

Bay Area Air Quality Management District

375 Beale Street, Suite 600
San Francisco, CA 94105
(415) 771-6000

FINAL

MAJOR FACILITY REVIEW PERMIT

Issued to:

**Gilroy Energy Center, LLC at Wolfskill Energy Center
Facility #B4511**

Facility Address:

2425 Cordelia Road
Fairfield, CA 94533

Mailing Address:

2425 Cordelia Road
Fairfield, CA 94533

Responsible Official

Andrew Gundershaug, Plant Manager
(707) 399-4393

Facility Contact

Allison Bryan, EHS Specialist,
(707) 399-4395

Type of Facility: Generation of Electricity
Primary SIC: 4911
Product: Electricity

BAAQMD Permit Division Contact:
Madhav Patil

ISSUED BY THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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

December 21, 2017
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 05/04/11);
- SIP Regulation 1 - General Provisions and Definitions
(as approved by EPA through 06/28/99);
- BAAQMD Regulation 2, Rule 1 - Permits, General Requirements
(as amended by the District Board on 12/19/12, effective 08/31/16);
- BAAQMD Regulation 2, Rule 2 - Permits, New Source Review
(as amended by the District Board on 12/19/12, effective 08/31/16);
- BAAQMD Regulation 2, Rule 4 - Permits, Emissions Banking
(as amended by the District Board on 12/19/12);
- SIP Regulation 2, Rule 4 - Permits, Emissions Banking
(as approved by EPA through 01/26/99);
- BAAQMD Regulation 2, Rule 5 – New Source Review of Toxic Air Contaminants
(as amended by the District Board on 12/07/16)
- BAAQMD Regulation 2, Rule 6 - Permits, Major Facility Review
(as amended by the District Board on 04/16/03); and
- SIP Regulation 2 Rule 6 –Permits, Major Facility Review
(as approved by EPA through 06/23/95).

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

1. This Major Facility Review Permit was issued on December 21, 2017 and expires on December 20, 2022. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than June 20, 2022, and no earlier than December 20, 2021. **If a complete application for renewal has not been submitted in accordance with this deadline, the facility may not operate after December 20, 2022.** If the permit renewal has not been issued by, 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. (BAAQMD 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 re-issuance, or modification; or denial of a permit renewal application. (BAAQMD 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. (BAAQMD 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 re-issuance, or termination, or the filing of a notification of planned changes or anticipated non-compliance does not stay the applicability of any permit condition. (BAAQMD 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. (BAAQMD 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. (BAAQMD Regulation 1-441, BAAQMD 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 permittee considers proprietary or trade secret information shall be prominently designated as such. Copies of any such proprietary or trade secret information which are provided to the District shall be maintained by the District in a locked confidential file, provided, however, that requests from the public for the review of any such information shall be handled in accordance with the District's procedures set forth in Section 11 of the District's Administrative Code. (BAAQMD Regulation 2-6-419; MOP Volume II, Part 3, §4.11)
9. Proprietary or trade secret information provided to EPA will be subject to the requirements of 40 CFR Part 2, Subpart B - Public Information, Confidentiality of Business Information. (40 CFR Part 2)
10. The emissions inventory submitted with the application for this Major Facility Review Permit is an estimate of actual emissions or the potential to emit for the time period stated and is included only as one means of determining applicable requirements for emission sources. It does not establish, or constitute a basis for establishing, any new emission limitations. (MOP Volume II, Part 3, §4.11)
11. The responsible official shall certify all documents submitted by the facility pursuant to the major facility review permit. The certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. The certifications shall be signed by a responsible official for the facility. (BAAQMD Regulation 2-6-409.20, MOP Volume II, Part 3, §4.11)
12. The permit holder is responsible for compliance, and certification of compliance, with all conditions of the permit, regardless whether it acts through employees, agents, contractors, or subcontractors. (BAAQMD Regulation 2-6-307)

C. Requirement to Pay Fees

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

I. Standard Conditions

D. Inspection and Entry

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

E. Records

1. The permit holder must provide any information, records, and reports requested or specified by the APCO. (Regulation 1-441, Regulation 2-6-409.4)
2. Notwithstanding the specific wording in any requirement, all records for federally enforceable requirements shall be maintained for at least five years from the date of creation of the record. (BAAQMD 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 reports shall be for the following periods: January 1st through June 30th and July 1st through December 31st, and are due on the last day of the month after the end of the reporting period. All instances of non-compliance shall be clearly identified in these reports. The reports shall be certified by the responsible official as true, accurate, and complete. In addition, all instances of non-compliance with the permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions. The reports shall be sent by e-mail to compliance@baaqmd.gov or by postal mail to the following address:

Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Attn: Title V Reports

(BAAQMD 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 through November 30th. The certification shall be submitted by December 31st of each year. The certification must list each applicable requirement, the compliance status, whether compliance was continuous or intermittent, the method used to determine compliance, and any other specific information required by the permit. The certification should be directed to the District's Compliance and Enforcement Division at the address above, and a copy of the

I. Standard Conditions

certification shall be sent by e-mail to r9.aeo@epa.gov or postal mail to the Environmental Protection Agency at the following address:

Director
Enforcement Division, TRI & Air Section (ENF-2-1)
USEPA Region 9
75 Hawthorne Street
San Francisco, California 94105

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

H. Emergency Provisions

1. The permit holder may seek relief from enforcement action in the event of a breakdown, as defined by Regulation 1-208 of the District's Rules and Regulations, by following the procedures contained in Regulations 1-431 and 1-432. The District will thereafter determine whether breakdown relief will be granted in accordance with Regulation 1-433. (MOP Volume II, Part 3, §4.8)
2. The permit holder may seek relief from enforcement action for a violation of any of the terms and conditions of this permit by applying to the District's Hearing Board for a variance pursuant to Health and Safety Code Section 42350. The Hearing Board will determine after notice and hearing whether variance relief should be granted in accordance with the procedures and standards set forth in Health and Safety Code Section 42350 et seq. (MOP Volume II, Part 3, §4.8)
3. The granting by the District of breakdown relief or the issuance by the Hearing Board of a variance will not provide relief from federal enforcement. (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. (BAAQMD Regulation 2-6-409.5; MOP Volume II, Part 3, §4.10)

J. Miscellaneous Conditions

1. The maximum capacity for each source as shown in Table II-A is the maximum allowable capacity. Any exceedance of the maximum allowable capacity for any source is a violation of Regulation 2, Rule 1, Section 301. (BAAQMD 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, BAQMD Regulation 2, Rule 6)

I. Standard Conditions

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

1. Every year starting January 30, 2003, the permit holder shall hold one sulfur dioxide allowance on March 1 (February 29th during a leap year) 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 CO₂ and NO_x shall be maintained and operated in accordance with 40 CFR Parts 72 and 75. (BAAQMD Regulation 2-7, Acid Rain)
3. A written Quality Assurance program must be established in accordance with 40 CFR Part 75, Appendix B for NO_x which includes, but is not limited to: procedures for daily calibration testing, quarterly linearity testing, record keeping and reporting implementation, and relative accuracy testing. (BAAQMD Regulation 2-7, Acid Rain)
4. The permit holder shall monitor SO₂ emissions in accordance with 40 CFR Part 72 and 75. (BAAQMD Regulation 2-7, Acid Rain)
5. The permit holder shall submit quarterly Electronic Data Reports (EDRs) to EPA for Turbine, S-1. 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

Table II A - Permitted Sources

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

S-#	Description	Make or Type	Model	Capacity
1	Combustion Gas Turbine, Natural Gas with water injection, nominal 49.9 MW	General Electric	LM6000PC	500 MMBtu/hour (HHV)

Table II B – Abatement Devices

A-#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency
1	Oxidation Catalyst	1	BAAQMD Condition #19684 parts 18.3 & 18.4	All operating modes except startup and shutdown	CO: 6 ppmv POC: 2 ppmv
2	Selective Catalytic Reduction System	1	BAAQMD Condition #19684 part 18.1	All operating modes except startup and shutdown	NOx: 2.5 ppmv

Table II C – Significant Sources

The following source is exempt from the requirement to obtain an authority to construct and permit to operate, but is defined as a significant source pursuant to BAAQMD Regulation 2-6-239.

