appendix F. (Basis: 40 CFR Part 75, Appendix B and 40 CFR Part 60, Appendix F ~~continuous emission monitoring~~)

## VI. Permit Conditions (continued)

### A. Source-Specific Permit Conditions (continued)

27. The owner/operator shall comply with the applicable requirements of 40 CFR Part 60 Subpart GG. (Basis: NSPS)
28. The owner/operator shall notify the District of any breakdown condition consistent with the District's breakdown regulations. (Basis: Regulation 1-208)
29. The District shall be notified in writing in a timeframe consistent with the District's breakdown regulations following the correction of any breakdown condition. The breakdown condition shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the actions taken to restore normal operations. (Basis: Regulation 1-208)
30. Recordkeeping: The owner/operator shall maintain the following records:
- (a) hourly, daily, quarterly and annual quantity of fuel used and corresponding heat input rates (condition 23);
  - (b) the date and time of each occurrence, duration, and type of any startup, shutdown, or malfunction along with the resulting mass emissions during such time period (condition 19 & 22);
  - (c) emission measurements from all source testing, RATAs and fuel analyses (condition 23b, 24c & 25);
  - (d) daily, quarterly and annual hours of operation (condition 23);
  - (e) hourly records of NO<sub>x</sub> and CO, emission concentrations and hourly ammonia injection rates and ammonia/NO<sub>x</sub> ratio (condition 19);-
  - (f) for the continuous emissions monitoring system; performance testing, evaluations, calibrations, checks, maintenance, adjustments, and any period of non-operation of any continuous emissions monitor (condition 24c, 25 & 29).-
- \_\_\_\_\_ (~~Basis: record keeping~~)
31. All records required to be maintained by this permit shall be retained by the permittee for a period of five years and shall be made readily available for District inspection upon request. (Basis: record keeping)
32. Reporting: The owner/operator shall submit to the District a written report for each calendar quarter, within 30 days of the end of the quarter, which shall include:
- (a) Daily and quarterly fuel use and corresponding heat input rates (condition 23);

**VI. Permit Conditions (continued)**

**A. Source-Specific Permit Conditions (continued)**

- (b) Daily and quarterly mass emission rates for all criteria pollutants during normal operations and during other periods (startup/shutdown, breakdowns) (condition 19 & 22);
- (c) Time intervals, date, and magnitude of excess emissions (condition 19 & 22);
- (d) Nature and cause of the excess emission, and corrective actions taken (condition 19 & 22);
- (e) Time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments (condition 28);
- (f) A negative declaration when no excess emissions occurred (condition 19 & 22); and;
- (g) Results of quarterly fuel analyses for HHV and total sulfur/hydrogen sulfide content (condition 24e); and

~~—(Basis: record keeping & reporting)~~

33 Emission Offsets: The owner/operator shall offset the project emissions in the amount and at the ratios outlined in Table 2.

Table 2 – Emission Offsets

Pollutant	Emissions Requiring Offsets (tons/yr.)	Offset Ratio	Total ERCs Required (tons/yr.)	Source of ERCs
NOx (as NO <sub>2</sub> )	39.5	1.15	45.4	ERC Certificate 727
POC	6.9	1.00	6.9	ERC Certificate 728

The ERC certificates must be delivered to the District ten days prior to issuance of the ATC.  
 (Basis: Emission Offsets)

34 District Operating Permit: The owner/operator shall apply for and obtain all required operating permits from the District according to the requirements of the District’s rules and regulations.  
 (Basis: Regulations 2-2 & 2-6)

35 Title IV and Title V Permits: The applications for modification of the Title IV and Title V permits must be delivered to the District prior to first-fire of the turbines. Also the acid rain monitors (Title IV) must be certified within 90 days of first-fire. (Basis: Regulation 2-6 and 2-7)

## VII. APPLICABLE EMISSION 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 indicates whether periodic (P) or continuous (C) monitoring is required. For periodic monitoring, the frequency of the monitoring has also been shown, either annual (A), quarterly (Q), monthly (M), 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.

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-3, S-4, S-5, TURBINES**

<u>Type of Limit</u>	<u>Citation of Limit</u>	<u>FE Y/N</u>	<u>Future Effective Date</u>	<u>Limit</u>	<u>Monitoring Requirement Citation</u>	<u>Monitoring Frequency (P/C/N)</u>	<u>Monitoring Type</u>
NO <sub>x</sub>	BAAQMD 9-9-301.3	Y		9 ppmv @ 15% O <sub>2</sub> , dry	BAAQMD 9-9-501 and BAAQMD condition #18102, part 24	C	CEM
	BAAQMD 9-9-301.3	Y		9 ppmv @ 15% O <sub>2</sub> , dry	BAAQMD condition #18102, part 25	P/A	Source test

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-3, S-4, S-5, TURBINES**

<u>Type of Limit</u>	<u>Citation of Limit</u>	<u>FE Y/N</u>	<u>Future Effective Date</u>	<u>Limit</u>	<u>Monitoring Requirement Citation</u>	<u>Monitoring Frequency (P/C/N)</u>	<u>Monitoring Type</u>
NOX	NSPS, 40 CFR 60.332 (a)(1)	Y		99?????ppmv @ 15% O <sub>2</sub> , dry	Monitoring requirement subsumed by monitoring for BACT limit. See Permit Shield.	N	
	None	Y		None	40 CFR 75.10	C	CEM
NOx	BAAQMD condition #18102, part 10	Y		168 <del>lb</del> lb./clock hr for S-3, S-4, and S-5 combined during commissioning and including startup and shutdown of turbines	BAAQMD condition #18102, parts 7 and 24	C	CEM
	BAAQMD condition #18102, part 10	Y		1200 <del>lb</del> lb./calendar day for all turbines combined during commissioning and including startup and shutdown of turbines	BAAQMD condition #18102, parts 7 and 24	C	CEM
	BAAQMD condition #18102, part 19.1	Y		5 ppmv @ 15% O <sub>2</sub> , dry, 1-hr average except during turbine startup or shutdown	BAAQMD condition #18102, part 19.1	C	CEM
	BAAQMD condition #18102, part 19.1	Y		5 ppmv @ 15% O <sub>2</sub> , dry, 1-hr average except during turbine startup or shutdown	BAAQMD condition #18102, part 25	P/A	Source test

