

# Bay Area Air Quality Management District

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

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**Final**

## MAJOR FACILITY REVIEW PERMIT

**Issued To:**

**Calpine Gilroy Cogen, L. P. and Gilroy Energy Center, LLC  
Facility #B1180**

**Facility Address:**

1400 Pacheco Pass Highway  
Gilroy, CA 95020

**Mailing Address:**

P.O. Box 1764  
Gilroy, CA 95021

**Responsible Official**

Roger Morales,  
Operations and Maintenance Manager  
(408) 847-5328; ext: 1402

**Facility Contact**

Maria Barroso,  
Compliance Manager  
(831) 385-4090; ext: 13

**Alternate Responsible Official**

Eugene Fahey, General Manager, (831) 385-4090; ext: 12  
Maria Barroso, Compliance Manager, (831) 385-4090; ext: 13

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<b>Type of Facility:</b>	Cogeneration Plant & Power Plant 265 MW	BAAQMD Permit Division Contact:
<b>Primary SIC:</b>	4911	Krishnaswamy R. Bhagavan
<b>Product:</b>	Cogeneration of electricity and steam	

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

Signed by Jack P. Broadbent  
Jack P. Broadbent, Air Pollution Control Officer/Executive Officer

March 16, 2006  
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 5/2/01);

SIP Regulation 1 - General Provisions and Definitions  
(as approved by EPA through 6/28/99);

BAAQMD Regulation 2, Rule 1 - Permits, General Requirements  
(as amended by the District Board on 8/1/01);

SIP Regulation 2, Rule 1 - Permits, General Requirements  
(as approved by EPA through 1/26/99);

BAAQMD Regulation 2, Rule 2 - Permits, New Source Review  
(as amended by the District Board on 5/17/00);

SIP Regulation 2, Rule 2 - Permits, New Source Review and Prevention of Significant Deterioration  
(as approved by EPA through 1/26/99); and

BAAQMD Regulation 2, Rule 4 - Permits, Emissions Banking  
(as amended by the District Board on 1/16/03).

SIP Regulation 2, Rule 4 - Permits, Emissions Banking  
(as approved by EPA through 1/26/99).

BAAQMD Regulation 2, Rule 6 - Permits, Major Facility Review  
(as amended by the District Board on 4/16/03).

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

1. This Major Facility Review Permit was issued on March 16, 2006 and expires on March 15, 2011. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than October 15, 2010 and no earlier than March 15, 2010. **If a complete application for renewal has not been submitted in accordance with this deadline, the facility may not operate after March 15, 2011. If the permit renewal has not been issued by March 15, 2011, but a complete application for renewal has been submitted in accordance with the above deadlines, the existing permit will continue in force until the District takes final action on the renewal application.** (Regulation 2-6-307, 404.2, 407, & 409.6; MOP Volume II, Part 3, §4.2)
2. The permit holder shall comply with all conditions of this permit. The permit consists of this document and all appendices. Any non-compliance with the terms and conditions of this permit will constitute a violation of the law and will be grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (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)

## **I. Standard Conditions**

4. This permit may be modified, revoked, reopened and reissued, or terminated for cause. (Regulation 2-6-307, 409.8, 415; MOP Volume II, Part 3, §4.11)
5. The filing of a request by the facility for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated non-compliance does not stay the applicability of any permit condition. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
6. This permit does not convey any property rights of any sort, or any exclusive privilege. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
7. The permit holder shall supply within 30 days any information that the District requests in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. (Regulation 1-441, Regulation 2-6-409.4 & 501; MOP Volume II, Part 3, §4.11)
8. Any records required to be maintained pursuant to this permit that the permit holder 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. (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

## I. Standard Conditions

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

### F. Monitoring Reports

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

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

(Regulation 2-6-502, 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 December 1st (month and day) to November 30th. The certification shall be submitted by December 31 of each year. The certification must list each applicable requirement, the compliance status, whether compliance was continuous or intermittent, the method used to determine compliance and any other specific information required by the permit. The permit holder may satisfy this requirement through submittal of District-generated Compliance Certification forms. The certification should be directed to the District's Compliance and Enforcement Division at the address above, and a copy of the certification should be sent to the Environmental Protection Agency at the following address:

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

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

## **I. Standard Conditions**

### **H. Emergency Provisions**

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

The maximum capacity for each source as shown in Table II-A is the maximum allowable capacity. 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 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 March 1st of the following year (or February 29 in any leap year or if such day is not a business day, the first business day thereafter) 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, Rule 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

## **I. Standard Conditions**

- implementation, and relative accuracy testing. (Regulation 2, Rule 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, Rule 7, Acid Rain)
  5. The permit holder shall submit quarterly Electronic Data Reports (EDRs) to EPA for Turbines, S-3, S-4, S-5. In addition, from March 1, 2005 onward, the permit holder shall submit quarterly Electronic Data Reports (EDRs) to EPA for the combined cycle turbine S-100. 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

**Table II-A**

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 J and Regulation 2-1-301.

S-#	Description	Make or Type	Model	Capacity
3	45 MW Gas Turbine Generator, Natural Gas with water injection	General Electric	LM6000PC	467.6 MMBtu/hour (HHV)
4	45 MW Gas Turbine Generator, Natural Gas with water injection	General Electric	LM6000PC	467.6 MMBtu/hour (HHV)
5	45 MW Gas Turbine Generator, Natural Gas with water injection	General Electric	LM6000PC	467.6 MMBtu/hour (HHV)
6	Emergency Standby Fire Pump: Diesel Engine	Cummins	NT-495-FP	170 HP
100	87 MW Gas Turbine Generator, Natural Gas with steam injection	General Electric	Frame 7EA	1085 MM Btu/hr (HHV) @ 35 F
101	Auxiliary Boiler, Natural Gas	Nebraska	NSE68	104 MM Btu/hr (natural gas)
102	Auxiliary Boiler, Natural Gas	Nebraska	NSE68	104 MM Btu/hr (natural gas)
104	Cooling Tower, Counterflow,	Marley, Three Cell		1.44 MM gallons per hour



## II. Equipment List

**Table II-B – Abatement Devices**

A-#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency
3	Oxidation catalyst	3	BAAQMD Condition #18102 part 19.3 & 19.4		CO < 6 ppm POC < 2 ppm
4	Selective Catalytic Reduction System	3	BAAQMD Condition #18102 part 19.1		NOx < 5 ppm
5	Oxidation catalyst	4	BAAQMD Condition #18102 part 19.3 & 19.4		CO < 6 ppm POC < 2 ppm
6	Selective Catalytic Reduction System	4	BAAQMD Condition #18102 part 19.1		NOx < 5 ppm
7	Oxidation catalyst	5	BAAQMD Condition #18102 part 19.3 & 19.4		CO < 6 ppm POC < 2 ppm
8	Selective Catalytic Reduction System	5	BAAQMD Condition #18102 part 19.1		NOx < 5 ppm
100	Oxidation Catalyst	S100	Cond #2780 part 3	All conditions except startup and shutdown	CO < 10 ppm

### 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. This section also contains provisions that may apply to temporary sources.