S-#	Description	Make or Type	Model	Capacity
2	Cooling Tower	Marley	NC8312HL2	4,160 GPM

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.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered significant sources pursuant to the definition in BAAQMD Rule 2-6-239.

Portable equipment operating in accordance with the ARB portable equipment registration program and temporary equipment such as sandblasting equipment may be operated at the facility as long as the source is not significant under BAAQMD Rule 2-6-239. Otherwise, significant sources would need to be included in the Title V permit.

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

1. BAAQMD regulation(s): The date(s) of adoption or most recent amendment of the regulation by the District Board 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 the EPA Region 9 website. The address is <http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions>.

NOTE:

There are differences between the current BAAQMD rules and the versions of the rules in the SIP. All sources must comply with both versions of a rule until US EPA has reviewed and approved the District's revision of the regulation.

III. Generally Applicable Requirements

Table III
Generally Applicable Requirements

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
BAAQMD Regulation 1	General Provisions and Definitions (05/04/11)	N
SIP Regulation 1	General Provisions and Definitions (06/28/99)	Y
BAAQMD Regulation 2, Rule 1	General Requirements (12/19/12, effective 08/31/16)	Y
BAAQMD Regulation 2-1-429	Federal Emissions Statement (12/21/04)	N
SIP Regulation 2-1-429	Federal Emissions Statement (04/03/95)	Y
BAAQMD Regulation 2, Rule 2	Permits, New Source Review (12/19/12, effective 08/31/16)	Y
BAAQMD Regulation 2, Rule 4	Permits, Emissions Banking (12/19/12)	N
SIP Regulation 2, Rule 4	Permits, Emissions Banking (01/26/99)	Y
BAAQMD Regulation 2, Rule 5	New Source Review of Toxic Air Contaminants (12/07/16)	N
BAAQMD Regulation 2, Rule 6	Permits, Major Facility Review (04/16/03)	N
SIP Regulation 2, Rule 6	Permits, Major Facility Review (06/23/95)	Y
BAAQMD Regulation 4	Air Pollution Episode Plan (03/20/91)	N
SIP Regulation 4	Air Pollution Episode Plan (08/06/90)	Y
BAAQMD Regulation 5	Open Burning (06/19/13)	N
SIP Regulation 5	Open Burning (09/04/98)	Y
BAAQMD Regulation 6, Rule 1	Particulate Matter, General Requirements (12/05/07)	N
SIP Regulation 6	Particulate Matter and Visible Emission (09/04/98)	Y
BAAQMD Regulation 7	Odorous Substances (03/17/82)	N
BAAQMD Regulation 8, Rule 1	Organic Compounds - General Provisions (06/15/94)	Y
BAAQMD Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (07/02/05)	N
SIP Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (03/22/95)	Y
BAAQMD Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (07/01/09)	N
SIP Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (01/02/04)	Y
BAAQMD Regulation 8, Rule 4	Organic compounds - General Solvent and Surface Coating Operations (10/16/02)	Y
BAAQMD Regulation 8, Rule 15	Organic Compounds- Emulsified and Liquid Asphalts (06/01/94)	Y
BAAQMD Regulation 8, Rule 40	Organic Compounds - Aeration of Contaminated Soil and Removal of Underground Storage Tanks (06/15/05)	N

III. Generally Applicable Requirements

**Table III
 Generally Applicable Requirements**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
SIP Regulation 8, Rule 40	Organic Compounds - Aeration of Contaminated Soil and Removal of Underground Storage Tanks (04/19/01)	Y
BAAQMD Regulation 8, Rule 47	Organic Compounds - Air Stripping and Soil Vapor Extraction Operations (06/15/05)	N
SIP Regulation 8, Rule 47	Organic Compounds – Aeration of Contaminated Soil and Removal of Underground Storage Tanks (04/26/95)	Y
BAAQMD Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (12/20/95)	N
SIP Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (03/22/95)	Y
BAAQMD Regulation 8, Rule 51	Organic Compounds - Adhesive and Sealant Products (07/17/02)	N
SIP Regulation 8, Rule 51	Organic Compounds – Adhesive and Sealant Products (02/26/02)	Y
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants - Sulfur Dioxide (03/15/95)	N
SIP Regulation 9, Rule 1	Inorganic Gaseous Pollutants - Sulfur Dioxide (06/08/99)	Y
BAAQMD Regulation 11, Rule 2	Hazardous Pollutants - Asbestos Demolition, Renovation and Manufacturing (10/07/98)	N
BAAQMD Regulation 11, Rule 18	Reduction of Risk from Air Toxic Emissions at Existing Facilities (11/15/17)	N
BAAQMD Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (07/11/90)	N
SIP Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (09/02/81)	Y
California Health and Safety Code Section 41750 et seq.	Portable Equipment	N
California Health and Safety Code Section 44300 et seq.	Air Toxics “Hot Spots” Information and Assessment Act of 1987	N
California Health and Safety Code Title 17, Subchapter 10, Article 2, Sections 95100 through 95109	Mandatory Greenhouse Gas Emissions Reporting	N
40 CFR Part 61, Subpart M	National Emission Standards for Hazardous Air Pollutants – National Emission Standard for Asbestos (06/19/95)	Y
EPA Regulation 40 CFR 82	Protection of Stratospheric Ozone (04/13/05)	Y
Subpart F, 40 CFR 82.156	Recycling and Emissions Reductions –Required Practices	Y

III. Generally Applicable Requirements

Table III
Generally Applicable Requirements

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
Subpart F, 40 CFR 82.161	Recycling and Emissions Reductions – Technician Certification	Y
Subpart F, 40 CFR 82.166	Recycling and Emissions Reductions – Reporting and Recordkeeping Requirements	Y

IV. SOURCE-SPECIFIC APPLICABLE REQUIREMENTS

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

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

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

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

Table IV - A
Source-specific Applicable Requirements
S1 – COMBUSTION GAS TURBINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 1	General Provisions and Definitions (05/04/11)		
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	N	
1-522.1	approval of plans and specifications	Y	
1-522.2	scheduling requirements	Y	
1-522.3	CEM performance testing	Y	
1-522.4	reporting of inoperative CEMs	Y	
1-522.5	CEM calibration requirements	Y	
1-522.6	CEM accuracy requirements	Y	
1-522.7	emission limit exceedance reporting requirements	N	
1-522.8	monitoring data submittal requirements	Y	
1-522.9	recordkeeping requirements	Y	
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	
1-523.1	Parametric monitor periods of inoperation	Y	

IV. Source-Specific Applicable Requirements

Table IV - A
Source-specific Applicable Requirements
S1 – COMBUSTION GAS TURBINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
1-523.2	Limits on periods of inoperation	Y	
1-523.3	Reports of Violations	N	
1-523.4	Records	Y	
1-523.5	Maintenance and calibration	N	
1-602	Area and Continuous Emission Monitoring Requirements	Y	
SIP Regulation 1	General Provisions and Definitions (06/28/99)		
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y	
1-522.7	Monitor excesses	Y	
1-523	Parametric Monitoring and Recordkeeping Procedures	Y	
1-523.3	Reports of Violations	Y	
BAAQMD Regulation 2, Rule 1	Regulation 2, Rule 1 - Permits, General Requirements (03/04/09)		
2-1-501	Monitors	Y	
BAAQMD Regulation 6, Rule 1	Particulate Matter, General Requirements (12/05/07)		
6-1-301	Ringelmann Number 1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation	N	
6-1-401	Appearance of Emissions	N	
SIP Regulation 6	Particulate Matter and Visible Emissions (09/04/98)		
6-301	Ringelmann Number 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-401	Appearance of Emissions	Y	
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (03/15/95)		
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-302	General Emission Limitations	Y	