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-3, S-4, S-5, TURBINES**

<u>Type of Limit</u>	<u>Citation of Limit</u>	<u>FE Y/N</u>	<u>Future Effective Date</u>	<u>Limit</u>	<u>Monitoring Requirement Citation</u>	<u>Monitoring Frequency (P/C/N)</u>	<u>Monitoring Type</u>
	<u>BAAQMD condition #18102, part 22</u>	<u>Y</u>		<u>201.6 lb./calendar day (as NO2) for S-3, S-4, and S-5 combined, except during startup or shutdown and except during commissioning</u>	<u>BAAQMD condition #18102, part 24</u>	<u>C</u>	<u>CEM</u>
<u>NOX</u>	<u>BAAQMD condition #18102, part 22</u>	<u>Y</u>		<u>39.5 tons per calendar year (as NO2) for S-3, S-4, and S-5 combined, except during startup or shutdown and except during commissioning</u>	<u>BAAQMD condition #18102, part 24</u>	<u>C</u>	<u>CEM</u>
<u>CO</u>	<u>BAAQMD condition #18102, part 10</u>	<u>Y</u>		<u>92 lb./clock hr for S-3, S-4, and S-5 combined during commissioning and including startup and shutdown of turbines</u>	<u>BAAQMD condition #18102, parts 7 and 24</u>	<u>C</u>	<u>CEM</u>
<u>CO</u>	<u>BAAQMD condition #18102, part 10</u>	<u>Y</u>		<u>900 lb./calendar day for S-3, S-4, and S-5 combined during commissioning and including startup and shutdown of turbines</u>	<u>BAAQMD condition #18102, parts 7 and 24</u>	<u>C</u>	<u>CEM</u>
	<u>BAAQMD condition #18102, part 19.3</u>	<u>Y</u>		<u>6 ppmv @ 15% O2, dry, 3-hr average except during turbine startup or shutdown</u>	<u>BAAQMD condition #18102, parts 19.3 and 24</u>	<u>C</u>	<u>CEM</u>
	<u>BAAQMD condition #18102, part 19.3</u>	<u>Y</u>		<u>6 ppmv @ 15% O2, dry, 3-hr average except during turbine startup or shutdown</u>	<u>BAAQMD condition #18102, part 25</u>	<u>P/A</u>	<u>Source test</u>

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-3, S-4, S-5, TURBINES**

<u>Type of Limit</u>	<u>Citation of Limit</u>	<u>FE Y/N</u>	<u>Future Effective Date</u>	<u>Limit</u>	<u>Monitoring Requirement Citation</u>	<u>Monitoring Frequency (P/C/N)</u>	<u>Monitoring Type</u>
	<u>BAAQMD condition #18102, part 22</u>	<u>Y</u>		<u>148.7 lb./calendar day for S-3, S-4, and S-5 combined, except during turbine startup or shutdown and except during commissioning</u>	<u>BAAQMD condition #18102, part 24</u>	<u>C</u>	<u>CEM</u>
	<u>BAAQMD condition #18102, part 22</u>	<u>Y</u>		<u>36.0 tons per calendar year for S-3, S-4, and S-5 combined, except during turbine startup or shutdown and except during commissioning</u>	<u>BAAQMD condition #18102, part 24</u>	<u>C</u>	<u>CEM</u>
<u>CO2</u>		<u>Y</u>		<u>None</u>	<u>40 CFR 75.10</u>	<u>C</u>	<u>CEM (CO2) or CEM (O2) or fuel flow monitor</u>
<u>SO2</u>	<u>BAAQMD 9-1-301</u>	<u>Y</u>		<u>GLC<sup>1</sup> of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours</u>		<u>N</u>	
	<u>BAAQMD 9-1-302</u>	<u>Y</u>		<u>300 ppm (dry)</u>	<u>BAAQMD condition #18102, part 24</u>	<u>P/Q</u>	<u>Total sulfur and hydrogen sulfide analysis</u>

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-3, S-4, S-5, TURBINES**

<u>Type of Limit</u>	<u>Citation of Limit</u>	<u>FE Y/N</u>	<u>Future Effective Date</u>	<u>Limit</u>	<u>Monitoring Requirement Citation</u>	<u>Monitoring Frequency (P/C/N)</u>	<u>Monitoring Type</u>
<u>SO2</u>	<u>NSPS 40 CFR 60.333(a)</u>	<u>Y</u>		<u>0.015% (vol.) @ 15% O<sub>2</sub> (dry)</u>	<u>Monitoring Requirement (40 CFR-75) subsumed by requirement for PUC quality natural gas. See Permit Shield.</u>	<u>N</u>	
<u>SO2</u>	<u>None</u>	<u>Y</u>		<u>None</u>	<u>40 CFR 75.11, 40 CFR 75, Appendix D, part 2.3</u>		<u>Fuel measurements, calculations</u>
<u>SO2</u>	<u>BAAQMD condition #18102, part 10</u>	<u>Y</u>		<u>24 #lb./calendar day for S-3, S-4, and S-5 combined during commissioning and including startup and shutdown of turbines</u>	<u>BAAQMD condition #18102, part 24</u>	<u>P/Q</u>	<u>Total sulfur and hydrogen sulfide analysis</u>
	<u>BAAQMD condition #18102, part 19.6</u>	<u>Y</u>		<u>0.33 #lb./clock hr for S-3, S-4, and S-5 combined</u>	<u>BAAQMD condition #18102, part 24</u>	<u>P/Q</u>	<u>Total sulfur and hydrogen sulfide analysis</u>
	<u>BAAQMD condition #18102, part 19.6</u>	<u>Y</u>		<u>0.33 #lb./clock hr for S-3, S-4, and S-5 combined</u>	<u>BAAQMD condition #18102, part 25</u>	<u>P/A</u>	<u>Source test</u>