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

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

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

**NOTE:**

There are differences between the current BAAQMD rule and the version of the rule in the SIP. 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  
 Generally Applicable Requirements**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
BAAQMD Regulation 1	General Provisions and Definitions (05/02/01)	N
SIP Regulation 1	General Provisions and Definitions (8/27/99)	Y
BAAQMD Regulation 2, Rule 1	General Requirements (8/1/01)	N
BAAQMD 2-1-429	Federal Emissions Statement (6/7/95)	Y
SIP Regulation 2, Rule 1	General Requirements (8/27/99)	Y

### III. Generally Applicable Requirements

**Table III  
 Generally Applicable Requirements**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>
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
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 (11/21/01)	N
BAAQMD Regulation 8, Rule 40	Organic Compounds - Aeration of Contaminated Soil and Removal of Underground Storage Tanks (12/15/99)	Y
BAAQMD Regulation 8, Rule 47	Organic Compounds - Air Stripping and Soil Vapor Extraction Operations (6/15/94)	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 (7/17/02)	N
BAAQMD Regulation 11, Rule 2	Hazardous Pollutants - Asbestos Demolition, Renovation and Manufacturing (10/7/98)	N
BAAQMD Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (7/11/90)	N
SIP Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (9/2/81)	Y
California Health and Safety Code Section 41750 et seq.	Portable Equipment	N
California Health And Safety Code Section 44300 Et Seq.	Air Toxics "Hot Spots" Information And Assessment Act Of 1987	N
40 CFR Part 61, Subpart M	National Emission Standards For Hazardous Air Pollutants – National Emission Standard For Asbestos (6/19/95)	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 of Directors.
2. Any federal requirement, including a version of a District regulation that has been approved into the SIP:  
 The most recent date of EPA approval of any portion of the rule, encompassing all actions on the rule through that date

The full text of each permit condition cited is included in Section VI, Permit Conditions, of this permit. Additionally, where an applicable requirement is a SIP requirement, the full language of the SIP requirement is included in Appendix A of this permit on EPA Region 9's website. The address is

<http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions>. . All other text may be found in the regulations themselves.

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

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 (5/2/01)</b>		
1-431	Breakdown Report	Y	
1-432	Written Breakdown Report	Y	
1-433	Determination of Breakdown	Y	
1-520	Continuous Emission Monitoring	Y	
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	N	
1-522.1	Plans and Specifications	Y	
1-522.2	Installation Scheduling	Y	
1-522.3	Performance Testing	Y	
1-522.4	Periods of Inoperation Greater Than 24 Hours	Y	

## IV. Source-Specific Applicable Requirements

**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>
1-522.5	Calibration	Y	
1-522.6	Accuracy	Y	
1-522.7	Excesses	N	
1-522.8	Monthly Reports	Y	
1-522.9	Records	Y	
1-522.10	Monitors Required by Sections 1-521 or 2-1-403	Y	
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	
1-602	Area and Continuous Emission Monitoring Requirements	Y	
<b>SIP Regulation 1</b>	<b>General Provisions and Definitions (6/28/99)</b>		
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y <sup>1</sup>	
1-522.7	Emission limit exceedance reporting requirements	Y <sup>1</sup>	
<b>BAAQMD Regulation 2, Rule 1</b>	<b>Regulation 2, Rule 1 - Permits, General Requirements (8/1/01)</b>		
2-1-501	Monitors	Y	
<b>BAAQMD Regulation 6</b>	<b>Particulate Matter and Visible Emissions (12/19/90)</b>		
6-301	Ringelmann Number 1 Limitation	Y	
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	Y	
9-1-302	General Emission Limitations	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	
9-9-301	Emission Limits, General	Y	
9-9-301.3	Emission Limits- Turbines Rated ≥ 10 MW w/SCR	Y	
9-9-401	Certification, Efficiency	Y	

## IV. Source-Specific Applicable Requirements

**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>
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 Subpart A</b>	<b>Standards of Performance for New Stationary Sources (12/23/71)</b>	Y	
	<b>General Provisions</b>	Y	
60.4(b)	Reports To EPA And District	Y	
60.7(a)	Written notification	Y	
60.7(b)	Records	Y	
60.8	Performance Tests	Y	
60.9	Availability of Information	Y	
60.11(a)	Compliance with standards and maintenance requirements	Y	
60.11(d)	Minimizing emissions	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	
60.19	General notification and reporting requirements	Y	
<b>Subpart GG</b>	<b>Standards of Performance for Stationary Gas Turbines (1/27/82)</b>		
60.332(a)(1)	NOx limit	Y	
60.332(a)(3)	Choice of “F” values available (either NOx emission allowance for fuel-bound nitrogen or zero) to owner/operator to use in equation in Section 60.332(a)(1)	Y	
60.332(a)(4)	Definition of “F” value – if the owner/operator elects the NOx emission allowance for fuel-bound nitrogen option.	Y	
60.333	Standard for SO2	Y	
60.334(b)	Requirements for CEMS consisting of NOx and O2 monitors installed at turbines which use water injection that were constructed, reconstructed, or modified after October 3, 1977, but before July 8, 2004	Y	
60.334(h)(1)	Requirements for monitoring total sulfur content of fuel fired in turbines	Y	
60.334(h)(3)	Options available to owner/operator to discontinue total sulfur content monitoring	Y	
60.334(i)(2)	Frequency (once per unit operating day) of determining the sulfur and nitrogen content of the gaseous fuel fired in the turbines	Y	

## IV. Source-Specific Applicable Requirements

**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>
60.334 (j)(1)(iii)	Nitrogen oxides: Excess emissions and monitor downtime reporting requirements for turbines using NOx and diluent CEMS	Y	
60.334 (j)(2)(i)	Sulfur Dioxide: (Applicable only if owner or operator is required to monitor sulfur content of fuel per Section 60.334(h)) Excess emissions	Y	
60.334 (j)(2)(iii)	Sulfur Dioxide: Fuel sulfur content monitor downtime	Y	
60.334(j)(5)	Postmarking requirements for reports	Y	
60.335	Test Methods and Procedures	Y	
<b>40 CFR 60 Appendix B</b>	<b>Performance Specifications</b>	Y	
Performance Specification 2	Specifications and test procedures for SO2 and NOx continuous emission monitoring systems in stationary sources	Y	
Performance Specification 3	Specifications and test procedures for O2 and CO2 continuous emission monitoring systems	Y	
<b>40 CFR 60 Appendix F</b>	<b>Quality Assurance Procedures</b>		
Procedure 1	Quality assurance requirements for gas continuous emission monitoring systems used for compliance determination	Y	
<b>40 CFR Part 72</b>	<b>Title IV – Acid Rain Program</b>	Y	
<b>40 CFR Part 75</b>	<b>Code of Federal Regulations, Continuous Emissions Monitoring</b>	Y	
<b>BAAQMD Condition #18102</b>			
Definitions	Definitions	Y	
part 12	Consistency with analyses (2-1-403)	Y	
part 13	Conflicts between conditions (1-102)	Y	
part 14	Reimbursement of costs (2-1-303)	Y	
part 15	Access to Records and Facilities (1-440, 1-441)	Y	

