

Bay Area Air Quality Management District

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

Final

MAJOR FACILITY REVIEW PERMIT

Issued To:

**Donald Von Raesfeld Power Plant
Facility #B4991**

Facility Address:

850 Duane Avenue
Santa Clara, CA 95050

Mailing Address:

1500 Warburton Avenue
Santa Clara, CA 95050

Responsible Official

John Roukema
Director of Silicon Valley Power
408-261-5490

Facility Contact

Damon Beck
Compliance Manager - Generation
408-615-6555

Type of Facility:	Fossil Fuel Fired Power Plant	BAAQMD Engineering Division Contact:
Primary SIC:	4911	Brian Lusher
Product:	Electricity	

ISSUED BY THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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

April 12, 2013
Date

TABLE OF CONTENTS

I.	STANDARD CONDITIONS	3
II.	EQUIPMENT	8
III.	GENERALLY APPLICABLE REQUIREMENTS	10
IV.	SOURCE-SPECIFIC APPLICABLE REQUIREMENTS	13
V.	SCHEDULE OF COMPLIANCE	27
VI.	PERMIT CONDITIONS	28
VII.	APPLICABLE LIMITS & COMPLIANCE MONITORING REQUIREMENTS.....	39
VIII.	TEST METHODS	49
IX.	PERMIT SHIELD	51
X.	REVISION HISTORY	52
XI.	GLOSSARY	53
XII.	TITLE IV ACID RAIN PERMIT	62

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 5/4/11);
- 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 04/18/12);
- SIP Regulation 2, Rule 1 - Permits, General Requirements
(as approved by EPA through 1/26/99);
- BAAQMD Regulation 2, Rule 2 - Permits, New Source Review
(as amended by the District Board on 6/15/05);
- SIP Regulation 2, Rule 2 - Permits, New Source Review and Prevention of Significant Deterioration
(as approved by EPA through 1/26/99);
- BAAQMD Regulation 2, Rule 4 - Permits, Emissions Banking
(as amended by the District Board on 12/21/04);
- SIP Regulation 2, Rule 4 - Permits, Emissions Banking
(as approved by EPA through 1/26/99);
- BAAQMD Regulation 2, Rule 5 – New Source Review of Toxic Air Contaminants
(as amended by the District Board on 01/06/10); and
- BAAQMD Regulation 2, Rule 6 - Permits, Major Facility Review
(as amended by the District Board on 4/16/03)); and
- SIP Regulation 2, Rule 6 – Permits, Major Facility Review
(as approved by EPA through 6/23/95)

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

1. This Major Facility Review Permit was issued on April 12, 2013 and expires on April 11, 2018. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than October 11, 2017 and no earlier than April 11, 2017. **If a complete application for renewal has not been submitted in accordance with this deadline, the facility may not operate after April 11, 2018. If the permit renewal has not been issued by April 11, 2018, 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 re-issuance, or

I. Standard Conditions

- modification; or denial of a permit renewal application. (Regulation 2-6-307; MOP Volume II, Part 3, §4.11)
3. In the event any enforcement action is brought as a result of a violation of any term or condition of this permit, the fact that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with such term or condition shall not be a defense to such enforcement action. (MOP Volume II, Part 3, §4.11)
 4. This permit may be modified, revoked, reopened and reissued, or terminated for cause. (Regulation 2-6-307, 409.8, 415; MOP Volume II, Part 3, §4.11)
 5. The filing of a request by the facility for a permit modification, revocation and 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. (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 which the permit holder considers to be proprietary or trade secret information shall be prominently designated as such. Copies of any such proprietary or trade secret information which are provided to the District shall be maintained by the District in a locked confidential file, provided, however, that requests from the public for the review of any such information shall be handled in accordance with the District's procedures set forth in Section 11 of the District's Administrative Code. (Regulation 2-6-419; MOP Volume II, Part 3, §4.11)
 9. Proprietary or trade secret information provided to EPA will be subject to the requirements of 40 CFR Part 2, Subpart B - Public Information, Confidentiality of Business Information. (40 CFR Part 2)
 10. The emissions inventory submitted with the application for this Major Facility Review Permit is an estimate of actual emissions or the potential to emit for the time period stated and is included only as one means of determining applicable requirements for emission sources. It does not establish, or constitute a basis for establishing, any new emission limitations. (MOP Volume II, Part 3, §4.11)
 11. The responsible official shall certify all documents submitted by the facility pursuant to the major facility review permit. The certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. The certifications shall be signed by a responsible official for the facility. (Regulation 2-6-409.20, MOP Volume II, Part 3, §4.11)