IV. Source-Specific Applicable Requirements

Table IV - A
Source-specific Applicable Requirements
S1 – COMBUSTION GAS TURBINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 9, Rule 9	Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines (12/06/06)		
9-9-113	Exemption – Inspection/Maintenance	N	
9-9-114	Exemption – Start-Up/Shutdown	N	
9-9-301	Emission Limits, General	N	
9-9-301.1.3	Emission Limits- Turbines Rated ≥ 10 MW w/SCR	N	
9-9-301.2	Emission Limits - Turbine heat input rated > 250 – 500 MM Btu/hr	N	
9-9-501	Monitoring and recordkeeping requirements	N	
SIP Regulation 9, Rule 9	Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines (12/15/97)		
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	
9-9-501	Monitoring and recordkeeping requirements	Y	
BAAQMD Manual of Procedures, Volume V	Continuous Emission Monitoring Policy and Procedures (01/20/82)	Y	
40 CFR 60 Subpart A	Standards of Performance for New Stationary Sources (12/23/71)	Y	
	General Provisions	Y	
60.4(a)	Reports to EPA	Y	
60.4(b)	Reports to EPA and District	Y	
60.7	Notification and Recordkeeping	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 - A
Source-specific Applicable Requirements
S1 – COMBUSTION GAS TURBINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines (02/27/14)		
60.332	Standard for Nitrogen Oxides	Y	
60.332(a)(1)	NO _x limit	Y	
60.333	Standard for Sulfur Dioxide	Y	
60.333(a)	SO ₂ Concentration < 0.015 percent @ 15% O ₂ (Turbine Only)	Y	
60.333(b)	Standard for Sulfur Dioxide – Fuel Sulfur Content Limit	Y	
60.334	Monitoring of operations – CEM requirements	Y	
60.334(b)	NO _x CEMs for water/steam injected turbines	Y	
60.334(h)(1)	Exemption from Monitoring of fuel sulfur content	Y	
60.334(h)(2)	Exemption from Monitoring of fuel nitrogen content	Y	
60.334(j)(1)(iii)	NO _x Excess Emissions and Monitor Downtime reporting requirements	Y	
60.335	Test Methods and Procedures	Y	
60.335(a)	Performance test as per 40 CFR 60.8 requirements	Y	
60.335(b)	Performance test for NO _x	Y	
60.335(b)(1)	ISO Correction	Y	
60.335(b)(2)	Testing at various loads	Y	
60.335(b)(10)	Minimum sample requirements	Y	
60.335(b)(11)	Option of fuel analysis	Y	
60.335(c)(1)	Optional method to adjust NO _x emission level	Y	
40 CFR Part 72	Permits Regulation (Title IV – Acid Rain Program)	Y	
	Subpart A – Acid Rain Program General Requirements		
72.6	Applicability	Y	
72.6(a)(3)	New utility unit (at the time of commencement of commercial operation)	Y	
72.9	Standard Requirements	Y	
72.9(a)	Permit Requirements	Y	
72.9(a)(1)(i)	Submittal of a complete acid rain permit application	Y	
72.9(a)(1)(iii)	Submittal of information in a timely manner	Y	
72.9(a)(2)(i)	Operation in compliance with Acid Rain permit	Y	
72.9(a)(2)(ii)	Have an Acid Rain Permit	Y	

IV. Source-Specific Applicable Requirements

Table IV - A
Source-specific Applicable Requirements
S1 – COMBUSTION GAS TURBINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
72.9(b)	Monitoring Requirements	Y	
72.9(c)	Sulfur Dioxide Requirements	Y	
72.9(c)(1)	Requirement to hold allowances as of allowance transfer deadline	Y	
72.9(c)(2)	Each ton of excess SO ₂ emissions is a separate violation of the CAA	Y	
72.9(c)(3)	Initial deadline to hold allowances	Y	
72.9(c)(3)(iv)	Deadline at time of monitor certification	Y	
72.9(c)(4)	Use of Allowance Tracking System	Y	
72.9(c)(5)	Allowances may not be deducted prior to year for which allowance was allocated	Y	
72.9(c)(6)	Limited authorization	Y	
72.9(d)	Nitrogen Oxide Requirements	Y	
72.9(e)	Excess emissions requirements	Y	
72.9(f)	Recordkeeping and Reporting Requirements	Y	
72.9(g)	Liability	Y	
72.9(h)	Effect on Other Authorities	Y	
	Subpart C – Acid Rain Permit Applications		
72.30(a)	Requirement to apply	Y	
72.30(c)	Duty to reapply. Requirement to submit complete acid rain application 6 months prior to expiration of current acid rain permit.	Y	
72.31	Information requirements for Acid Rain permit applications	Y	
72.31(a)	Identification of affected source	Y	
72.31(b)	Identification of each affected emissions unit	Y	
72.31(c)	Complete compliance plan	Y	
72.31(d)	Standard requirements under 40 CFR 72.9	Y	
72.31(e)	If the Acid Rain permit application is for Phase II and the unit is a new unit, the date that the unit has commenced or will commence operation and the deadline for monitor certification.	Y	
72.32	Permit application shield and binding effect of permit application	Y	
	Subpart E – Acid Rain Permit Contents		
72.50	General	Y	
72.50(a)	Acid Rain Permits	Y	
72.50(a)(1)	Permits must contain all elements of complete Acid Rain Application under 40 CFR 72.31	Y	
72.50(b)	Permits include terms in 40 CFR 72.2	Y	

IV. Source-Specific Applicable Requirements

Table IV - A
Source-specific Applicable Requirements
S1 – COMBUSTION GAS TURBINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
72.51	Permit Shield	Y	
40 CFR Part 75	Continuous Emissions Monitoring	Y	
	Subpart A – General	Y	
75.2	Applicability	Y	
75.2(a)	Applicability to affected units subject to Acid Rain emission limitations	Y	
75.4	Compliance Dates	Y	
75.4(b)	New affected unit (at the time of the commencement of commercial operation) shall ensure that all monitoring systems required under this part for monitoring of SO ₂ , NO _x , CO ₂ , opacity, and volumetric flow are installed and all certification tests are completed on or before the later of the following dates	Y	
75.4(b)(2)	The earlier of 90 unit operating days or 180 calendar days after the date the unit commences commercial operation, notice of which date shall be provided under subpart G of this part.	Y	
75.5	Prohibitions	Y	
	Subpart B – Monitoring Provisions	Y	
75.10	General Operating Requirements	Y	
75.10(a)	Primary Measurement Requirement	Y	
75.10(a)(1)	SO ₂ Emissions, except as provided in §§75.11 and 75.16 and subpart E of this part	Y	
75.10(a)(2)	NO _x Emissions, except as provided in §§75.12 and 75.17 and subpart E of this part	Y	
75.10(a)(3)	CO ₂ Emissions	Y	
75.10(a)(3)(ii)	CO ₂ Emissions estimated using Carbon Content of fuel and procedures in Appendix G.	Y	
75.10(a)(4)	Opacity Monitoring, except as provided in §§75.14 and 75.18	Y	
75.10(b)	Primary Equipment Performance Requirements	Y	
75.10(c)	Heat Input Rate Measurement Requirement	Y	
75.10(d)	Primary equipment hourly operating requirements	Y	
75.10(d)(1)	Cycles of operation for each 15-minute period. Hourly average calculated from a minimum of four 15 minute periods.	Y	
75.10(d)(3)	Validity of data and data substitution	Y	
75.10(f)	Minimum measurement capability requirement	Y	