## IV. Source-Specific Applicable Requirements

**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 17	Operations (2-1-307)	Y	
part 18	Visible emissions (6-301)	Y	
Part 19	Emission Limits		
Part 19.1	Emission Limit for NOX (BACT)	Y	
Part 19.2	Emission Limit for ammonia (BACT)	N	
Part 19.3	Emission Limit for carbon monoxide (BACT)	Y	
Part 19.4	Emission Limit for precursor organic compounds (BACT)	Y	
Part 19.5	Emission Limit for PM10 (BACT, cumulative increase)	Y	
Part 19.6	Emission Limit for SOX (BACT, cumulative increase)	Y	
Part 20	Turbine Startup (cumulative increase)	Y	
Part 21	Turbine Shutdown (cumulative increase)	Y	
Part 22	Mass emission limits (cumulative increase)	Y	
part 23	Operational Limits (cumulative increase)	Y	
part 24	Monitoring requirements (Cumulative Increase, BACT, 40 CFR 75, 40 CFR 60)	Y	
part 25	Source testing/RATA (40 CFR 60, BAAQMD Manual of Procedures Volume IV)	Y	
part 26	Quality assurance program (40 CFR Part 75, Appendix B and 40 CFR Part 60, Appendix F)	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 30a	Records of fuel use and heat input (cumulative increase)	Y	
part 30b	Records of startups, shutdowns, and malfunctions (BACT, cumulative increase)	Y	
part 30c	Records of emission measurements (BACT, cumulative increase, 40 CFR 60, 40 CFR 75)	Y	
part 30d	Records of hours of operation (cumulative increase)	Y	
part 30e	Records of NOX, CO, and ammonia emissions (BACT)	Y	
part 30f	Records of continuous emission monitoring systems (1-522)	Y	
part 31	Records retention for five years (2-6-501)	Y	
part 32a	Reports of fuel use and heat input (cumulative increase)	Y	
part 32b	Reports of mass emission rates (BACT, cumulative increase)	Y	
part 32c	Reports of excess emissions (BACT, cumulative increase)	Y	



## IV. Source-Specific Applicable Requirements

**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 32d	Reports of nature and cause of excess emissions (BACT, cumulative increase)	Y	
part 32e	Reports of continuous emission monitoring systems downtime (1-522)	Y	
part 32f	Negative declarations (BACT, cumulative increase)	Y	
part 32g	Reports of fuel analyses (cumulative increase, 40 CFR 75)	Y	
part 34	District Operating permit (2-2, 2-6)	Y	

<sup>1</sup> This section has been removed from BAAQMD Regulations because it has been superseded. Nevertheless, the source must comply with this regulation until US EPA has reviewed and approved (or disapproved) the District's revision of the regulation.

## IV. Source-Specific Applicable Requirements

**Table IV-B**  
**S-100 – GAS TURBINE**

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 (5/2/01)</b>		
1-431	Breakdown Report	Y	
1-432	Written Breakdown Report	Y	
1-433	Determination of Breakdown	Y	
1-520	Continuous Emission Monitoring	Y	
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	
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	
1-602	Area and Continuous Emission Monitoring Requirements	N	
<b>SIP Regulation 1</b>	<b>General Provisions and Definitions (6/28/99)</b>		
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y <sup>1</sup>	
1-522.7	Emission limit exceedance reporting requirements	Y <sup>1</sup>	
<b>BAAQMD Regulation 2, Rule 1</b>	<b>Regulation 2, Rule 1 – Permits, General Requirements ( 8/1/01)</b>		
2-1-501	Monitors	Y	
<b>BAAQMD Regulation 6</b>	<b>Particulate Matter and Visible Emissions (12/19/90)</b>		
6-301	Ringelmann Number 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-401	Appearance of Emissions	Y	

## IV. Source-Specific Applicable Requirements

**Table IV-B  
 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 9, Rule 1</b>	<b>Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)</b>		
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-302	General Emission Limitations	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 Subpart A</b>	<b>Standards of Performance for New Stationary Sources (12/23/71)</b>	Y	
	<b>General Provisions</b>	<b>Y</b>	
60.4(b)	Reports to EPA and District	Y	
60.7(a)	Written notification	Y	
60.7(b)	Records	Y	
60.8	Performance Tests	Y	
60.9	Availability of Information	Y	
60.11(a)	Compliance with standards and maintenance requirements	Y	
60.11(d)	Minimizing emissions	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	
60.19	General notification and reporting requirements	Y	
<b>40 CFR 60 Appendix B</b>	<b>Performance Specifications</b>	Y	
Performance Specification 2	Specifications and test procedures for SO <sub>2</sub> and NO <sub>x</sub> continuous emission monitoring systems in stationary sources	Y	
Performance Specification 3	Specifications and test procedures for O <sub>2</sub> and CO <sub>2</sub> continuous emission monitoring systems	Y	

## IV. Source-Specific Applicable Requirements

**Table IV-B**  
**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>40 CFR 60 Appendix F</b>	<b>Quality Assurance Procedures</b>		
Procedure 1	Quality assurance requirements for gas continuous emission monitoring systems used for compliance determination	Y	
<b>Subpart GG</b>	<b>Standards of Performance for Stationary Gas Turbines (1/27/82)</b>		
60.332(a)(1)	NOx limit	Y	
60.332(a)(3)	Choice of “F” values available (either NOx emission allowance for fuel-bound nitrogen or zero) to owner/operator to use in equation in Section 60.332(a)(1)	Y	
60.332(a)(4)	Definition of “F” value – if the owner/operator elects the NOx emission allowance for fuel-bound nitrogen option.	Y	
60.333	Performance Standards, SO2	Y	
60.334(b)	Requirements for CEMS consisting of NOx and O2 monitors installed at turbines which use steam injection that were constructed, reconstructed, or modified after October 3, 1977, but before July 8, 2004	Y	
60.334(h)(1)	Requirements for monitoring total sulfur content of fuel fired in turbines	Y	
60.334(h)(3)	Options available to owner/operator to discontinue total sulfur content monitoring	Y	
60.334(i)(2)	Frequency (once per unit operating day) of determining the sulfur and nitrogen content of the gaseous fuel fired in the turbines	Y	
60.334 (j)(1)(iii)	Nitrogen oxides: Excess emissions and monitor downtime reporting requirements for turbines using NOx and diluent CEMS	Y	
60.334 (j)(2)(i)	Sulfur Dioxide: (Applicable only if owner or operator is required to monitor sulfur content of fuel per Section 60.334(h)) Excess emissions	Y	
60.334 (j)(2)(iii)	Sulfur Dioxide: Fuel sulfur content monitor downtime	Y	
60.334(j)(5)	Postmarking requirements for reports	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>Title IV - Acid Rain Program</b>	Y	March 1, 2005

## IV. Source-Specific Applicable Requirements

**Table IV-B**  
**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>40 CFR Part 75</b>	<b>Code of Federal Regulations, Continuous Emissions Monitoring</b>	Y	March 1, 2005
<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 4	Individual boiler NOx concentration limit averaged over a 3-hour period (basis: PSD, BACT)	Y	
part 6	NMHC/TSP Limit (basis: Cumulative increase)	Y	
part 8	Steam Injection (basis: BACT)	Y	
Part 9	Continuous Emission Monitoring (basis: PSD, 2-1-403)	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 18	Hours of Operation (basis: Cumulative increase)	Y	
<b>BAAQMD Condition # 21961</b>	<b>PSD Permit</b>		
III	Facilities Operation	Y	
V	Right to Entry	Y	
VI	Transfer of Ownership	Y	
VII	Severability	Y	

## IV. Source-Specific Applicable Requirements

**Table IV-B**  
**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>
VIII	Other Applicable Regulations	Y	
IX, B	Air Pollution Control Equipment	Y	
IX, C	Emission Limits for NOx	Y	
IX, D	Performance Tests	Y	
IX, E	Continuous Emission Monitoring	Y	
IX, G	New Source Performance Standards	Y	

<sup>1</sup> This section has been removed from BAAQMD Regulations because it has been superseded. Nevertheless, the source must comply with this regulation until US EPA has reviewed and approved (or disapproved) the District's revision of the regulation.