I. Standard Conditions

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

C. Requirement to Pay Fees

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

D. Inspection and Entry

Access to Facility: The permit holder shall provide reasonable access to the facility and equipment 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 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 first reporting period for this permit shall be April 12, 2013 to September 30, 2013. The report shall be submitted by October 31, 2013. Subsequent reports shall be for the following periods: October 1st through March 31st and April 1st through September 30st, and are due on the last day of the month after the end of the reporting period. All instances of non-compliance shall be clearly identified in these reports. The reports shall be certified by the responsible official as true, accurate, and complete. In addition, all instances of non-compliance with the permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions. The reports shall be sent to the following address:

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

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

I. Standard Conditions

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 initial certification period will run from April 12th, 2013 to March 31st, 2014. Subsequent certification periods will be from April 1st to March 31st. The certification shall be submitted by April 30th 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 certification shall be sent to the Environmental Protection Agency at the following address:

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

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

H. Emergency Provisions

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

I. Standard Conditions

J. Miscellaneous Conditions

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

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 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 O₂ and NO_x shall be maintained and operated in accordance with 40 CFR Parts 72 and 75. (Regulation 2-7, Acid Rain)
3. A written Quality Assurance program must be established in accordance with 40 CFR Part 75, Appendix B for NO_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. (Regulation 2-7, Acid Rain)
4. The permit holder shall monitor SO₂ emissions in accordance with 40 CFR Part 72 and 75. (Regulation 2-7, Acid Rain)
5. The permit holder shall submit quarterly Electronic Data Reports (EDRs) to EPA for S-1 and S-3, Turbines, and S-2 and S-4, Heat Recovery Steam Generators. 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	Gas Turbine #1 (natural gas fired)	General Electric	LM6000 PC Sprint	473.7 MM BTU/hr
2	HRSB Duct Burner #1 (natural gas fired)	Custom-made		136.9 MM BTU/hr
3	Gas Turbine #2 (natural gas fired)	General Electric	LM6000 PC Sprint	473.7 MM BTU/hr
4	HRSB Duct Burner #2 (natural gas fired)	Custom-made		136.9 MM BTU/hr

Table II B – Abatement Devices

A-#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency
1	Selective Catalytic Reduction System	S-1, S-2	BAAQMD Condition #24252, part 20a	None	2.0 ppmv NO _x @ 15% O ₂ , dry, 1-hr average
2	Oxidation Catalyst	S-1, S-2	BAAQMD Condition #24252, part 20c	None	4 ppmv CO @ 15% O ₂ , dry, 3-hr average
3	Selective Catalytic Reduction System	S-3, S-4	BAAQMD Condition #24252, part 20a	None	2.0 ppmv NO _x @ 15% O ₂ , dry, 1-hr average

II. Equipment

Table II B – Abatement Devices

A-#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency
4	Oxidation Catalyst	S-3, S-4	BAAQMD Condition #24252, part 20c	None	4 ppmv CO @ 15% O ₂ , dry, 3-hr average

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
5	Cooling Tower	GEA	3-cell	34,980 gallons per minute

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 the SIP requirements can be viewed 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 regulations and the versions of the regulations 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.