IV. Source-Specific Applicable Requirements

Table IV - A
Source-specific Applicable Requirements
S1 – COMBUSTION GAS TURBINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
75.10(g)	Minimum recording and recordkeeping requirements	Y	
75.11	Specific provisions for monitoring SO ₂ emissions	Y	
75.11(d)	Gas-fired and oil-fired units	Y	
75.11(d)(2)	Allows the use of Appendix D Optional SO ₂ Emissions Data Protocol for Gas-Fired and Oil-Fired Units to monitor SO ₂ emissions.	Y	
75.12	Specific provisions for monitoring NO _x emission rate	Y	
75.12(a)	NO _x continuous emission monitor and diluents monitoring requirement	Y	
75.12(c)	NO _x mass emission rate determination according to Appendix F	Y	
75.13	Specific provisions for monitoring CO ₂ emissions	Y	
75.13(b)	Determination of CO ₂ emissions using Appendix G	Y	
75.14	Specific Provisions for monitoring opacity	Y	
75.14(c)	Gas-Fired Units Exempt from Opacity Monitoring	Y	
	Subpart C – Operation and Maintenance Requirements	Y	
75.20	Initial certification and recertification procedures	Y	
75.20(a)	Initial certification and approval process	Y	
75.20(b)	Recertification approval process	Y	
75.20(c)	Initial certification and recertification procedures	Y	
75.20(g)	Initial certification and recertification procedures for excepted monitoring systems under appendices D and E	Y	
75.21	Quality assurance and quality control requirements	Y	
75.21(a)	Continuous emission monitoring systems	Y	
75.21(c)	Calibration gases	Y	
75.21(d)	Notification for periodic Relative Accuracy Test Audits	Y	
75.21(e)	Consequences of audits	Y	
75.22	Reference test methods	Y	
75.24	Out-of-control periods and adjustment for system bias	Y	
	Subpart D – Missing Data Substitution Procedures	Y	
75.30	General Provisions	Y	
75.30(a)	Owner/operator shall provide substitute data for each affected unit using a continuous emission monitor according to this subpart whenever the unit is combusting fuel.	Y	
75.31	Initial missing data procedures	Y	
75.32	Determination of monitor data availability for standard missing data procedures	Y	

IV. Source-Specific Applicable Requirements

Table IV - A
Source-specific Applicable Requirements
S1 – COMBUSTION GAS TURBINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
75.33	Standard missing data procedures for SO, NO, Hg, and flow rate	Y	
75.33(a)	Following initial certification and after following initial missing data procedures for 2,160 quality assured operating hours for NOx continuous emissions monitors system the owner/operator shall follow the data substitution procedures in paragraph (b) and (c) of this section.	Y	
75.33(c)	Volumetric flow rate, NOx emission rate and NOx concentration data	Y	
75.34	Units with add-on emission controls	Y	
75.35	Missing data procedures for CO2	Y	
75.36	Missing data procedures for heat input rate determinations	Y	
	Subpart F – Recordkeeping Requirements	Y	
75.53	Monitoring plan	Y	
75.53(a)	General provisions	Y	
75.53(b)	Updates to monitoring plan	Y	
75.53(e)	Contents of monitoring plan	Y	
75.53(f)	Contents of monitoring plan for specific situations	Y	
75.53(g)	Contents of the monitoring plan after January 1, 2009	Y	
75.53(h)	Contents of monitoring plan for specific situations	Y	
75.57	General recordkeeping provisions	Y	
75.57(a)	General recordkeeping provisions for affected sources	Y	
75.57(b)	Operating parameter record provisions. The owner or operator shall record for each hour the following information on unit operating time, heat input rate, and load, separately for each affected unit.	Y	
75.57(c)	SO2 emission record provisions	Y	
75.57(d)	NOx emission record provisions	Y	
75.57(e)	CO2 emission record provisions	Y	
75.57(g)	Diluents record provisions	Y	
75.57(h)	Missing data records	Y	
75.58	General recordkeeping provisions for specific situations	Y	
75.58(b)	Specific parametric data record provisions for calculating substitute emissions data for units with add-on emission controls	Y	

IV. Source-Specific Applicable Requirements

Table IV - A
Source-specific Applicable Requirements
S1 – COMBUSTION GAS TURBINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
75.58(c)	Specific SO ₂ emission record provisions for gas-fired or oil-fired units using optional protocol in appendix D to this part. In lieu of recording the information in §75.57(c), the owner or operator shall record the applicable information in this paragraph for each affected gas-fired or oil-fired unit for which the owner or operator is using the optional protocol in appendix D to this part for estimating SO ₂ mass emissions	Y	
75.59	Certification, quality assurance, and quality control record provisions	Y	
75.59(a)	Continuous emission or opacity monitoring systems	Y	
75.59(b)	Accepted monitoring systems for gas-fired and oil-fired units. The owner or operator shall record the applicable information in this section for each excepted monitoring system following the requirements of appendix D to this part or appendix E to this part for determining and recording emissions from an affected unit.	Y	
75.59(c)	Except as otherwise provided in §75.58(b)(3)(i), units with add-on SO ₂ or NO _x emission controls following the provisions of §75.34(a)(1) or (a)(2), and for units with add-on Hg emission controls, the owner or operator shall keep the following records on-site in the quality assurance/quality control plan required by section 1 of appendix B to this part:	Y	
75.59(f)	DAHS Verification. For each DAHS (missing data and formula) verification that is required for initial certification, recertification, or for certain diagnostic testing of a monitoring system, record the date and hour that the DAHS verification is successfully completed. (This requirement only applies to units that report monitoring plan data in accordance with §75.53(g) and (h).)	Y	
	Subpart G – Reporting Requirements	Y	
75.60	General Provisions	Y	
75.61	Notifications	Y	
75.62	Monitoring plan submittals	Y	
75.63	Initial certification or recertification application	Y	
75.64	Quarterly reports	Y	
75.66	Petitions to the administrator	Y	
BAAQMD Condition #19684	Conditions to the Permit to Operate for S-1 Combustion Gas Turbine		
Definitions	Definitions	Y	

IV. Source-Specific Applicable Requirements

Table IV - A
Source-specific Applicable Requirements
S1 – COMBUSTION GAS TURBINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
part 11	Consistency with analyses (2-1-403)	Y	
part 12	Conflicts between conditions (1-102)	Y	
part 13	Reimbursement of costs (2-1-303)	Y	
part 14	Access to Records and Facilities (1-440, 1-441)	Y	
part 16	Operations (2-1-307)	Y	
part 17	Visible emissions (6-301)	Y	
Part 18	Emission Limits		
Part 18.1	Emission Limit for NOX (BACT)	Y	
Part 18.2	Emission Limit for ammonia (BACT)	N	
Part 18.3	Emission Limit for carbon monoxide (BACT)	Y	
Part 18.4	Emission Limit for precursor organic compounds (BACT)	Y	
Part 18.5	Emission Limit for PM10 (BACT, cumulative increase)	Y	
Part 18.6	Emission Limit for SOX (BACT, cumulative increase)	Y	
Part 19	Turbine Startup (cumulative increase)	Y	
Part 20	Turbine Shutdown (cumulative increase)	Y	
Part 21	Mass emission limits (cumulative increase)	Y	
part 22	Operational Limits (cumulative increase)	Y	
part 23	Monitoring requirements (Cumulative Increase, BACT, 40 CFR 75, 40 CFR 60)	Y	
part 24	Source testing/RATA (40 CFR 60, BAAQMD Manual of Procedures Volume IV)	Y	
part 25	Quality assurance program (40 CFR Part 75, Appendix B and 40 CFR Part 60, Appendix F)	Y	
part 27	Breakdowns (1-208)	Y	
part 28	Breakdown reports (1-208)	Y	
part 29a	Records of fuel use and heat input (cumulative increase)	Y	
part 29b	Records of startups, shutdowns, and malfunctions (BACT, cumulative increase)	Y	
part 29c	Records of emission measurements (BACT, cumulative increase, 40 CFR 60, 40 CFR 75)	Y	
part 29d	Records of hours of operation (cumulative increase)	Y	
part 29e	Records of NOX, CO, and ammonia emissions (BACT)	Y	
part 29f	Records of continuous emission monitoring systems (1-522)	Y	
part 30	Records retention for five years (2-6-501)	Y	

IV. Source-Specific Applicable Requirements

Table IV - A
Source-specific Applicable Requirements
S1 – COMBUSTION GAS TURBINE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
part 31a	Reports of fuel use and heat input (cumulative increase)	Y	
part 31b	Reports of mass emission rates (BACT, cumulative increase)	Y	
part 31c	Reports of excess emissions (BACT, cumulative increase)	Y	
part 31d	Reports of nature and cause of excess emissions (BACT, cumulative increase)	Y	
part 31e	Reports of continuous emission monitoring systems downtime (1-522)	Y	
part 31f	Negative declarations (BACT, cumulative increase)	Y	
part 31g	Reports of fuel analyses (cumulative increase, 40 CFR 75)	Y	
part 32	District Operating permit (Regulation 2, Rules 2 and 6)	Y	