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-3, S-4, S-5, TURBINES**

<u>Type of Limit</u>	<u>Citation of Limit</u>	<u>FE Y/N</u>	<u>Future Effective Date</u>	<u>Limit</u>	<u>Monitoring Requirement Citation</u>	<u>Monitoring Frequency (P/C/N)</u>	<u>Monitoring Type</u>
	<u>BAAQMD condition #18102, part 22</u>	<u>Y</u>		<u>7.9 lb./calendar day for S-3, S-4, and S-5 combined excluding startup and shutdown of turbines except during commissioning</u>	<u>BAAQMD condition #18102, part 24</u>	<u>P/Q</u>	<u>Total sulfur and hydrogen sulfide analysis</u>
	<u>BAAQMD condition #18102, part 22</u>	<u>Y</u>		<u>1.9 tons/calendar year for S-3, S-4, and S-5 combined excluding startup and shutdown of turbines except during commissioning</u>	<u>BAAQMD condition #18102, part 24</u>	<u>P/Q</u>	<u>Total sulfur and hydrogen sulfide analysis</u>
<u>Opacity</u>	<u>BAAQMD 6-301</u>	<u>N</u>		<u>&gt; Ringelmann No. 1 for no more than 3 minutes in any hour</u>		<u>N</u>	
<u>Opacity</u>	<u>BAAQMD condition #18102, part 18</u>	<u>Y</u>		<u>&gt; Ringelmann No. 1 for no more than 3 minutes in any hour or equivalent 20% opacity</u>		<u>N</u>	
<u>FP</u>	<u>BAAQMD 6-310</u>	<u>Y</u>		<u>0.15 grain/dscf</u>		<u>N</u>	
<u>PM10</u>	<u>BAAQMD condition #18102, part 10</u>	<u>Y</u>		<u>180 lb./calendar day for S-3, S-4, and S-5 combined during commissioning and including startup and shutdown of turbines</u>	<u>BAAQMD condition #18102, part 11</u>	<u>once</u>	<u>source test, records &amp; calculation</u>
	<u>BAAQMD condition #18102, part 19.5</u>	<u>Y</u>		<u>2.5 lb./clock hr for S-3, S-4, and S-5 combined</u>	<u>BAAQMD condition #18102, part 25<del>25</del></u>	<u>P/A</u>	<u>Source test</u>

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-3, S-4, S-5, TURBINES**

<u>Type of Limit</u>	<u>Citation of Limit</u>	<u>FE Y/N</u>	<u>Future Effective Date</u>	<u>Limit</u>	<u>Monitoring Requirement Citation</u>	<u>Monitoring Frequency (P/C/N)</u>	<u>Monitoring Type</u>
	<u>BAAQMD condition #18102, part 22</u>	Y		<u>14.7 tons/year for S-3, S-4 &amp; S-5 combined except during startup and shutdown.</u>	<u>BAAQMD condition #18102, part 25</u>	P/A	<u>Source Test</u>
POC	<u>BAAQMD condition #18102, part 10</u>	Y		<u>900 <del>lb</del>lb./calendar day for S-3, S-4, and S-5 combined during commissioning and including startup and shutdown of turbines</u>	<u>BAAQMD condition #18102 part 11</u>	once	<u>source test, records &amp; calculation</u>
POC	<u>BAAQMD condition #18102, part 19.4</u>	Y		<u>2 ppmv @ 15% O<sub>2</sub>, dry, 3-hr average except during turbine startup or shutdown</u>	<u>BAAQMD condition #18102, part 19.4</u>	C	<u>Source testtest???</u>
					<u>BAAQMD condition #18102, part 25</u>	P/A	<u>Source test</u>
	<u>BAAQMD condition #18102, part 22</u>	Y		<u>28.1 <del>lb</del>lb./calendar day for S-3, S-4, and S-5 combined, except during startup or shutdown and except during commissioning</u>	<u>BAAQMD condition #18102, part 25</u>	P/A	<u>Source test</u>
	<u>BAAQMD condition #18102, part 22</u>	Y		<u>6.9 ton/calendar year for S-3, S-4, and S-5 combined, except during startup or shutdown and except during commissioning</u>	<u>BAAQMD condition #18102, part 25</u>	P/A	<u>Source test</u>

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-3, S-4, S-5, TURBINES**

<u>Type of Limit</u>	<u>Citation of Limit</u>	<u>FE Y/N</u>	<u>Future Effective Date</u>	<u>Limit</u>	<u>Monitoring Requirement Citation</u>	<u>Monitoring Frequency (P/C/N)</u>	<u>Monitoring Type</u>
NH3	BAAQMD condition #18102, Part 19.2	N		10 ppmv @ 15% O2, dry, averaged over 3 hrs except during turbine startup or shutdown	BAAQMD condition #18102, parts 19.2 and 24	C	Measure-ment ratio NH3 to NOX inlet rate at SCR
	BAAQMD condition #18102, Part 19.2	N		10 ppmv @ 15% O2, dry, averaged over 3 hrs except during turbine startup or shutdown	BAAQMD condition #18102, part 25	P/A	Source test
Heat input limit	BAAQMD condition #18102, part 23	Y		468 MM BTU/clock hr (HHV), 3-hr average for each turbine, S-3,S-4, and S-5	BAAQMD condition #18102, part 24d	C	Fuel meter, firing monitor
	BAAQMD condition #18102, part 23	Y		468 MM BTU/clock hr (HHV), 3-hr average for each turbine, S-3,S-4, and S-5	BAAQMD condition #18102, part 24d	P/M	Fuel composition analysis
	BAAQMD condition #18102, part 23	Y		468 MM BTU/clock hr (HHV), 3-hr average for each turbine, S-3,S-4, and S-5	BAAQMD condition #18102, part 25	P/A	Source test
	BAAQMD condition #18102, part 23	Y		11,222 MM BTU/day (HHV) for each turbine, S-3,S-4, and S-5	BAAQMD condition #18102, part 35a	C	fuel meter, firing monitor, calculations
	BAAQMD condition #18102, part 23	Y		11,222 MM BTU/day (HHV) for each turbine, S-3,S-4, and S-5	BAAQMD condition #18102, part 24d	P/M	Fuel composition analysis