## IV. Source-Specific Applicable Requirements

**Table IV-C**  
**S-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>		
1-431	Breakdown Report	Y	
1-432	Written Breakdown Report	Y	
1-433	Determination of Breakdown	Y	
1-520	Continuous Emission Monitoring	Y	
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	
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	
1-602	Area and Continuous Emission Monitoring Requirements	Y	
<b>SIP Regulation 1</b>	<b>General Provisions and Definitions (6/28/99)</b>		
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y <sup>1</sup>	
1-522.7	Emission limit exceedance reporting requirements	Y <sup>1</sup>	
<b>BAAQMD Regulation 2, Rule 1</b>	<b>Regulation 2, Rule 1 - Permits, General Requirements (8/1/01)</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	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-310.3	Heat transfer equipment	Y	

## IV. Source-Specific Applicable Requirements

**Table IV-C  
 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>
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	Y	
9-1-302	General Emission Limitations	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>		
9-7-301	Emission Limits-Gaseous Fuel	Y	
9-7-301.1	Emission Limits-NOx	Y	
9-7-301.2	Emission Limits-CO	Y	
9-7-303	Emission Limits-Gaseous Fuels-and Non-Gaseous Fuel	Y	
9-7-503	Records	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>		
<b>40 CFR 60</b>	<b>Standards of Performance for New Stationary Sources (12/23/71)</b>	<b>Y</b>	
<b>Subpart A</b>	<b>General Provisions</b>	<b>Y</b>	
60.4(b)	Reports to EPA and District	Y	
60.7(a)	Written notification	Y	
60.7(b)	Records	Y	
60.8	Performance Tests	Y	
60.9	Availability of Information	Y	
60.11(a)	Compliance with standards and maintenance requirements	Y	
60.11(d)	Minimizing emissions	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	
60.19	General notification and reporting requirements	Y	



## IV. Source-Specific Applicable Requirements

**Table IV-C  
 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>
<b>40 CFR 60 Appendix B</b>	<b>Performance Specifications</b>	Y	
Performance Specification 2	Specifications and test procedures for SO <sub>2</sub> and NO <sub>x</sub> continuous emission monitoring systems in stationary sources	Y	
Performance Specification 3	Specifications and test procedures for O <sub>2</sub> and CO <sub>2</sub> continuous emission monitoring systems	Y	
<b>40 CFR 60 Appendix F</b>	<b>Quality Assurance Procedures</b>		
Procedure 1	Quality assurance requirements for gas continuous emission monitoring systems used for compliance determination	Y	
<b>Subpart Db</b>	<b>Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (12/16/87)</b>	<b>Y</b>	
60.44b (a)(1)(ii)	NO <sub>x</sub> limit	Y	
60.44b(h)	NO <sub>x</sub> 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	NO <sub>x</sub> limit (basis: PSD, BACT)	Y	
part 6	NMHC/TSP Limit (basis: Cumulative increase)	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 18	Hours of Operation (basis: Cumulative increase)	Y	
BAAQMD Condition # 21961	<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, B	Air Pollution Control Equipment	Y	

## IV. Source-Specific Applicable Requirements

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

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
IX, C	Emission Limits for NOx	Y	
IX, D	Performance Tests	Y	

<sup>1</sup> This section has been removed from BAAQMD Regulations because it has been superseded. Nevertheless, the source must comply with this regulation until US EPA has reviewed and approved (or disapproved) the District's revision of the regulation.

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

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<b>BAAQMD Regulation 6</b>	<b>Particulate Matter and Visible Emissions (12/19/90)</b>		
6-301	Ringelmann Number 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-311	General Operations	Y	
6-401	Appearance of Emissions	Y	

**Table IV - E  
 Source-specific Applicable Requirements  
 S-6 - EMERGENCY STANDBY FIRE PUMP: DIESEL ENGINE**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<b>BAAQMD Regulation 6</b>	<b>Particulate Matter and Visible Emissions (12/19/90)</b>		
6-303	Ringelmann No. 2 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	

## IV. Source-Specific Applicable Requirements

**Table IV - E**  
**Source-specific Applicable Requirements**  
**S-6 - EMERGENCY STANDBY FIRE PUMP: DIESEL ENGINE**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
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	Y	
9-1-304	Fuel Burning (Liquid and Solid Fuels)	Y	
<b>BAAQMD Regulation 9, Rule 8</b>	<b>Inorganic Gaseous Pollutants (8/1/01)</b>		
9-8-330	Emergency Standby Engines, Hours of Operation	N	
9-8-530	Emergency standby engines, monitoring and recordkeeping	N	

## 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.

### **Permit Condition #2780:**

For S-100 - GAS TURBINE, S-101 AND S-102, BOILERS  
(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. The oxides of nitrogen (NO<sub>x</sub>) concentration in the gas turbine exhaust shall not exceed 25 ppmvd at 15% oxygen averaged over any three-hour period. (BACT, PSD)
- 1b. The limit in part 1a shall not apply during cold start-up, which is not to exceed four hours, or shutdown procedure, which is not to exceed two hours. However, for daily start-ups after a 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 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 at 15% oxygen averaged over any calendar day, 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, Gas Turbine, shall not exceed 323.7 tons per any consecutive twelve months. The permit holder shall install current Best Available

## VI. Permit Conditions

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 lb in any calendar day. (Regulation 2-2-301)
2. (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 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 ppmvd at 15% oxygen over any three-hour period . (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 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)
- 3.g. (Deleted under BAAQMD Application # 13479)
4. Nitrogen oxide (NO<sub>x</sub>) emissions from each auxiliary boiler (S-101, S-102) shall not exceed 30 ppmvd at 3% oxygen averaged over any three-hour period. (PSD, BACT)
5. (Deleted under BAAQMD Application # 13479)

## VI. Permit Conditions

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/yr. NMHC.
- 6.a. As long as natural gas is burned exclusively at the turbine and boilers, particulate emissions shall not be monitored. (Cumulative increase)

6.b. (Deleted under BAAQMD Application # 13479)

### **6.C. (DELETED UNDER BAAQMD APPLICATION # 13479)**

7.a. (Deleted under BAAQMD Application # 13479)

7.b. (Deleted under BAAQMD Application # 13479)