IV. Source-Specific Applicable Requirements

Table IV - B
Source-specific Applicable Requirements
S2 – COOLING TOWER

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 6, Rule 1	Particulate Matter General Requirements (12/05/07)		
6-1-301	Ringelmann No. 1 Limitation	N	
6-1-305	Visible Particulates	N	
6-1-310	Particulate Weight Limitation	N	
6-1-401	Appearance of Emissions	N	
SIP Regulation 6	Particulate Matter and Visible Emissions (09/04/98)		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-401	Appearance of Emissions	Y	

V. SCHEDULE OF COMPLIANCE

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

VI. PERMIT CONDITIONS

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

Condition #19684

For S – 1 COMBUSTION GAS TURBINE:

Definitions:

Annual	Within a calendar year
Hour:	Any consecutive 60-minute period beginning on the hour.
Day:	Any continuous 24-hour period beginning at 12:00 AM or 0000 hours
Year:	Any consecutive twelve-month period
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 Part 18 are met, but not to exceed 60-minutes
Gas Turbine Shutdown Mode:	The lesser of the 30-minute period prior to the termination of fuel flow to the Gas Turbine, or the period of time from non-compliance with any requirement listed in Part 18 until termination of fuel flow to the Gas Turbine.
Corrected Concentration:	The concentration of any pollutant (generally NO _x , CO or NH ₃) corrected to a standard stack gas oxygen concentration. For an emission point (exhaust of a Gas Turbine) the standard stack gas oxygen concentration is 15% O ₂ by volume on a dry basis
Commissioning Activities:	All testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the construction contractor to insure safe and reliable steady state operation of the gas turbines, heat recovery steam generators, steam turbine, and associated electrical delivery systems.
Commissioning Period:	The Period shall commence when a gas turbine is first fired. The period shall terminate when the plant has completed performance testing and is available for commercial operation. The commissioning period shall not exceed 180 days under any circumstances.
Precursor Organic Compounds (POCs):	Any compound of carbon, excluding methane, ethane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate

VI. Permit Conditions

1. Deleted
2. Deleted
3. Deleted
4. Deleted
5. Deleted
6. Deleted
7. Deleted
8. Deleted
9. Deleted
10. Deleted

The equipment for which this Authority to Construct is issued may be operated only when in compliance with the following conditions:

11. Consistency with Analyses: The owner/operator shall operate all equipment 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. (Basis: BAAQMD 2-1-403)
12. Conflicts Between Conditions: In the event that any condition herein is determined to be in conflict with any other condition contained herein, then, if principles of law do not provide to the contrary, the condition most protective of air quality and public health and safety shall prevail to the extent feasible. (Basis: BAAQMD 1-102)
13. 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. (Basis: BAAQMD 2-1-303)
14. 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

VI. Permit Conditions

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. (Basis: BAAQMD 1-440, 1-441)

15. Deleted
16. Operations: The owner/operator shall properly maintain the gas turbine, emission controls, CEMs and associated equipment in good operating condition at all times when the equipment is in operation. (Basis: BAAQMD 2-1-307)
17. Visible Emissions: The owner/operator shall not discharge air contaminants 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. (Basis: BAAQMD 6-301)
18. Emissions Limits: The owner/operator shall only operate S-1 Gas Turbine if all of the following emission limits are met:
 - 18.1 Oxides of nitrogen (as NO₂) emissions from S-1 Gas Turbine into the atmosphere shall not exceed 2.5 ppmvd @ 15% O₂ (3-hour rolling average), except during periods of startup and shutdown as defined in this permit. The owner/operator shall verify the NO_x concentrations from the stack of S-1 by a District-approved continuous emission monitoring system (CEMS) and during any required source test. (basis: BACT)
 - 18.2 Ammonia emissions from S-1 Gas Turbine into the atmosphere shall not exceed 10.0 ppmvd @ 15% O₂ (1-hour rolling average), except during periods of startup and shutdown as defined in this permit. The owner/operator shall verify the ammonia concentration by a District approved corrected ammonia slip calculation. The owner/operator shall establish the correction factor during a District approved source test. (basis: Regulation 2, Rule 5)
 - 18.3 Carbon monoxide (CO) emissions from S-1 Gas Turbine into the atmosphere shall not exceed 6.0 ppmvd @ 15 % O₂ (3-hour rolling average), except during periods of startup and shutdown as defined in this permit. The owner/operator shall verify the CO concentration of S-1 by a District-approved CEMS and during any required source test. (basis: BACT)
 - 18.4 Precursor organic compound (POC) emissions from S-1 Gas Turbine into the atmosphere shall not exceed 2.0 ppmvd @ 15% O₂ (1-hour rolling average), except during periods of startup and shutdown as defined in this permit. The owner/operator

VI. Permit Conditions

shall verify the POC concentration from the stack of S-1 during any required source test.
 (basis: BACT)

- 18.5 Emissions of particulate matter of less than 10 microns in diameter (PM10) from S-1 Gas Turbine into the atmosphere shall not exceed 3.0 pounds per hour, except during periods of startup and shutdown as defined in this permit. The owner/operator shall verify PM10 mass emission rate from the stack of S-1 during any required source test. (basis: BACT, cumulative increase)
- 18.6 Oxides of sulfur (as SO₂) emissions from S-1 Gas Turbine into the atmosphere shall not exceed 1.38 pounds per hour, except during periods of startup and shutdown as defined in this permit. The owner/operator shall verify the SO_x emission rate during any required source test. (basis: BACT, cumulative increase)
19. Turbine Startup: The owner/operator of S-1 shall not exceed a time period of 60 minutes per start-up, 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)
20. Turbine Shutdown: The owner/operator of S-1 shall not exceed a time period of 30 minutes.
21. Mass Emission Limits: The owner/operator of S-1 shall not exceed the mass emission limits listed in Table 1 below.

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

Pollutant	Daily (lb/day)	Annual (ton/year)
NO _x (as NO ₂)	121	14.7
CO	163	29.2
POC	31	5.5
PM10	72	13.1
SO _x (as SO ₂)	32	4.5

Daily limits shall be based on average one-hour readings and annual limits shall be based on 12-month rolling average one-hour readings from the 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)

22. Operational Limits: In order to assure compliance with the emission limits of this permit, the owner/operator shall comply with the following operational limits:

VI. Permit Conditions

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

Hourly: 500 MMBtu/hr (HHV)
Daily: 12,000 MMBtu/day (HHV)
Annual: 4,380,000 MMBtu/year (HHV)

- (b) The owner/operator shall use only PUC Quality natural gas to fire the gas turbine (General Order 58-a). The owner/operator shall not use natural gas with sulfur concentrations in excess of 1 gr/100 scf.