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-3, S-4, S-5, TURBINES**

<u>Type of Limit</u>	<u>Citation of Limit</u>	<u>FE Y/N</u>	<u>Future Effective Date</u>	<u>Limit</u>	<u>Monitoring Requirement Citation</u>	<u>Monitoring Frequency (P/C/N)</u>	<u>Monitoring Type</u>
	<u>BAAQMD condition #18102, part 23</u>	Y		<u>5,494,300 MM BTU/yr. for S-3, S-4, and S-5, Turbines combined</u>	<u>BAAQMD condition #18102, part 35a</u>	C	<u>fuel meter, firing monitor, calculations</u>
	<u>BAAQMD condition #18102, part 23</u>	Y		<u>5,494,300 MM BTU/yr. for S-3, S-4, and S-5, Turbines combined</u>	<u>BAAQMD condition #18102, part 24d</u>	P/M	<u>Fuel composition analysis</u>
<u>Unabated firing</u>	<u>BAAQMD condition #18102, part 8</u>	Y		<u>300 hours during commissioning</u>	<u>BAAQMD condition #18102, part 8</u>	P/H	<u>Records</u>
<u>MW</u>				<u>None</u>	<u>BAAQMD condition #18102, part 25</u>	P/A	<u>Source test</u>
<u>Gas temperature</u>				<u>None</u>	<u>BAAQMD condition #18102, part 25</u>	P/A	<u>Source test</u>
<u>Stack gas flow</u>				<u>None</u>	<u>BAAQMD condition #18102, part 25</u>	P/A	<u>Source test</u>
<u>NH3 injection rate</u>				<u>None</u>	<u>BAAQMD condition #18102, part 25</u>	P/A	<u>Source test</u>

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII-AB  
 S-100 - GAS TURBINE**

Type of limit	Emission Limit Citation of Limit	FE Y/N	Future Effective Date	Emission-Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOx	BAAQMD 9-9-305 and 9-9-401	Y		Natural Gas $\leq 21.0$ ppmv* @ 15% O <sub>2</sub> , dry, 3-hr average Natural gas curtailment, $\leq 42$ ppmv @ 15% O <sub>2</sub> , dry 3-hr average *corrected for efficiency	BAAQMD 9-9-501	C	CEM
	BAAQMD Permit Cond# 2780 part 1a	Y		Natural Gas or Fuel Oil $\leq 25$ ppmv @ 15% O <sub>2</sub> , 3-hr avg.	BAAQMD Permit Condition 2780, part 11	C	CEM
	BAAQMD Permit Cond# 2780 part 1e	Y	Upon completion of modification	Natural Gas $\leq 21.0$ ppmv @ 15% O <sub>2</sub> , dry, calendar day average	BAAQMD 9-9-501	C	CEM
NOX	BAAQMD Permit Cond# 2780 part 1f	Y		< 323.7 tons per any twelve consecutive months	BAAQMD 9-9-501	C	CEM
	BAAQMD Permit Cond# 2780 part 1g	Y		< 1876 <del>lb.</del> per calendar day	BAAQMD 9-9-501	C	CEM
	PSD permit, part IX-C.	Y		Natural Gas or Fuel Oil $\leq 25$ ppmv @ 15% O <sub>2</sub> , dry 3-hr average	BAAQMD 9-9-501	C	CEM

## VII. Applicable Emission limits & Compliance Monitoring Requirements (continued)

**Table VII-AB**  
**S-100 - GAS TURBINE**

Type of limit	Emission Limit Citation of Limit	FE Y/N	Future Effective Date	Emission-Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	PSD permit, part IX-C.	Y		Natural Gas or Fuel Oil $\leq 25$ ppmv @ 15% O <sub>2</sub> , dry 3-hr average	PSD permit, part IX-E.	C	CEM
NOX	NSPS, 40 CFR 60.332 (a)(1)	Y		95 ppmv, ppmv @ 15% O <sub>2</sub> , dry	Monitoring requirement subsumed by PSD permit. See Permit Shield.	C	CEM
POC	BAAQMD Permit Condition 2780 part 6	Y		< 40 TPY NMHC for S-100, S-101, S-102	BAAQMD Permit Condition 2780, part 17	C	fuel oil meter
SO2	BAAQMD 9-1-301	N		GLC <sup>1</sup> of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N	
SO2	BAAQMD 9-1-302	Y		300 ppm (dry)		N	
	BAAQMD 9-1-304	Y		Sulfur content of fuel <0.5% by weight		N	
	BAAQMD Permit Condition 2780 part 5	Y		Sulfur content of fuel <0.12% by weight	BAAQMD Permit Condition 2780 part 5	P/E	fuel certification by vendor
SO2	BAAQMD Permit Condition 2780 part 7	Y		Sulfur content of fuel <0.25% by weight under natural gas curtailment	BAAQMD Permit Condition 2780 part 5	P/E	fuel certification by vendor
SO2	BAAQMD Permit Condition 2780 part 10	Y		< 3087 lb./day for <del>entire facility</del> <u>S-1001, S-10102, and S-102</u> , except under natural gas curtailment	BAAQMD Permit Condition 2780 part 10b	P/E (during use of fuel oil only)	fuel analysis and SO2 calculation

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII-AB  
 S-100 - GAS TURBINE**

Type of limit	Emission Limit Citation of Limit	FE Y/N	Future Effective Date	Emission-Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	PSD permit, part IX-F	Y		Sulfur content of fuel <0.12% by weight	PSD permit, part IX-F	P/E	fuel certification by vendor
SO2	PSD permit, part IX-F	Y		Sulfur content of fuel <0.25% by weight under natural gas curtailment	PSD permit, part IX-F	P/E	fuel certification by vendor
	NSPS Subpart GG, 60.333 (a)	Y		Natural gas combustion: 0.015% ( <del>wt</del> vol.) @ 15% O <sub>2</sub> (dry)	Monitoring requirement subsumed by Title V condition. See Permit Shield.	N	
SO2	NSPS Subpart GG, 60.333 (b)	Y		Fuel oil combustion: 0.8 % sulfur in fuel by weight	Monitoring requirement subsumed by PSD condition. See Permit Shield.	N	
<del>TSP</del> Opacity	BAAQMD 6-301	N		Ringelmann No. 1		N	
<del>FP</del>	BAAQMD 6-310	Y		0.15 grain/dscf @ 6% O <sub>2</sub>		N	
<del>TSP</del> FP	BAAQMD Permit Condition 2780 part 6	Y		< 25 TPY total <del>FP</del> TSP for S-100, S-101, S-102 (natural gas combustion)	BAAQMD Permit Condition 2780 part 6c	P/M	initial source test, records

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII-AB  
 S-100 - GAS TURBINE**