**Table III
 Generally Applicable Requirements**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
BAAQMD Regulation 1	General Provisions and Definitions (5/4/11)	N
SIP Regulation 1	General Provisions and Definitions (6/28/99)	Y
BAAQMD Regulation 2, Rule 1	General Requirements (04/18/12)	N
SIP Regulation 2, Rule 1	General Requirements (1/26/99)	Y
BAAQMD 2-1-429	Federal Emissions Statement (12/21/04)	N
SIP Regulation 2-1-429	Federal Emissions Statement (4/3/95)	Y

III. Generally Applicable Requirements

Table III
Generally Applicable Requirements

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
BAAQMD Regulation 4	Air Pollution Episode Plan (3/20/91)	N
SIP Regulation 4	Air Pollution Episode Plan (8/6/90)	Y
BAAQMD Regulation 5	Open Burning (7/09/08)	N
SIP Regulation 5	Open Burning (9/4/98)	Y
BAAQMD Regulation 6, Rule 1	Particulate Matter, General Requirements (12/5/07)	N
SIP Regulation 6	Particulate Matter and Visible Emissions (9/4/98)	Y
BAAQMD Regulation 7	Odororous Substances (3/17/82)	N
BAAQMD Regulation 8, Rule 1	Organic Compounds - General Provisions (6/15/94)	Y
BAAQMD Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (7/20/05)	N
SIP Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (3/22/95)	Y
BAAQMD Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (07/01/09)	N
SIP Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (1/2/04)	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 (6/1/94)	Y
BAAQMD Regulation 8, Rule 40	Organic Compounds - Aeration of Contaminated Soil and Removal of Underground Storage Tanks (6/15/05)	N
SIP Regulation 8, Rule 40	Organic Compounds - Aeration of Contaminated Soil and Removal of Underground Storage Tanks (4/19/01)	Y
BAAQMD Regulation 8, Rule 47	Organic Compounds - Air Stripping and Soil Vapor Extraction Operations (6/15/05)	N
SIP Regulation 8, Rule 47	Organic Compounds - Air Stripping and Soil Vapor Extraction Operations (4/26/95)	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 (3/22/95)	Y
BAAQMD Regulation 8, Rule 51	Organic Compounds - Adhesive and Sealant Products (7/17/02)	N
SIP Regulation 8, Rule 51	Organic Compounds - Adhesive and Sealant Products (2/26/02)	Y
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)	N
SIP Regulation 9, Rule 1	Inorganic Gaseous Pollutants - Sulfur Dioxide (6/8/99)	Y

III. Generally Applicable Requirements

**Table III
 Generally Applicable Requirements**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)
BAAQMD Regulation 11, Rule 2	Hazardous Pollutants - Asbestos Demolition, Renovation and Manufacturing (10/7/98)	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
California Health and Safety Code Title 17, Section 93115	Airborne Toxic Control Measure for Stationary Compression Ignition Engines	N
California Health and Safety Code Title 17, Section 93116	Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater	N
40 CFR Part 61, Subpart M	National Emission Standards for Hazardous Air Pollutants – National Emission Standard for Asbestos (7/20/04)	Y
EPA Regulation 40 CFR 82	Protection of Stratospheric Ozone (4/13/05)	
Subpart F, 40 CFR 82.156	Recycling and Emissions Reductions – Required Practices	Y
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 of this permit, entitled “Permit Conditions”. The full language of the SIP requirements can be viewed 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>

All other text may be found in the regulations themselves.

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 1	General Provisions and Definitions (7/9/08)		
1-107	Combination of Emissions	Y	
1-520	Continuous Emission Monitoring	Y	
1-520.1	Monitoring of NO _x , CO ₂ , or O ₂	Y	
1-520.8	Monitors required per Reg. 2-1-403	Y	
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y	
1-522.1	approval of plans and specifications	Y	
1-522.2	scheduling requirements	Y	

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
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 non operation	Y	
1-523.2	Limits on periods of non operation	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 (6/28/99)		
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 (7/19/06)		
2-1-501	Monitors	Y	
BAAQMD Regulation 6, Rule 1	Particulate Matter, General Requirements (12/5/07)		
6-1-301	Ringelmann Number 1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation	N	
6-1-310.3	Heat Transfer Operations (HRSG Only)		