(Basis: Cumulative Increase)

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

- (a) install and maintain exhaust stack platform with permanent provisions to allow collection of stack gas samples consistent with EPA test methods. (Basis: NSPS, BACT)

- (b) install and maintain an ammonia injection system with an operational ammonia flowmeter accurate to plus or minus five percent at full scale and to be calibrated once every twelve months, and install an injection pressure indicator. (Basis: BACT)

- (c) install and maintain a continuously recording emissions monitor(s) for NO_x, CO and O₂, or CO₂. Continuous emissions monitors must comply with the requirements of 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, and be capable of monitoring concentrations and mass emissions during normal operating conditions and during startups and shutdowns. The owner/operator shall record the NO_x, CO, and O₂ or CO₂ concentrations at least once every 15 consecutive minutes. (Basis: NSPS, 40 CFR 75)

- (d) continuously record the fuel flow rate using District-approved fuel flow meters along with quarterly fuel compositional analyses for the measuring the fuel's higher heating value (wet basis). (Basis: Cumulative Increase)

- (e) analyze the total sulfur content of the fuel gas on a quarterly basis. (Basis: BACT, Cumulative Increase, BAAQMD 9-1-302)

24. Source Testing/RATA: Within sixty days after first fire of the gas turbines, and at a minimum on an annual basis thereafter, a relative accuracy test audit (RATA) shall be conducted on the CEMS in accordance with 40 CFR Part 60 Appendix B Performance Specifications. A source test shall be conducted to verify compliance with part 18 at least once every 8,000 hours of turbine operation or once every three years, whichever comes first. The owner/operator shall provide written test results of the source tests to the District within 60 days after testing. The owner/operator shall submit a complete test protocol to the

VI. Permit Conditions

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. The owner/operator shall comply with the source test protocol for the following: measurements of NO_x, CO, POC, and stack gas oxygen content in accordance with ARB Test Method 100; measurements of PM₁₀ in accordance with ARB Test Method 5; and measurements of ammonia 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 owner/operator shall include initial and annual source tests parameters specified in the approved test protocol, and at a minimum include the following:

- a. NO_x (as NO₂) – ppmvd at 15% O₂ and lbs/MMBtu;
 - b. Ammonia – ppmvd at 15% O₂ (Exhaust);
 - c. CO – ppmvd at 15% O₂ and lbs/MMBtu (Exhaust);
 - d. POC – ppmvd at 15% O₂ and lbs/MMBtu (Exhaust);
 - e. PM₁₀ – lbs/hr (Exhaust);
 - f. SO_x – lbs/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 (lbs/hr or moles/hr)
- (Basis: BAAQMD Manual of Procedures, Volume IV, BACT, Cumulative Increase)

25. The owner/operator shall establish a written quality assurance program in accordance with 40 CFR Part 75, Appendix B and 40 CFR Part 60 Appendix F. (Basis: 40 CFR 75)
26. Deleted.
27. The owner/operator shall notify the District in writing of any breakdown condition consistent with the District's breakdown regulations. (Basis: BAAQMD 1-432)
28. The owner/operator shall include a breakdown condition description of the equipment malfunction or failure, the date and cause of the initial failure, the estimate of the emissions excess of those allowed, and the actions taken to restore normal operations. (Basis: BAAQMD 1-431)
29. Recordkeeping: The owner/operator shall maintain the following records:
 - (a) hourly, daily, quarterly and yearly quantity of fuel used and corresponding heat input rates;

VI. Permit Conditions

- (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;
 - (c) emission measurements from all source testing, RATAs and fuel analyses;
 - (d) daily, quarterly and yearly hours of operation;
 - (e) hourly records of NO_x and CO, emission concentrations and hourly ammonia injection rates and ammonia/NO_x ratio.
 - (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.
- (Basis: Cumulative Increase, BACT)
30. The owner/operator shall maintain all records for at least five years and shall make them available for District inspection upon request. (Basis: BAAQMD 2-6-501)
31. 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. The required written report shall include:
- (a) Daily and quarterly fuel use and corresponding heat input rates (Basis: Cumulative Increase);
 - (b) Daily, and quarterly mass emission rates for all criteria pollutants during normal operations and during other periods (startup/shutdown, breakdowns) (Basis: BACT, Cumulative Increase);
 - (c) Time intervals, date, and magnitude of excess emissions (Basis: BACT, Cumulative Increase);
 - (d) Nature and cause of the excess emission, and corrective actions taken (Basis: BACT, 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 (Basis: BAAQMD Regulation 1-522);
 - (f) A declaration stating periods during which no excess emissions occurred (Basis: BACT, Cumulative Increase);
 - (g) Results of quarterly fuel analyses for HHV and total sulfur content (Basis: BACT, 40 CFR 75).
32. District Operating Permit: The owner/operator shall apply for and obtain all the necessary permits to operate in accordance with the requirements of the District's rules and regulations. (Basis: BAAQMD Regulation 2, Rule 2, Regulation 2, Rule 6)
33. Deleted

VII. APPLICABLE LIMITS & COMPLIANCE MONITORING REQUIREMENTS

This section has been included to summarize the applicable emission limits contained in Section IV, Source-Specific Applicable Requirements, of this permit. The following tables show the relationship between each emission limit and the associated compliance monitoring provisions, if any. The monitoring frequency column indicates whether periodic (P) or continuous (C) monitoring is required. For periodic monitoring, the frequency of the monitoring has also been shown using the following codes: annual (A), quarterly (Q), monthly (M), weekly (W), daily (D), hourly (H), 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
S1 – COMBUSTION 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 9-9-301.1.3	N		9 ppmv @ 15% O ₂ , dry	BAAQMD 9-9-501 and BAAQMD condition #19684, part 23c	C	CEM
NOx	SIP 9-9-301.3	Y		9 ppmv @ 15% O ₂ , dry	SIP 9-9-501 and BAAQMD condition #19684, part 23c	C	CEM
NOx	BAAQMD 9-9-301.1.3	Y		9 ppmv @ 15% O ₂ , dry	BAAQMD condition #19684, part 24a	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII - A
Applicable Limits and Compliance Monitoring Requirements
S1 – COMBUSTION 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	SIP 9-9-301.3	Y		9 ppmv @ 15% O2, dry	BAAQMD condition #19684, part 24a	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
NOx	BAAQMD 9-9-301.2	N		0.43 lbs/MWhr or 9 ppmv @ 15% O2, dry	BAAQMD 9-9-501 and BAAQMD condition #19684, part 23c	C	CEM
NOx	NSPS, 40 CFR 60 Subpart GG CFR 60.332 (a)(1)	Y		75 ppmv @ 15% O2, dry	NSPS 40 CFR 60.334(b)	C	CEM
NOx	None	Y		None	40 CFR 75.10	C	CEM
NOx	BAAQMD condition #19684, part 18.1	Y		2.5 ppmv @ 15% O2, dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #19684, part 18.1	C	CEM
NOX	BAAQMD condition #19684, part 18.1	Y		2.5 ppmv @ 15% O2, dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #19684, part 24a	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
NOx	BAAQMD condition #19684, part 21	Y		109 lb/ day (as NO2)	BAAQMD condition #19684, part 23c	C	CEM

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII - A
Applicable Limits and Compliance Monitoring Requirements
S1 – COMBUSTION 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 condition #19684, part 21	Y		14.7 tons per year (as NO ₂)	BAAQMD condition #19684, part 23c	C	CEM
CO	BAAQMD condition #19684, part 18.3	Y		6 ppmv @ 15% O ₂ , dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #19684, parts 18.3 and 23c	C	CEM
CO	BAAQMD condition #19684, part 18.3	Y		6 ppmv @ 15% O ₂ , dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #19684, part 24c	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
CO	BAAQMD condition #19684, part 21	Y		159 lb/ day	BAAQMD condition #19684, part 23c	C	CEM
CO	BAAQMD condition #19684, part 21	Y		21.5 tons per year	BAAQMD condition #19684, part 23c	C	CEM
CO ₂		Y		None	40 CFR 75.10	C	CEM (CO ₂) or CEM (O ₂) or fuel flow monitor
SO ₂	BAAQMD 9-1-301	Y		GLC ¹ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N	

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII - A
Applicable Limits and Compliance Monitoring Requirements
S1 – COMBUSTION 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
	BAAQMD 9-1-302	Y		300 ppm (dry)	BAAQMD condition #19684, part 23e	N	None
SO2	NSPS 40 CFR 60 Subpart GG 60.333(a)	Y		0.015% (vol.) @ 15% O ₂ (dry)	NSPS 40 CFR 60.334(h)(3)	N	None
SO2	None	Y		None	40 CFR 75.11, 40 CFR 75, Appendix D, part 2.3		Fuel measurements, calculations
SO2	BAAQMD condition #19684, part 18.6	Y		1.38 lb/hr	BAAQMD condition #19684, part 23e	P/Q	Fuel gas Total sulfur content analysis
SO2	BAAQMD condition #19684, part 18.6	Y		1.38 lb/hr	BAAQMD condition #19684, part 24f	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
SO2	BAAQMD condition #19684, part 21	Y		32 lb/ day	BAAQMD condition #19684, part 23e	P/Q	Fuel Gas Total sulfur content analysis
SO2	BAAQMD condition #19684, part 21	Y		4.5 tons/year	BAAQMD condition #19684, part 23e	P/Q	Fuel gas Total sulfur content analysis
Opacity	BAAQMD 6-1-301	N		> Ringelmann No. 1 for no more than 3 minutes in any hour		N	