Type of limit	Emission Limit Citation of Limit	FE Y/N	Future Effective Date	Emission-Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQMD Permit Condition 2780 part 6	Y		< 25 TPY total TSP- <del>FP</del> for S-100, S-101, S-102 (fuel oil combustion)	BAAQMD Permit Condition 2780 part 6a and 6b	P/E	initial source test, records
Fuel Oil usage	PSD permit, IX, F	Y		193,000 gal/day, 24.4 million gal/ <del>yr</del> .	PSD permit, IX, E	C	fuel oil meter, records
Fuel Oil usage	BAAQMD Permit Condition 2780 part 17	Y		0.55 million barrels/ <del>yr</del> .	BAAQMD Permit Condition 2780 part 9	C	fuel oil meter, records
Carbon Monoxide	BAAQMD Permit Condition 2780 part 3b	Y		emissions < 100 tons/ <del>yr</del> . ( <del>entire facility</del> for S-100, S-101, and S-102)	BAAQMD Permit Condition 2780 part 11	C	CEM
Carbon Monoxide	BAAQMD Permit Condition 2780 part 3c	Y		10 ppmv <del>and</del> ppmvd @ 15% O <sub>2</sub> , 3-hr average, except during startup, shutdown, operation at < 80% load, fuel oil combustion, and operation at low ambient temperature	BAAQMD Permit Condition 2780 part 11	C	CEM
Carbon Monoxide	BAAQMD Permit Condition 2780 part 3d	Y		< 14670 lbs. CO during startups and shutdowns per any consecutive 12-month period	BAAQMD Permit Condition 2780 part 11	C	CEM

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII-AB  
 S-100 - GAS TURBINE**

Type of limit	<u>Emission Limit Citation of Limit</u>	FE Y/N	Future Effective Date	<u>Emission-Limit</u>	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQMD Permit Condition 2780 part 3e	Y		< 750 hours of operation at < 80% load per any consecutive 12-month period	BAAQMD Permit Condition 2780 part 11	C	CEM
Carbon Monoxide	BAAQMD Permit Condition 2780 part 3e	Y		< 14.8 tons CO during operation at < 80% load per any consecutive 12-month period	BAAQMD Permit Condition 2780 part 11	C	CEM
	BAAQMD Permit Condition 2780 part 3f	Y		< 100 hours of operation at ambient temperatures < 35° F. per any consecutive 12-month period	BAAQMD Permit Condition 2780 part 11	C	CEM
Carbon Monoxide	BAAQMD Permit Condition 2780 part 3f	Y		15 ppmvd <sup>1</sup> @ 15% O <sub>2</sub> , 1-hr average, during operation at low ambient temperature	BAAQMD Permit Condition 2780 part 11	C	CEM

<sup>1</sup> Ground Level Concentration

**Table VII-B  
 S-101, S-102 – BOILERS**

Type of limit	<u>Emission Limit Citation of Limit</u>	FE Y/N	Future Effective Date	<u>Emission-Limit</u>	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOX	BAAQMD D 9-7-301.1	Y		30 ppmv @3%O <sub>2</sub> , dry, 3-hr average	BAAQMD Permit Condition 2780 part 11	C	CEM

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII-B  
 S-101, S-102 – BOILERS**

Type of limit	Emission Limit Citation of Limit	FE Y/N	Future Effective Date	Emission-Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQM D 9-7-302.1	Y		40 ppmv @ 3% O <sub>2</sub> , dry, 3-hr average	BAAQMD Permit Condition 2780 part 11	C	CEM
	BAAQM D 9-7-303	Y		Weighted average of 9-7-301.1 and 9-7-302.1, 3-hr average	BAAQMD 9-7-501	C	Non-resettable fuel meters
	BAAQM D 9-7-305.1	Y		150 ppmv @ 3% O <sub>2</sub> , dry, 3-hr average		N	
	BAAQM D 9-7-306.1	Y		150 ppmv @ 3% O <sub>2</sub> , dry, 3-hr average		N	
	BAAQM D Permit Condition 2780 part 4	Y		40 ppmv @ 3% O <sub>2</sub> , dry, 3-hr average	BAAQMD Permit Condition 2780 part 11	C	CEM
	PSD permit, part IX-C.	Y		Natural Gas or Fuel Oil $\leq 40$ ppmv @ 3% O <sub>2</sub> , dry, 3-hr average	PSD permit, part IX-D.	C	CEM
NOX	NSPS 40.60b (a)(1)(ii)	Y		0.2 <del>lb</del> /MM Btu, averaged over 24 hrs	Monitoring requirement subsumed by BACT cond. #2780, parts 3 and 11. See Permit Shield.	N	

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII-B  
 S-101, S-102 – BOILERS**

Type of limit	Emission Limit Citation of Limit	FE Y/N	Future Effective Date	Emission-Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
CO	BAAQM D 9-7-301.2	Y		400 ppmv @3% O <sub>2</sub> , dry, 3-hr average		N	
	BAAQM D 9-7-302.2	Y		400 ppmv @3% O <sub>2</sub> , dry, 3-hr average		N	
CO	BAAQM D 9-7-303	Y		Weighted average of 9-7-301.1 and 9-7-302.1, 3-hr average	BAAQMD 9-7-501	C	Non-resettable fuel meters
	BAAQM D 9-7-305.2	Y		400 ppmv @3% O <sub>2</sub> , dry, 3-hr average	BAAQMD 9-7-503.2	N	records
	BAAQM D 9-7-306.2	Y		400 ppmv @3% O <sub>2</sub> , dry, 3-hr average	BAAQMD 9-7-503.3	N	records
	BAAQM D Permit Condition 2780 part 3b	Y		< 100 tons per year, for S-100, S-101, and S-102 entire facility	BAAQMD Permit Condition 2780 part 11	C	CEM
SO <sub>2</sub>	BAAQM D 9-1-301	N		GLC <sup>1</sup> of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N	
	BAAQM D 9-1-302	Y		300 ppm (dry)		N	
SO <sub>2</sub>	BAAQM D 9-1-304	Y		Sulfur content of fuel <0.5% by weight		N	

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII-B  
 S-101, S-102 – BOILERS**