8. The steam injection to control NO<sub>x</sub> 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)
- 10.a. (Deleted under BAAQMD Application # 13479)
- 10.b. (Deleted under BAAQMD Application # 13479)
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)
- 13.a. The exhaust stack from the gas turbine (P-100) shall be constructed to a height of at least 80 feet. (PSD)
- 13.b. 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 shall be subject to the approval of the APCO. (PSD, BACT)

## VI. Permit Conditions

15. (Deleted under BAAQMD Application # 13479)
16. (Deleted BAAQMD Title V application #25841)
17. (Deleted under BAAQMD Application # 13479)
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)

### **Condition #14299**

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

1. The owner/operator shall ensure that sources S-100, Gas Turbine, and S-101-S-102, Boilers exclusively combust no other fuel in them except for natural gas . (basis: 2-1-403)

### **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

## VI. Permit Conditions

Precursor Organic Compounds (POCs):	oxygen concentration is 15% O <sub>2</sub> by volume on a dry basis Any compound of carbon, excluding methane, ethane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate
CEC:	California Energy Commission

### EQUIPMENT 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 NO<sub>x</sub> 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 NO<sub>x</sub> and CO concentrations in ppmvd corrected to 15% oxygen on a dry basis.

### PERMIT CONDITIONS:

Condition #18102

Conditions for the Commissioning Period  
(Parts 1 through 8 deleted)

9. (Deleted under BAAQMD Application # 13479)

(Parts 10 through 11 deleted)

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



## VI. Permit Conditions

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. (Deleted under BAAQMD Application # 13479)

17. Operations: The gas turbine, emissions controls, CEMS and associated equipment shall be 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. (6-301)

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)

## VI. Permit Conditions

- 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 defined in this permit. The PM<sub>10</sub> mass emission rate shall be verified during any required source test. (basis: BACT & cumulative increase)
- 19.6 Oxides of sulfur emissions (SO<sub>x</sub>) from the gas turbine shall not exceed 0.33 pounds per hour. The SO<sub>x</sub> 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)
NO <sub>x</sub> (as NO <sub>2</sub> )	604.8	39.5
POC	84	6.9
CO	446.1	36.0
SO <sub>x</sub> (as SO <sub>2</sub> )	23.8	1.9
PM <sub>10</sub>	180	14.7

## VI. Permit Conditions

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)

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

(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.

## VI. Permit Conditions

(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).

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

(Basis: Cumulative Increase, BACT, 40 CFR 75, 40 CFR 60)

25. Source Testing/RATA: The owner/operator shall perform a relative accuracy test audit (RATA) on the CEMS in accordance with 40 CFR Part 60 Appendix B Performance Specifications and a source test on an annual basis. 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 forty-five 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>x</sub>) – ppmvd at 15% O<sub>2</sub> and 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/MMBtu (Exhaust);
- d. POC – ppmvd at 15% O<sub>2</sub> and lb/MMBtu (Exhaust);
- e. PM<sub>10</sub> – lb/hr (Exhaust);
- f. SO<sub>x</sub> – 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/hr or moles/hr)

(Basis: 40 CFR 60, BAAQMD Manual of Procedures Volume IV)

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)

## VI. Permit Conditions

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 (cumulative increase);
  - (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 (BACT, cumulative increase);
  - (c) emission measurements from all source testing, RATAs and fuel analyses (Cumulative Increase, BACT, 40 CFR 75, 40 CFR 60);
  - (d) daily, quarterly and annual hours of operation (Cumulative Increase);
  - (e) hourly records of NO<sub>x</sub> and CO, emission concentrations and hourly ammonia injection rates and ammonia/NO<sub>x</sub> ratio (BACT);
  - (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 (1-522).
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: BAAQMD 2-6-501)
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 (Cumulative Increase);
  - (b) Daily and quarterly mass emission rates for all criteria pollutants during normal operations and during other periods (startup/shutdown, breakdowns) (BACT, cumulative increase);
  - (c) Time intervals, date, and magnitude of excess emissions (BACT, cumulative increase);
  - (d) Nature and cause of the excess emission, and corrective actions taken (BACT,

## VI. Permit Conditions

- cumulative increase);
- (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 (1-522);
- (f) A negative declaration when no excess emissions occurred (BACT, cumulative increase); and
- (g) Results of quarterly fuel analyses for HHV and total sulfur/hydrogen sulfide content (Cumulative increase, 40 CFR 75).

33. ( Deleted under BAAQMD Application # 13479)

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. (Deleted under BAAQMD Title V application # 6748)

### **Condition # 21961:**

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

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

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

## VI. Permit Conditions

required to be kept under the terms and conditions of this Approval to Construct/Modify; and

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

### VI. Transfer of Ownership

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

### VII. Severability

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

### VIII. Other Applicable Regulations

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

### IX. Special Conditions

- A. (deleted BAAQMD Title V application #25841)
- B. Air Pollution Control Equipment

On and after the date of startup of the 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

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%

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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 shutdown procedure, which is not to exceed two hours. However, for daily start-ups after a 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 NO<sub>x</sub> 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 NO<sub>x</sub> 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 NO<sub>x</sub> shall be conducted at the maximum capacity of the 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 NO<sub>x</sub> 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:

Continuous monitoring systems to measure stack gas NO<sub>x</sub> concentration, fuel usage, steam-to-fuel ratio, and either O<sub>2</sub> or CO<sub>2</sub> 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



## VI. Permit Conditions

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)
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)~~

## VI. Permit Conditions

~~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 ratio 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/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)  
(Deleted under BAAQMD Title V application # 6748)~~

### 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)

## 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 column indicates whether periodic (P) or continuous (C) monitoring is required. For periodic monitoring, the frequency of the monitoring has also been shown, using the following codes: annual (A), quarterly (Q), monthly (M), daily (D), or on an event basis (E). No monitoring (N) has been required if the current applicable rule or regulation does not require monitoring, and the operation is unlikely to deviate from the applicable emission limit based upon the nature of the operation.

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

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

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOx	BAAQMD 9-9-301.3	Y		9 ppmv @ 15% O2, dry	BAAQMD 9-9-501 and BAAQMD condition #18102, part 24	C	CEMS
	BAAQMD 9-9-301.3	Y		9 ppmv @ 15% O2, dry	BAAQMD condition #18102, part 25	P/A	Source test

## VII. Applicable Emission limits & Compliance Monitoring Requirements

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

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOX	NSPS, 40 CFR 60.332 (a)(1)	Y		99 ppmv @ 15% O <sub>2</sub> , dry 4-hour rolling average (Arithmetic average of the average NO <sub>x</sub> concentration measured by the CEMS for a given hour and the three unit operating hour average NO <sub>x</sub> concentrations immediately preceding that unit operating hour)	NSPS, 40 CFR 60.334 (b)	C	CEMS
	None	Y		None	40 CFR 75.10	C	CEMS
	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, 24	C	CEMS
	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
	BAAQMD condition #18102, part 22	Y		604.8 lb/calendar day (as NO <sub>2</sub> ) for S-3, S-4, and S-5 combined	BAAQMD condition #18102, part 24	C	CEMS
NOX	BAAQMD condition #18102, part 22	Y		39.5 tons per calendar year (as NO <sub>2</sub> ) for S-3, S-4, and S-5 combined	BAAQMD condition #18102, part 24	C	CEMS
CO	BAAQMD condition #18102, part 19.3	Y		6 ppmv @ 15% O <sub>2</sub> , dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #18102, parts 19.3 and 24	C	CEMS