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII - A
Applicable Limits and Compliance Monitoring Requirements
S1 – COMBUSTION 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	SIP 6-301	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour		N	
Opacity	BAAQMD condition #19684, part 18	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour or equivalent 20% opacity		N	
FP	BAAQMD 6-1-310	N		0.15 grain/dscf		N	
FP	SIP 6-310	Y		0.15 grain/dscf		N	
PM10	BAAQMD condition #19684, part 18.5	Y		3 lb/ hr	BAAQMD condition #19684, part 24e	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
PM10	BAAQMD condition #19684, part 21	Y		72 lb/day	BAAQMD condition #19684, parts 23d, 24e	P/A	Source Test every 8,000 hrs or every 3 yrs, whichever comes first
PM10	BAAQMD condition #19684, part 21	Y		13.1 tons/year	BAAQMD condition #19684, part 24e	P/A	Source Test every 8,000 hrs or every 3 yrs, whichever comes first

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII - A
Applicable Limits and Compliance Monitoring Requirements
S1 – COMBUSTION 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
POC	BAAQMD condition #19684, part 18.4	Y		2 ppmv @ 15% O ₂ , dry, except during turbine startup or shutdown	BAAQMD condition #19684, part 24d	C	Source test every 8,000 hrs or every 3 yrs, whichever comes first
POC	BAAQMD condition #19684, part 18.4	Y		2 ppmv @ 15% O ₂ , dry, except during turbine startup or shutdown	BAAQMD condition #19684, part 24d	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
POC	BAAQMD condition #19684, part 21	Y		31 lb/calendar day	BAAQMD condition #19684, part 24d	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
POC	BAAQMD condition #19684, part 21	Y		4.1 ton/year	BAAQMD condition #19684, part 24d	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
NH ₃	BAAQMD condition #19684, Part 18.2	N		10 ppmv @ 15% O ₂ , dry, except during turbine startup or shutdown	BAAQMD condition #19684, parts 18.2 and 23b	C	Calculation based on source test and NH ₃ to NO _x ratio at inlet to SCR

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII - A
Applicable Limits and Compliance Monitoring Requirements
S1 – COMBUSTION 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
NH3	BAAQMD condition #19684, Part 18.2	N		10 ppmv @ 15% O2, dry, except during turbine startup or shutdown	BAAQMD condition #19684, part 24b	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
Heat input limit	BAAQMD condition #19684, part 22	Y		500 MM BTU/hr (HHV)	BAAQMD condition #19684, part 23d	C	Fuel meter, firing monitor
Heat input limit	BAAQMD condition #19684, part 22	Y		500 MM BTU/hr (HHV)	BAAQMD condition #19684, part 23d	P/Q	Fuel composition analysis
Heat input limit	BAAQMD condition #19684, part 22	Y		500 MM BTU/hr (HHV)	BAAQMD condition #19684, part 24g	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
Heat input limit	BAAQMD condition #19684, part 22	Y		12,000 MM BTU/day (HHV)	BAAQMD condition #19684, part 23d	C	fuel meter, firing monitor, calculations
Heat input limit	BAAQMD condition #19684, part 22	Y		12,000 MM BTU/day (HHV)	BAAQMD condition #19684, part 23d	P/Q	Fuel composition analysis
Heat input limit	BAAQMD condition #19684, part 22	Y		4,380,000 MM BTU/yr (HHV)	BAAQMD condition #19684, part 23d	C	fuel meter, firing monitor, calculations

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII - A
Applicable Limits and Compliance Monitoring Requirements
S1 – COMBUSTION 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
Heat input limit	BAAQMD condition #19684, part 22	Y		4,380,000 MM BTU/yr (HHV)	BAAQMD condition #19684, part 24d	P/Q	Fuel composition analysis
MW				None	BAAQMD condition #19684, part 24h	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
Exhaust Gas temperature				None	BAAQMD condition #19684, part 24j	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first
Stack gas flow rate				None	BAAQMD condition #19684, part 24i	P/A	Source test every 8,000 hrs or every 3 yrs, whichever comes first

VII. Applicable Limits and Compliance Monitoring Requirements

**Table VII - A
 Applicable Limits and Compliance Monitoring Requirements
 S1 – COMBUSTION 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
NH3 injection rate				None	BAAQMD condition #19684, part 24k	P/A	Source test District approved correct ammonia slip calculation and correction factor determined by source test with source. test every 8,000 hrs or every 3 yrs, whichever comes first
Start-up Period	BAAQMD condition #19684, part 19	Y		60 minutes per start-up	BAAQMD condition #19684, part 30(b)	P/E	Records
Shutdown Period	BAAQMD condition #19684, part 20	Y		30 minutes per shutdown	BAAQMD condition #19684, part 30(b)	P/E	Records
Fuel Sulfur Content	40 CFR 60.333(b)	Y		0.8 percent by weight (8000 ppmw) sulfur	40 CRFR 60.334(h)(1)	P	Fuel Sulfur Content Testing

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII - B
Applicable Limits and Compliance Monitoring Requirements
S2-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 Regulation 6-1-301	N		< Ringelmann No. 1 for more than 3 min/hr		N	
Opacity	SIP Regulation 6-301	Y		< Ringelmann No. 1 for more than 3 min/hr		N	
Particulate Weight	BAAQMD Regulation 6-1-310	N		0.15 grains per dscf		N	
Particulate Weight	SIP Regulation 6-310	Y		0.15 grains per dscf		N	
Particulate Weight	BAAQMD Regulation 6-1-311	N		40 lb/hr	N	N	
Particulate Weight	SIP Regulation 6-311	Y		40 lb/hr	N	N	

VIII. TEST METHODS

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

**Table VIII
 Test Methods**

Applicable Requirement	Description of Requirement	Acceptable Test Methods
BAAQMD 6-301	Ringelmann No. 1 Limitation	Manual of Procedures, Volume I, Evaluation of Visible Emissions
BAAQMD 6-310	Particulate Weight Limitation	Manual of Procedures, Volume IV, ST-15, Particulates Sampling
BAAQMD 6-311	General Operations	Manual of Procedures, Volume IV, ST-15, Particulates Sampling
BAAQMD 9-1-302	General Emission Limitation	Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide, Continuous Sampling, or ST-19B, Total Sulfur Oxides Integrated Sample
BAAQMD 9-9-301.2	Emission Limits- Turbines Rated ≥ 250 -500 MMBtu/hr	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-9-301.1.3	Emission Limits – Turbines Rated > 10 MW w/SCR	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
NSPS 40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines (2/24/06)	
60.332 (a)(1)	Performance Standard, NO _x	EPA Method 20, Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
60.333 (a)	SO ₂ Volumetric Emission Limit	EPA Method 20, Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
60.333 (b)	Fuel Sulfur Limit (gaseous fuel)	ASTM D 1072-80, Standard Method for Total Sulfur in Fuel Gases ASTM D 3031-81, Standard Test Method for Total Sulfur in Natural Gas by Hydrogenation
NSPS 40 CFR 60.8	40 CFR 60, Appendix A	EPA Method 7, Determination of Nitrogen Oxide Emissions from Stationary Sources EPA Method 20, Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
BAAQMD Cond# 19684		

VIII. Test Methods

Table VIII
Test Methods

Applicable Requirement	Description of Requirement	Acceptable Test Methods
Part 18.1	NO _x Limit	Test Procedure ARB 100, Procedures for Continuous Gaseous Emission Stack Sampling
Part 18.2	NH ₃ Limit	BAAQMD Test Procedure ST-1B, Ammonia, Integrated Sampling
Part 18.3	CO Limit	Test Procedure ARB 100, Procedures for Continuous Gaseous Emission Stack Sampling
Part 18.4	POC Limit	Test Procedure ARB 100, Procedures for Continuous Gaseous Emission Stack Sampling
Part 18.5	PM ₁₀ Limit	Test Procedure ARB 5, Determination of Particulate Matter Emissions from Stationary Sources and EPA Method 202, Condensable Particulate Matter
Part 18.6	SO _x Limit	Test Procedure, MOP Vol.4, ST-19A, Sulfur Dioxide, Continuous Sampling, or ST-19B, Total Sulfur Oxides Integrated Sample