Type of limit	Emission Limit Citation of Limit	FE Y/N	Future Effective Date	Emission-Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
SO2	BAAQM D Permit Condition 2780 part 5	Y		Sulfur content of fuel <0.12% by weight	BAAQMD Permit Condition Number 2780 part 5	P/E	Fuel certification by vendor
SO2	BAAQM D Permit Condition 2780 part 7a	Y		Sulfur content of fuel <0.25% by weight under natural gas curtailment	BAAQMD Permit Condition 2780 part 5	P/E	Fuel certification by vendor
	BAAQM D Permit Condition 2780 part 10	Y		< 3087 <del>lb</del> lb/day for <u>S-100, S-101, and S-102</u> <del>entire facility,</del> except under natural gas curtailment	BAAQMD Permit Condition 2780 part 10b	P/E (during use of fuel oil only)	fuel analysis and SO2 calculation
	PSD permit, IX, F	Y		Sulfur content of fuel <0.12% by weight	PSD permit, IX, F	P/E	fuel certification by vendor
	PSD permit, IX, F			Sulfur content of fuel <0.25% by weight under natural gas curtailment	PSD permit, IX, F	P/E	fuel certification by vendor
<u>Opacity</u>	BAAQM D 6-301	N		Ringelmann No. 1		N	
<u>FPTSP</u>	BAAQM D 6-310	Y		0.15 grain/dscf @ 6% O2		N	

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII-B  
 S-101, S-102 – BOILERS**

Type of limit	Emission Limit Citation of Limit	FE Y/N	Future Effective Date	Emission-Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQMD Permit Condition 2780 part 6	Y		< 25 TPY FP for S-100, S-101, S-102	BAAQMD Permit Condition Number 2780 part 6a and 6b	P/E	initial source test, records
POC	BAAQMD Permit Condition 2780 part 6	Y		< 40 TPY NMHC for S-100, S-101, S-102	BAAQMD Permit Condition 2780 part 17	C	fuel oil meter
Fuel Oil usage	PSD permit, IX, F	Y		193,000 gal/day, 24.4 million gal/ <del>yr</del> <sup>yr</sup>	PSD permit, IX, E	P/E	fuel oil meter, records
	BAAQMD Permit Condition 2780 part 17	Y		0.55 million barrels/ <del>yr</del> <sup>yr</sup>	BAAQMD Permit Condition 2780 part 5	P/E	records
Hours of operation	BAAQMD Permit Condition 2780 part 18	Y		Simultaneous use with the gas turbine < combined total of 28 boiler hours/day or 3950 boiler hours/year	none	P/E	records

<sup>1</sup> Ground Level Concentration

**VII. Applicable Emission limits & Compliance Monitoring Requirements  
 (continued)**

**Table VII-C**  
**S-104 – COOLING TOWER**

<u>Type of limit</u>	<u>Citation of Limit</u>	<u>FE Y/N</u>	<u>Future Effective Date</u>	<u>Limit</u>	<u>Monitoring Requirement Citation</u>	<u>Monitoring Frequency (P/C/N)</u>	<u>Monitoring Type</u>
<u>Opacity</u>	<u>BAAQM D 6-301</u>	N		<u>Ringelmann No. 1</u>		N	
<u>FP</u>	<u>BAAQM D 6-311</u>	Y		<u>40 lbs/hr</u>		N	

## VIII. TEST METHODS

The test methods associated with the emission limit of a District regulation are generally referenced in Section 600 *et seq* 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**

<b>Applicable Requirement</b>	<b>Description of Requirement</b>	<b>Acceptable Test Methods</b>
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
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, NO <sub>x</sub> , 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, NO <sub>x</sub> , 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
BAAQMD 9-7-305.1	Natural Gas Curtailment Performance Standard, NO <sub>x</sub>	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

#### IV. Test Methods (continued)

**Table VIII (continued)**

<b>Applicable Requirement</b>	<b>Description of Requirement</b>	<b>Acceptable Test Methods</b>
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 9-9-305	Emission Limits- Existing Low NOx Turbines	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-9-503.2	Deadline for Demonstration of Compliance with §9-9-301	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
<b>BAAQMD Cond# 2780</b>		
part 1	NOX Limit (basis: BACT, PSD)	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
part 3	CO control requirement and Limit (basis: BACT)	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
part 4	NOx Limit (basis: PSD, BACT)	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
part 5	Fuel oil sulfur limit (basis: BACT)	Manual of Procedures, Volume III, Method 10, Determination of Sulfur in Fuel Oils.
part 6	NMHC/TSP Limit (basis: Cumulative increase)	Manual of Procedures, Volume IV, ST-7, Non-Methane Organic Carbon Sampling, and Manual of Procedures, Volume IV, ST-15, Particulates Sampling
part 7	Natural Gas Curtailment Requirement (basis: BACT, PSD)	Manual of Procedures, Volume III, Method 10, Determination of Sulfur in Fuel Oils.
part 10	SO <sub>2</sub> Limit (basis: BACT)	Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide, Continuous Sampling, or ST-19B, Total Sulfur Oxides Integrated Sample

#### IV. Test Methods (continued)

**Table VIII (continued)**

<b>Applicable Requirement</b>	<b>Description of Requirement</b>	<b>Acceptable Test Methods</b>
part 15	Fuel oil/NOx limit demonstration (basis: BACT)	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
<b><u>BAAQMD</u></b> <b><u>Cond#18202</u></b>		
<u>Part 19.1</u>	<u>NOx Limit</u>	<u>Test Procedure ARB 100</u>
<u>Part 19.2</u>	<u>NH3 Limit</u>	<u>BAAQMD Test Procedure ST-1B</u>
<u>Part 19.3</u>	<u>CO Limit</u>	<u>Test Procedure ARB 100</u>
<u>Part 19.4</u>	<u>POC Limit</u>	<u>Test Procedure ARB 100</u>
<u>Part 19.5</u>	<u>PM10 Limit</u>	<u>Test Procedure ARB 5</u>
<u>Part 19.6</u>	<u>SOx Limit</u>	<u>Test Procedure, MOP Vol.4, ST-19A or ST-19B</u>
<b>NSPS</b> <b>Subpart GG</b>	<b>Standards of Performance for Stationary Gas Turbines (1/27/82)</b>	
60.332 (a)(1)	Performance Standard, NOx	EPA Method 20, Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
60.333 (a)	SO2 Volumetric Emission Limit	EPA Method 20, Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
60.333 (b)	Fuel Sulfur Limit (gaseous fuel)	ASTM D 1072-80, Standard Method for Total Sulfur in Fuel Gases ASTM D 3031-81, Standard Test Method for Total Sulfur in Natural Gas by Hydrogenation
NSPS 40 CFR 60.8	40 CFR 60, Appendix A	EPA Method 7,-Determination of Nitrogen Oxide Emissions from Stationary Sources EPA Method 20-Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
<b>PSD Permit</b>		
PSD permit, part IX-C.	PSD permit, part IX-C.	EPA Method 7,-Determination of Nitrogen Oxide Emissions from Stationary Sources EPA Method 20-Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines

**IX. TITLE IV ACID RAIN PERMIT**

**Effective January 1, 1998 through December 31, 2002**

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**ISSUED TO:**

**Calpine Gilroy Cogen, L.P.  
1400 Pacheco Pass Highway  
Gilroy, CA 95020**

**PLANT SITE LOCATION:**

**1400 Pacheco Pass Highway  
Gilroy, CA 95020**

**ISSUED BY:**

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Ellen Garvey, Executive Officer/  
Air Pollution Control Officer

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Date

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**Type of Facility: Cogeneration Facility  
Primary SIC: 4911  
Product: Electricity**

**DESIGNATED REPRESENTATIVE**

**Name: ~~Larry Krumland~~ Robert McM Caffrey  
Title: ~~Vice President~~ General Manager  
Phone: (408) ~~792-1234~~ 847-5328**

**FACILITY CONTACT PERSON:**

**Name: Brian Martin  
Title:  
Phone: (408) 847-5328**

## IX. Title IV Acid Rain Permit

### ACID RAIN PERMIT CONTENTS

- 1) Statement of Basis
- 2) SO<sub>2</sub> allowance allocated under this permit and NO<sub>x</sub> requirements for each affected unit.
- 3) Comments, notes and justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements of conditions.
- 4) The permit application submitted for this source. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the application.

#### 1) STATEMENT OF BASIS

**Statutory and Regulatory Authorities: ~~In:~~ In accordance with District Regulation 2, Rule 7 and Titles IV and V of the Clean Air Act, the Bay Area Air Quality Management District issues this permit pursuant to District Rule Regulation 2, Rule 7.**

#### 2) SO<sub>2</sub> ALLOWANCE ALLOCATIONS

	Year	2001	2002	2003	2004	2005
	SO <sub>2</sub> allowances under Table 2 of 40 CFR Part 73	None	None	None	None	None
S-3, Turbine	NO <sub>x</sub> Limit	This unit is not subject to the NO <sub>x</sub> requirements from 40 CFR Part 76 as this unit is not capable of firing on coal.				

**IX. Title IV Acid Rain Permit**

	Year	2001	2002	2003	2004	2005
	SO <sub>2</sub> allowances under Table 2 of 40 CFR Part 73	None	None	None	None	None
S-4, Turbine	NOx Limit	This unit is not subject to the NOx requirements from 40 CFR Part 76 as this unit is not capable of firing on coal.				

	Year	2001	2002	2003	2004	2005
	SO <sub>2</sub> allowances under Table 2 of 40 CFR Part 73	None	None	None	None	None
S-5, Turbine	NOx Limit	This unit is not subject to the NOx requirements from 40 CFR Part 76 as this unit is not capable of firing on coal.				

3) COMMENTS, NOTES AND JUSTIFICATIONS

**None**

4) PERMIT APPLICATION

**Attached**

## X. 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] are not applicable 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.

**Table X-A**  
**S-101, S-102 - BOILERS**

Citation	Title or Description (Reason not applicable)
NSPS Subpart D	Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971 (Boiler capacity below 250 million <del>btu</del> Btu/hr)
NSPS Subpart Da	Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978 (Boiler capacity below 250 million <del>btu</del> Btu/hr)
NSPS Subpart Db, 40 CFR 60.42b	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, Standard for Sulfur Dioxide (Boilers were built between 6/19/84 and 6/19/86 and are exempt from this requirement per 60.40b(b)(3))
NSPS Subpart Db, 40 CFR 60.43b	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, Standard for Particulate (Boilers were built between 6/19/84 and 6/19/86 and are exempt from this requirement per 60.40b(b)(3))
NSPS Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (Boilers built before 6/9/89 and not modified or reconstructed since 6/9/89)

**X. Permit Shield (continued)**

**Table X-B  
 S-103, No 2 Distillate Oil Storage Tank**

Citation	Title or Description (Reason not applicable)
NSPS Subpart K	Subpart K-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978 (Storage tank contains No 2 fuel oil)
Subpart Ka-	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984 (Storage tank contains No 2 fuel oil)
BAAQMD Regulation 8, Rule 5	Storage of Organic Liquids  (Section 8-5-117: Exemption, Low Vapor Pressure)

**X. Permit Shield (continued)**

**B. SUBSUMED REQUIREMENTS**

Pursuant to District Regulations 2-6-233 and 2-6-409.12, as of the date this permit is issued, the federally enforceable “subsumed” regulations and/or standards cited in the following table ~~are not applicable to~~ for the source or group of sources identified at the top of the table[s] are subsumed by the monitoring, recordkeeping, and reporting for more stringent requirements or by a “hybrid” monitoring scheme. The District has determined that compliance with the “streamlined” requirements listed below and elsewhere in this permit will assure compliance with the substantive requirements of the “subsumed” ~~regulations and/or standards~~ monitoring requirements. Enforcement actions and litigation may not be initiated against the source or group of sources covered by this shield based on the “subsumed” ~~regulatory and/or statutory provisions~~ monitoring requirements cited.

**Table X B - 1**  
**Permit Shield for Subsumed Requirements**  
**S-3, S-4, S-5, TURBINES**

<b><u>Subsumed Requirements Citation</u></b>	<b><u>Title or Description</u></b>	<b><u>Streamlined Requirements</u></b>	<b><u>Title or Description</u></b>
<b><u>40 CFR 60.334 (a)</u></b>	<b><u>Fuel-to-water monitoring</u></b>	<b><u>BAAQMD Condition 18102, part 24</u></b>	<b><u>Continuous emission monitoring for 2.5 ppmv limit @ 15% oxygen</u></b>
<b><u>40 CFR 60.334(b)(2)</u></b>	<b><u>Fuel Nitrogen Content monitoring (natural gas)</u></b>	<b><u>BAAQMD Condition 18102, part 24</u></b>	<b><u>Continuous emission monitoring for 2.5 ppmv limit @ 15% oxygen</u></b>
<b><u>40 CFR 60.334(b)(2)</u></b>	<b><u>Fuel Sulfur Content monitoring (natural gas)</u></b>	<b><u>BAAQMD Condition 18102, part 23b</u></b>	<b><u>Requirement for exclusive use of PUC-quality natural gas</u></b>
<b><u>40 CFR 60.334(c)(1)</u></b>	<b><u>Periods of excess emissions, NOx</u></b>	<b><u>BAAQMD Condition 18102, Part 24</u></b>	<b><u>Requirement for continuous emission monitor for NOx</u></b>