## VII. Applicable Emission limits & Compliance Monitoring Requirements

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

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQMD condition #18102, part 19.3	Y		6 ppmv @ 15% O <sub>2</sub> , dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #18102, part 25	P/A	Source test
	BAAQMD condition #18102, part 22	Y		446.1 lb/calendar day for S-3, S-4, and S-5 combined	BAAQMD condition #18102, part 24	C	CEMS
CO	BAAQMD condition #18102, part 22	Y		36.0 tons per calendar year for S-3, S-4, and S-5 combined	BAAQMD condition #18102, part 24	C	CEMS
CO <sub>2</sub>		Y		None	40 CFR 75.10	C	CEMS (CO <sub>2</sub> ) or CEMS (O <sub>2</sub> ) or fuel flow monitor
SO <sub>2</sub>	BAAQMD 9-1-301	Y		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	
	BAAQMD 9-1-302	Y		300 ppm (dry)	BAAQMD condition #18102, part 24	P/Q	Total sulfur and hydrogen sulfide analysis

## VII. Applicable Emission limits & Compliance Monitoring Requirements

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

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
SO2	NSPS 40 CFR 60.333(a) or 60.333(b)	Y		SO2 in gases exiting turbine $\leq$ 0.015% (vol.) @15% O <sub>2</sub> (dry) or Total sulfur in fuel combusted in turbines $\leq$ 0.8% by wt. (8000 ppmw)	NSPS, 40 CFR 60.334 (h)(1)	P/D	Determine total sulfur content of the fuel fired in turbines using total sulfur methods described in 40 CFR 60.335(b)(10)
SO2	None	Y		None	40 CFR 75.11, 40 CFR 75, Appendix D, part 2.3		Fuel measurements, calculations
SO2	BAAQMD condition #18102, part 19.6	Y		0.33 lb/clock hr for S-3, S-4, and S-5 combined	BAAQMD condition #18102, part 24	P/Q	Total sulfur and hydrogen sulfide analysis
	BAAQMD condition #18102, part 19.6	Y		0.33 lb/clock hr for S-3, S-4, and S-5 combined	BAAQMD condition #18102, part 25	P/A	Source test
SO2	BAAQMD condition #18102, part 22	Y		23.8 lb/calendar day for S-3, S-4, and S-5 combined	BAAQMD condition #18102, part 24	P/Q	Total sulfur and hydrogen sulfide analysis

## VII. Applicable Emission limits & Compliance Monitoring Requirements

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

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQMD condition #18102, part 22	Y		1.9 tons/calendar year for S-3, S-4, and S-5 combined	BAAQMD condition #18102, part 24	P/Q	Total sulfur and hydrogen sulfide analysis
	BAAQMD condition #18102, part 23.b	Y		Total sulfur content in natural gas combusted in turbines ≤ 0.25 gr/100 scf	BAAQMD condition #18102, part 24.e	P/Q	Analysis of total sulfur content in fuel
Opacity	BAAQMD 6-301	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour		N	
Opacity	BAAQMD condition #18102, part 18	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour or equivalent 20% opacity		N	
FP	BAAQMD 6-310	Y		0.15 grain/dscf		N	
PM10	BAAQMD condition #18102, part 19.5	Y		2.5 lb/clock hr for S-3, S-4, and S-5 combined, except during turbine startup or shutdown	BAAQMD condition #18102, part 25	P/A	Source test
PM10	BAAQMD condition #18102, part 22	Y		180 lb/calendar day for S-3, S-4 & S-5 combined	BAAQMD condition #18102, part 25	P/A	Source Test
	BAAQMD condition #18102, part 22	Y		14.7 tons/year for S-3, S-4 & S-5 combined	BAAQMD condition #18102, part 25	P/A	Source Test
POC	BAAQMD condition #18102, part 19.4	Y		2 ppmv @ 15% O <sub>2</sub> , dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #18102, part 19.4	P/A	Source test

## VII. Applicable Emission limits & Compliance Monitoring Requirements

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

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
POC	BAAQMD condition #18102, part 19.4	Y		2 ppmv @ 15% O <sub>2</sub> , dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #18102, part 25	P/A	Source test
	BAAQMD condition #18102, part 22	Y		84 lb/calendar day for S-3, S-4, and S-5 combined	BAAQMD condition #18102, part 25	P/A	Source test
POC	BAAQMD condition #18102, part 22	Y		6.9 ton/calendar year for S-3, S-4, and S-5 combined	BAAQMD condition #18102, part 25	P/A	Source test
NH <sub>3</sub>	BAAQMD condition #18102, Part 19.2	N		10 ppmv @ 15% O <sub>2</sub> , dry, averaged over 3 hrs except during turbine startup or shutdown	BAAQMD condition #18102, parts 19.2 and 24	C	Measurement ratio NH <sub>3</sub> to NO <sub>x</sub> inlet rate at SCR
	BAAQMD condition #18102, Part 19.2	N		10 ppmv @ 15% O <sub>2</sub> , 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) 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), for each turbine, S-3,S-4, and S-5	BAAQMD condition #18102, part 24d	P/Q	Fuel composition analysis
Heat input limit	BAAQMD condition #18102, part 23	Y		468 MM BTU/clock hr (HHV), for each turbine, S-3,S-4, and S-5	BAAQMD condition #18102, part 25	P/A	Source test



## VII. Applicable Emission limits & Compliance Monitoring Requirements

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

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	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 30.a	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/Q	Fuel composition analysis
Heat input limit	BAAQMD condition #18102, part 23	Y		5,494,300 MM BTU/yr. For S-3, S-4, and S-5, Turbines combined	BAAQMD condition #18102, part 30.a	C	fuel meter, firing monitor, calculations
Heat input limit	BAAQMD condition #18102, part 23	Y		5,494,300 MM BTU/yr. For S-3, S-4, and S-5, Turbines combined	BAAQMD condition #18102, part 24d	P/Q	Fuel composition analysis
MW				None	BAAQMD condition #18102, part 25	P/A	Source test
Gas temperature				None	BAAQMD condition #18102, part 25	P/A	Source test
Stack gas flow				None	BAAQMD condition #18102, part 25	P/A	Source test
NH3 injection rate				None	BAAQMD condition #18102, part 25	P/A	Source test