IX. TITLE IV ACID RAIN PERMIT

Effective December 21, 2017 through December 20, 2022

ISSUED TO:

**Gilroy Energy Center, LLC at Wolfskill Energy Center
2425 Cordelia Road
Fairfield CA 94533**

PLANT SITE LOCATION:

**2425 Cordelia Road
Fairfield, CA 94533**

ISSUED BY:

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

December 21, 2017
Date

**Type of Facility: Simple-Cycle Generation Facility
Primary SIC: 4911
Product: Electricity**

DESIGNATED REPRESENTATIVE

**Name: Andrew Gundershaug
Title: Plant Manager
Phone: (707) 399-4393**

FACILITY CONTACT PERSON:

**Name: Allison Bryan
Title: EHS Specialist
Phone: (707) 399-4395**

ACID RAIN PERMIT CONTENTS

- 1) Statement of Basis
- 2) SO₂ allowance allocated under this permit and NO_x 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) SO₂ ALLOWANCE ALLOCATIONS

	Year	2017	2018	2019	2020	2021
	SO₂ allowances under Table 2 of 40 CFR Part 73	None	None	None	None	None
S-1, Turbine	NO_x Limit	This unit is not subject to the NO_x requirements from 40 CFR Part 76 as this unit is not capable of firing on coal.				

3) COMMENTS, NOTES AND JUSTIFICATIONS

Pursuant to 40 CFR Part 72.6(a)(3)(i), S-1 is considered a new utility unit and is subject to the acid rain permit requirements of 72.9(a).

S-1 Gas Turbine is not listed in table-2 of 40 CFR Part 73, therefore, the operator is not required to obtain SO₂ allowances under the Acid Rain Program.

S-1 Gas Turbine does not qualify for a new unit exemption pursuant to 40 CFR 72.7(b)(1) since it serves a generator with a nameplate capacity greater than 25 MW.

4) PERMIT APPLICATION

Attached

X. PERMIT SHIELD

A. Non-applicable Requirements

None

B. Subsumed Requirements:

None

XI. REVISION HISTORY

<u>Date</u>	<u>Action</u>	<u>Details</u>
December 21, 2017	Renewal of Title V Permit	Application No. 28496
July 18, 2003	Final Permit	Application #5371: Initial Title V Permit for new facility
April 23, 2007	Significant revision	Application #10471: Change permit condition to allow for source test every 8,000 hrs of turbine operation or every 3 yrs. Change permit condition to allow for ammonia slip calculation and correction factor determined by source test. Increase emissions to include 4 hours of engine startup. Allow for flexibility to operate turbine up to 8,790 hrs/yr. Increase daily emissions of NOx and CO to 121 lb/day and 163 lb/day. Increase annual emissions of CO, POC, PM10 to 29.2 tpy, 5.5 tpy, 13.1 tpy. Change maximum heat input to 4,380,000 Btu/hr.
July 31, 2012	Renewal of Title V Permit	Application #17174

XII. GLOSSARY

ACT

Federal Clean Air Act

APCO

Air Pollution Control Officer

API

American Petroleum Institute

ARB

Air Resources Board

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

BARCT

Best Available Retrofit Control Technology

Basis

The underlying authority that allows the District to impose requirements.

C5

An Organic chemical compound with five carbon atoms

C6

An Organic chemical compound with six carbon atoms

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CAPCOA

California Air Pollution Control Officers Association

CEC

California Energy Commission

CEQA

California Environmental Quality Act

XII. Glossary

CEM

A "continuous emission monitor" is a monitoring device that provides a continuous direct measurement of some pollutant (e.g. NO_x concentration) in an exhaust stream.

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

CO₂

Carbon Dioxide

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

dscf

Dry Standard Cubic Feet

dscm

Dry Standard Cubic Meter

E 6, E 9, E 12

Very large or very small number values are commonly expressed in a form called scientific notation, which consists of a decimal part multiplied by 10 raised to some power. For example, 4.53 E 6 equals $(4.53) \times (10^6) = (4.53) \times (10 \times 10 \times 10 \times 10 \times 10 \times 10) = 4,530,000$. Scientific notation is used to express large or small numbers without writing out long strings of zeros.

EPA

The federal Environmental Protection Agency.

Excluded

Not subject to any District Regulations.

Federally Enforceable, FE

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

XII. Glossary

FP

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

FR

Federal Register

GDF

Gasoline Dispensing Facility

GLM

Ground Level Monitor

grains

1/7000 of a pound

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.

H₂S

Hydrogen Sulfide

HHV

Higher Heating Value. The quantity of heat evolved as determined by a calorimeter where the combustion products are cooled to 60F and all water vapor is condensed to liquid.

LHV

Lower Heating Value. Similar to the higher heating value (see HHV) except that the water produced by the combustion is not condensed but retained as vapor at 60F.

Major Facility

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

MFR

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

MOP

The District's Manual of Procedures

MSDS

Material Safety Data Sheet

XII. Glossary

NA

Not Applicable

NAAQS

National Ambient Air Quality Standards

NESHAPs

National Emission Standards for Hazardous Air Pollutants. See in 40 CFR Parts 61 and 63.

NMHC

Non-methane Hydrocarbons

NMOC

Non-methane Organic Compounds (Same as NMHC)

NO_x

Oxides of nitrogen.

NSPS

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

NSR

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

O₂

The chemical name for naturally occurring oxygen gas.

Offset Requirement

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

Oxidation Catalyst

A material used in combustion systems to reduce emissions of carbon monoxide and organics by promoting oxidation reactions.

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.

XII. Glossary

POC

Precursor Organic Compounds

PM

Total Particulate Matter

PM10

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.

RATA

Stands for Relative Accuracy Test Audit. A test conducted to certify the accuracy of the Continuous Emission Monitor (CEM).

SCR

A "selective catalytic reduction" unit is an abatement device that reduces NO_x concentrations in the exhaust stream of a combustion device. SCRs utilize a catalyst, which operates at a specific temperature range, and injected ammonia to promote the conversion of NO_x compounds to nitrogen gas.

SIP

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

SO₂

Sulfur dioxide

SO₂ Bubble

An SO₂ bubble is an overall cap on the SO₂ emissions from a defined group of sources, or from an entire facility. SO₂ bubbles are sometimes used at refineries because combustion sources are typically fired entirely or in part by "refinery fuel gas" (RFG), a waste gas product from refining operations. Thus, total SO₂ emissions may be conveniently quantified by monitoring the total amount of RFG that is consumed, and the concentration of H₂S and other sulfur compounds in the RFG.

SO₃

Sulfur trioxide

THC

Total Hydrocarbons (NMHC + Methane)

XII. Glossary

therm

100,000 British Thermal Unit

Title V

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

TOC

Total Organic Compounds (NMOC + Methane, Same as THC)

TSP

Total Suspended Particulate

TVP

True Vapor Pressure

VOC

Volatile Organic Compounds

Units of Measure:

bbl	=	barrel of liquid (42 gallons)
bhp	=	brake-horsepower
btu	=	British Thermal Unit
C	=	degrees Celsius
F	=	degrees Fahrenheit
f ³	=	cubic feet
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inches
max	=	maximum
m ²	=	square meter
min	=	minute
M	=	thousand
Mg	=	mega-gram, one thousand grams
µg	=	micro-gram, one millionth of a gram
MM	=	million
mm	=	millimeter
MMbtu	=	million btu
mm Hg	=	millimeters of Mercury (pressure)

XII. Glossary

Units of Measure:

MW	=	megawatts
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

Symbols:

<	=	less than
>	=	greater than
≤	=	less than or equal to
≥	=	greater than or equal to