**X. Permit Shield (continued)**

**Table X-B-2A  
 S-100, Turbine**

<b>Subsumed Requirement Citation</b>	<b>Title or Description</b>	<b>Streamlined Requirements</b>	<b>Title or Description</b>
<b>NSPS Subpart GG</b>	<b>Standards of Performance for Stationary Gas Turbines</b>		
<b>40 CFR 60.334 (a)</b>	Fuel-to-water monitoring	PSD permit	Part IX, E: Continuous Emission Monitoring
<b>40 CFR 60.334 (b)(1)</b>	Fuel Sulfur monitoring (fuel oil)	PSD permit	Part IX, F: Fuel Usage and Sulfur Content
<b>40 CFR 60.334 (b)(1)</b>	Fuel Nitrogen Content monitoring (fuel oil)	PSD permit	Part IX, E: Continuous Emission Monitoring
<b>40 CFR 60.334 (b)(2)</b>	Fuel Sulfur and Nitrogen Content monitoring (natural gas)	Title V Condition 14299	Requirement for use of PUC quality natural gas
<b>40 CFR 60.334 (c)(1)</b>	Periods of excess emissions, NOx	PSD permit	Part IX, E: Continuous Emission Monitoring
<b>40 CFR 60.334 (c)(2)</b>	Periods of excess emissions, SO2, fuel oil	PSD permit	Part IX, F: Fuel Usage and Sulfur Content
<b>40 CFR 60.334 (c)(2)</b>	Periods of excess emissions, SO2, natural gas	Title V Condition 14299	Requirement for use of PUC quality natural gas

**Table X-B-3  
 S-101, S-102, Boilers**

<b>Subsumed Requirement Citation</b>	<b>Title or Description</b>	<b>Streamlined Requirements</b>	<b>Title or Description</b>
<b>NSPS Subpart A</b>	<b>General Provisions</b>		
<b>40 CFR 60.7(c)</b>	Continuous Monitoring Systems	PSD Permit	Part VII, E: Continuous Emission Monitoring
<b>40 CFR 60.7(d)</b>	Summary Report Forms	PSD Permit	Part VII, E: Continuous Emission Monitoring

**X. Permit Shield (continued)**

**Table X-B-3  
 S-101, S-102, Boilers**

<b>Subsumed Requirement Citation</b>	<b>Title or Description</b>	<b>Streamlined Requirements</b>	<b>Title or Description</b>
<b>40 CFR</b> 60.7(e)	Records	PSD Permit	Part VII, E: Continuous Emission Monitoring
<b>40 CFR</b> 60.7(f)	Notification to Local Agency	PSD Permit	Part VII, E: Continuous Emission Monitoring
<b>40 CFR</b> 60.7(g)	Special Provisions	PSD Permit	Part VII, E: Continuous Emission Monitoring
<b>40 CFR</b> 60.13	Monitoring Requirements	PSD Permit	Part VII, E: Continuous Emission Monitoring
<b>NSPS Subpart Db</b>	<b>Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units</b>		
<b>40 CFR</b> 60.46b	Compliance and performance test methods and procedures for particulate matter and nitrogen oxides	BACT monitoring	BAAQMD Permit condition #2780, Parts 11 and 14
<b>40 CFR</b> 60.48b	Emission monitoring for particulate matter and nitrogen oxides	BACT monitoring	BAAQMD Permit condition #2780, Parts 11 and 14
<b>40 CFR</b> 60.49b	Reporting and recordkeeping requirements	BACT monitoring	BAAQMD Permit condition #2780, Parts 11 and 14

## **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 pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). 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.

## **XI. Glossary**

### **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 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.

### **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 ~~both~~ 40 CFR Part 63, ~~and District Regulation 2, Rule 5.~~

### **Major Facility**

A facility with potential emissions of regulated air pollutants greater than or equal to 100 tons per year, greater than or equal to 10 tons per year of any single hazardous air pollutant, and/or greater than or equal to 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity 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. ~~Contained~~ See in 40 CFR Parts 61 and 63.

### **NH3**

Ammonia

### **NMHC**

Non-methane Hydrocarbons

### **NO<sub>x</sub>**

Oxides of nitrogen.

## **XI. Glossary**

### **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 both 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"~~ criteria have been established in accordance with Section 108 of the Federal Clean Air Act. 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<sub>x</sub>, PM<sub>10</sub>, and SO<sub>2</sub>.

### **Phase II Acid Rain Facility**

A facility that generates electricity for sale through fossil-fuel combustion and ~~by virtue of certain other characteristics (defined in Regulation 2, Rule 6)~~ 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

### **PM<sub>10</sub>**

Particulate matter with aerodynamic equivalent diameter of less than or equal to 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.

### **SCR**

Selective Catalytic Reduction. Catalytic control for oxides of nitrogen

### **SIP**

## XI. Glossary

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.

### **SO<sub>2</sub>**

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.

### **TRMP**

Toxic Risk Management Plant

### **TSP**

Total Suspended Particulate

### **VOC**

Volatile Organic Compounds

### **Units of Measure:**

<del>bhp</del> Bhp	=	brake-horsepower
<del>btu</del> Btu	=	British <u>Thermal</u> -Unit
g	=	grams
gal	=	gallon
hp	=	horsepower
hr	=	hour
<del>lb.</del>	=	pound
in	=	inches
max	=	maximum
m <sup>2</sup>	=	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
<del>yr.</del>	=	year

## XII. REVISION HISTORY

<u>Date</u>	<u>Action</u>	<u>Details</u>
May 12, 1998	Initial Issuance	
December 18, 1998	Significant modification	CO limit changed from destruction efficiency basis to concentration basis.
July 26, 2000	Minor modification	Replacement of components, increase in capacity and efficiency, minor increase in emissions.
<u>September , 2001</u>	<u>Significant revision</u>	<u>Addition of three gas-turbine peaker units. Capacity increased by 135 MW. Major increase in emissions. Added existing cooling tower (S- 104). -Revisions to facilitywide SO2, PM, and CO limits. Issuance of Phase II Acid Rain permit.</u>

### **XIII. APPENDIX A - APPLICABLE STATE IMPLEMENTATION PLAN**

See Attachments