## VII. Applicable Emission limits & Compliance Monitoring Requirements

**Table VII-B**  
**S-100 – GAS TURBINE**

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOx	BAAQMD 9-9-305 and 9-9-401	Y		≤ 21.0 ppmv* @ 15% O <sub>2</sub> , dry, 3-hr average *corrected for efficiency	BAAQMD 9-9-501	C	CEMS
	BAAQMD Permit Cond# 2780 part 1a	Y		≤ 25 ppmv @ 15% O <sub>2</sub> , 3-hr avg.	BAAQMD Permit Condition 2780, part 11	C	CEMS
	BAAQMD Permit Cond# 2780 part 1e	Y	Upon completion of modification	≤ 21.0 ppmv @ 15% O <sub>2</sub> , dry, calendar day average	BAAQMD 9-9-501	C	CEMS
NOX	BAAQMD Permit Cond# 2780 part 1f	Y		< 323.7 tons per any twelve consecutive months	BAAQMD 9-9-501	C	CEMS
	BAAQMD Permit Cond# 2780 part 1g	Y		< 1876 lb per calendar day	BAAQMD 9-9-501	C	CEMS
	BAAQMD permit condition # 21961, part IX-C.	Y		≤ 25 ppmv @ 15% O <sub>2</sub> , dry 3-hr average	BAAQMD 9-9-501	C	CEMS
NOX	BAAQMD permit condition # 21961, part IX-C.	Y		Natural Gas or Fuel Oil ≤ 25 ppmv @ 15% O <sub>2</sub> , dry 3-hr average	BAAQMD permit condition # 21961, part IX-E.	C	CEMS

## VII. Applicable Emission limits & Compliance Monitoring Requirements

**Table VII-B**  
**S-100 – GAS TURBINE**

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOX	NSPS, 40 CFR 60.332 (a)(1)	Y		82 ppmv @ 15% O <sub>2</sub> , dry 4-hour rolling average (Arithmetic average of the average NO <sub>x</sub> concentration measured by the CEMS for a given hour and the three unit operating hour average NO <sub>x</sub> concentrations immediately preceding that unit operating hour)	NSPS, 40 CFR 60.334 (b)	C	CEMS
	None	Y		None	40 CFR 75.10	C	CEMS
POC	BAAQMD Permit Condition 2780 part 6	Y		< 40 TPY NMHC for S-100, S-101, S-102		N	
SO <sub>2</sub>	None	Y		None	40 CFR 75.11, 40 CFR 75, Appendix D, part 2.3		Fuel measurements, calculations
SO <sub>2</sub>	BAAQMD 9-1-301	Y		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	
SO <sub>2</sub>	BAAQMD 9-1-302	Y		300 ppm (dry)		N	
SO <sub>2</sub>	NSPS 40 CFR 60.333 (a) or 60.333(b)	Y		SO <sub>2</sub> in gases exiting turbine ≤ 0.015% (vol.) @15% O <sub>2</sub> (dry) or Total sulfur in fuel combusted in turbines ≤ 0.8% by wt. (8000 ppmw)	NSPS, 40 CFR 60.334 (h)(1)	P/D	Determine total sulfur content of the fuel fired in turbines using total sulfur methods described in 40 CFR 60.335(b)(10)

## VII. Applicable Emission limits & Compliance Monitoring Requirements

**Table VII-B**  
**S-100 – GAS TURBINE**

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD 6-301	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour		N	
FP	BAAQMD 6-310	Y		0.15 grain/dscf		N	
FP	BAAQMD Permit Condition 2780 part 6	Y		< 25 TPY total FP for S-100, S-101, S-102		N	
CO2		Y		None	40 CFR 75.10	C	CEMS (CO2) or CEMS (O2) or fuel flow monitor
Carbon Monoxide	BAAQMD Permit Condition 2780 part 3b	Y		emissions < 100 tons/yr (for S-100, S-101, and S-102)	BAAQMD Permit Condition 2780 part 11	C	CEMS
Carbon Monoxide	BAAQMD Permit Condition 2780 part 3c	Y		10 ppmvd @ 15% O2, 3-hr average, except during startup, shutdown, operation at < 80% load, and operation at low ambient temperature	BAAQMD Permit Condition 2780 part 11	C	CEMS
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	CEMS
	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	CEMS

## VII. Applicable Emission limits & Compliance Monitoring Requirements

**Table VII-B  
 S-100 – GAS TURBINE**

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
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	CEMS
Carbon Monoxide	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	CEMS
Carbon Monoxide	BAAQMD Permit Condition 2780 part 3f	Y		15 ppmvd @ 15% O <sub>2</sub> , 1-hr average, during operation at low ambient temperature	BAAQMD Permit Condition 2780 part 11	C	CEMS

<sup>1</sup> Ground Level Concentration

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

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOX	BAAQMD 9-7-301.1	Y		30 ppmv @ 3%O <sub>2</sub> , dry, 3-hr average	BAAQMD Permit Condition 2780 part 11	C	CEMS
NOX	BAAQMD Permit Condition 2780 part 4	Y		30 ppmv @ 3%O <sub>2</sub> , dry,, 3-hr average	BAAQMD Permit Condition 2780 part 11	C	CEMS
	BAAQMD permit condition # 21961, part IX-C.	Y		≤ 40 ppmv @ 3% O <sub>2</sub> , dry, 3-hr average	BAAQMD permit condition # 21961, part IX-D.	C	CEMS

## VII. Applicable Emission limits & Compliance Monitoring Requirements

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

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOX	NSPS 60.44b(a)(1)(ii)	Y		0.2 lb/MM Btu, averaged over 24 hrs	Monitoring requirement subsumed by BACT cond. #2780, parts 3 and 11. See Permit Shield.	N	
CO	BAAQMD 9-7-301.2	Y		400 ppmv @3%O <sub>2</sub> , dry, 3-hr average		N	
	BAAQMD Permit Condition 2780 part 3b	Y		< 100 tons per year, for S-100, S-101, and S-102	BAAQMD Permit Condition 2780 part 11	C	CEMS
SO <sub>2</sub>	BAAQMD 9-1-301	Y		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	
	BAAQMD 9-1-302	Y		300 ppm (dry)		N	
Opacity	BAAQMD 6-301	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour		N	
FP	BAAQMD 6-310.3	Y		0.15 grain/dscf @ 6% O <sub>2</sub>		N	
FP	BAAQMD Permit Condition 2780 part 6	Y		< 25 TPY FP for S-100, S-101, S-102		N	
POC	BAAQMD Permit Condition 2780 part 6	Y		< 40 TPY NMHC for S-100, S-101, S-102		N	

## VII. Applicable Emission limits & Compliance Monitoring Requirements

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

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Hours of operation	BAAQMD 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

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

Type of limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD 6-301	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour		N	
FP	BAAQMD 6-310	Y		0.15 grain/dscf		N	
	BAAQMD 6-311	Y		40 lbs/hr		N	

**Table VII - E  
 Applicable Limits and Compliance Monitoring Requirements  
 S-6 - EMERGENCY STANDBY FIRE PUMP: DIESEL ENGINE**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD Regulation 6-303	Y		Ringelmann 2.0 For less than 3 minutes in an hour	None	N	Visual Observation
FP	BAAQMD Regulation 6-310	Y		0.15 grains per dscf of exhaust gas volume	None	N	None
SO <sub>2</sub>	BAAQMD Regulation 9-1-301	Y		Ground Level Concentration of 0.5 ppm for 3 min. or 0.25 ppm for 60 min. or 0.05 ppm for 24 hours	None	N	None
SO <sub>2</sub>	BAAQMD Regulation 9-1-304	Y		Sulfur Content of Fuel < 0.5% by weight	None	N	Fuel Certification by Vendor



## 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  
 Test Methods**

<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 or EPA Method 5, Determination of Particulate Matter Emissions from Stationary Sources
BAAQMD 6-311	General Operations	Manual of Procedures, Volume IV, ST-15, Particulates Sampling or EPA Method 5, Determination of Particulate Matter Emissions from Stationary Sources
BAAQMD 9-1-302	General Emission Limitation	Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide, Continuous Sampling
BAAQMD 9-1-304	Fuel Sulfur Content	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 9-9-305	Emission Limits- Existing Low NO <sub>x</sub> 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 Condition #2780</b>		

## IV. Test Methods

**Table VIII  
 Test Methods**

<b>Applicable Requirement</b>	<b>Description of Requirement</b>	<b>Acceptable Test Methods</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
<b>BAAQMD Condition #18102</b>		
Part 19.1	NOx Limit	Test Procedure ARB 100
Part 19.2	NH3 Limit	BAAQMD Test Procedure ST-1B
Part 19.3	CO Limit	Test Procedure ARB 100
Part 19.4	POC Limit	Test Procedure ARB 100
Part 19.5	PM10 Limit	Test Procedure ARB 5
Part 19.6	SOx Limit	Test Procedure, MOP Vol.4, ST-19A or ST-19B
<b>PSD Permit</b>		
BAAQMD condition # 21961, 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
<b>NSPS 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

## IV. Test Methods

**Table VIII**  
**Test Methods**

<b>Applicable Requirement</b>	<b>Description of Requirement</b>	<b>Acceptable Test Methods</b>
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

## **IX. TITLE IV ACID RAIN PERMIT**

**Effective October 23, 2001 through October 22, 2006**

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**ISSUED TO:**

**Calpine Gilroy Cogen, L.P. and Gilroy Energy Center, LLC  
1400 Pacheco Pass Highway  
Gilroy, CA 95020**

**PLANT SITE LOCATION:**

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

**ISSUED BY:**

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Jack P. Broadbent, Executive Officer/  
Air Pollution Control Officer

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Date

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**Type of Facility: Cogeneration Plant and Power Plant  
Primary SIC: 4911  
Product: Cogeneration of electricity and steam**

**DESIGNATED REPRESENTATIVE**

**Name: Roger Morales  
Title: Operations Manager  
Phone: (408) 847-5328; ext: 1402**

**FACILITY CONTACT PERSON:**

**Name: Maria Barroso  
Title: Compliance Manager  
Phone: (831) 385-4090; ext: 13**

## 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 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	2005	2006	2007	2008	2009
	<b>SO<sub>2</sub> allowances under Table 2 of 40 CFR Part 73</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>
<b>S-3, Turbine</b>	<b>NO<sub>x</sub> Limit</b>	<b>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.</b>				

**IX. Title IV Acid Rain Permit**

	Year	2005	2006	2007	2008	2009
	<b>SO<sub>2</sub> allowances under Table 2 of 40 CFR Part 73</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>
<b>S-4, Turbine</b>	<b>NOx Limit</b>	<b>This unit is not subject to the NOx requirements from 40 CFR Part 76 as this unit is not capable of firing on coal.</b>				

	Year	2005	2006	2007	2008	2009
	<b>SO<sub>2</sub> allowances under Table 2 of 40 CFR Part 73</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>
<b>S-5, Turbine</b>	<b>NOx Limit</b>	<b>This unit is not subject to the NOx requirements from 40 CFR Part 76 as this unit is not capable of firing on coal.</b>				

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**

<b>Citation</b>	<b>Title or Description (Reason not applicable)</b>
<b>NSPS Subpart D</b>	Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971 (Boiler capacity below 250 million Btu/hr)
<b>NSPS Subpart Da</b>	Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978 (Boiler capacity below 250 million Btu/hr)
<b>NSPS Subpart Db, 40 CFR 60.42b</b>	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, Standard for Sulfur Dioxide (Boilers exclusively combust natural gas)
<b>NSPS Subpart Db, 40 CFR 60.43b</b>	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, Standard for Particulate (Boilers exclusively combust natural gas)
<b>NSPS Subpart Dc</b>	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)

**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 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 requirements listed below and elsewhere in this permit will assure compliance with the substantive requirements of the subsumed 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 monitoring requirements cited.

**Table X-B-1  
 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>		
40 CFR 60.7(c)	Continuous Monitoring Systems	PSD Permit	BAAQMD permit condition # 21961, Part VII, E: Continuous Emission Monitoring
40 CFR 60.7(d)	Summary Report Forms	PSD Permit	BAAQMD permit condition # 21961, Part VII, E: Continuous Emission Monitoring
40 CFR 60.7(e)	Records	PSD Permit	BAAQMD permit condition # 21961, Part VII, E: Continuous Emission Monitoring
40 CFR 60.7(f)	Notification to Local Agency	PSD Permit	BAAQMD permit condition # 21961, Part VII, E: Continuous Emission Monitoring
40 CFR 60.7(g)	Special Provisions	PSD Permit	BAAQMD permit condition # 21961, Part VII, E: Continuous Emission Monitoring
40 CFR 60.13	Monitoring Requirements	PSD Permit	BAAQMD permit condition # 21961, Part VII, E: Continuous Emission Monitoring



## X. Permit Shield

**Table X-B-1  
 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 Db</b>	<b>Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units</b>		
40 CFR 60.46b	Compliance and performance test methods and procedures for particulate matter and nitrogen oxides	BACT monitoring for NOx	BAAQMD Permit condition #2780, Parts 11 and 14
40 CFR 60.48b	Emission monitoring for particulate matter and nitrogen oxides	BACT monitoring for NOx	BAAQMD Permit condition #2780, Parts 11 and 14
40 CFR 60.49b	Reporting and recordkeeping requirements	BACT monitoring for NOx	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 40 CFR Part 63.

### **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. See in 40 CFR Parts 61 and 63.

### **NH<sub>3</sub>**

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 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 for the emissions from a new or modified source. 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 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**

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

## **XI. Glossary**

### **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:**

bhp	=	brake-horsepower
btu	=	British Thermal Unit
g	=	grams
gal	=	gallon
hp	=	horsepower
hr	=	hour
lb	=	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
yr	=	year

## **XII. REVISION HISTORY**

<u>Date</u>	<u>Action</u>	<u>Details</u>
May 12, 1998	Initial Issuance	
December 18, 1998	Significant modification (Application 18872)	CO limit changed from destruction efficiency basis to concentration basis.
July 26, 2000	Minor modification (Application 445)	Replacement of components, increase in capacity and efficiency, minor increase in emissions.
October 23, 2001	Significant revision (Application 2686)	Addition of three gas-turbine peaker units. Capacity increased by 135 MW. Major increase in emissions. Added existing cooling tower (S-104). Revisions to facility wide SO <sub>2</sub> , PM, and CO limits. Issuance of Phase II Acid Rain permit.
March 6, 2003	Administrative Amendment (No application)	Changed name of facility from “Calpine Gilroy Cogen, L.P.” to “Calpine Gilroy Cogen, L.P. and Gilroy Energy Center, LLC.” Changed name on Acid Rain permit from “Calpine Gilroy Cogen, L.P.” to “Gilroy Energy Center, LLC”. “Cond# 18202” was corrected to “Cond# 18102” on page 64.
March 16, 2006	Renewal Issuance (Application 6748)	