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
6-1-401	Appearance of Emissions	N	
SIP Regulation 6	Particulate Matter and Visible Emissions (9/4/98)		
6-301	Ringelmann Number 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-310.3	Heat Transfer Operations	Y	
6-401	Appearance of Emissions	Y	
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants – Sulfur Dioxide (3/15/95)		
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-302	General Emission Limitations	Y	
BAAQMD Regulation 9, Rule 3	Inorganic Gaseous Pollutants, Nitrogen Oxides From Heat Transfer Operations (3/17/82)		
9-3-303	New or Modified Heat Transfer Operation Limits	N	
BAAQMD Regulation 9, Rule 9	Inorganic Gaseous Pollutants-Nitrogen Oxides from Stationary Gas Turbines (12/6/06)		
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, General	N	
9-9-401	Certification, Efficiency	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	

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
9-9-114	Exemption – Start-Up/Shutdown	Y	
9-9-301	Emission Limits, General	Y	
9-9-301.3	Emission Limits, Turbines greater than 10 MW with SCR, NO _x less than 9 ppmv (dry, 15% O ₂)	Y	
9-9-501	Monitoring and recordkeeping requirements	Y	
BAAQMD Regulation 10 Subpart GG	NSPS Incorporation by Reference, Stationary Gas Turbines (2/16/2000)		
10-40.	Subpart GG - Standards of Performance For Stationary Gas Turbines	Y	
BAAQMD Manual of Procedures, Volume V	Continuous Emission Monitoring Policy and Procedures (1/20/82)	Y	
40 CFR 60 Subpart A	Standards of Performance for New Stationary Sources – General Provisions (1/28/09)	Y	
60.7	Notification and Recordkeeping	Y	
60.8	Performance Tests	Y	
60.9	Availability of Information	Y	
60.11(a)	Compliance with standards in this part	Y	
60.11(d)	Minimizing emissions	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	
60.19	General notification and reporting requirements	Y	
Subpart GG	Standards of Performance for Stationary Gas Turbines (2/24/06)		
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)	Fuel Sulfur Content cannot exceed 0.8 percent by weight (Turbine Only)	Y	
60.334	Monitoring of operations	Y	

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
60.334(c)	NO _x CEMs	Y	
60.334(h)(3)	Exemption from fuel sulfur monitoring requirements (Natural Gas)	Y	
60.334(j)(1)(iii)	NO _x Excess Emissions and Monitor Downtime reporting requirements	Y	
60.335	Test Methods and Procedures	Y	
40 CFR 60 Appendix B	Performance Specifications	Y	
Performance Specification 2	Specifications and test procedures for SO ₂ and NO _x continuous emission monitoring systems in stationary sources	Y	
Performance Specification 3	Specifications and test procedures for O ₂ and CO ₂ continuous emission monitoring systems	Y	
40 CFR 60 Appendix F	Quality Assurance Procedures		
Procedure 1	Quality assurance requirements for gas continuous emission monitoring systems used for compliance determination	Y	
40 CFR Part 72	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	
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	

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
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(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	
72.51	Permit Shield	Y	

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
40 CFR Part 75	Code of Federal Regulations, 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	
75.2(c)	The provisions of this part apply to sources subject to a State or federal NO _x mass emission reduction program, to the extent these provisions are adopted as requirements under such a program	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	

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
75.10(b)	Primary Equipment Performance Requirements Requires each CEM to meet equipment, installation, and performance specifications in part 75, Appendix A and quality assurance/quality control requirements in part 75 Appendix B.	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	
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 rates	Y	
75.12(a)	NO _x continuous emission monitor and diluent 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	

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
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	
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 NO _x 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, NO _x emission rate and NO _x concentration data	Y	
75.34	Units with add-on emission controls	Y	
75.35	Missing data procedures for CO ₂	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	

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
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)	SO ₂ emission record provisions	Y	
75.57(d)	NO _x emission record provisions	Y	
75.57(e)	CO ₂ emission record provisions	Y	
75.57(g)	Diluent 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	
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)	Excepted 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	

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
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 #24252			
Definitions	Definitions	Y	
part 13	S-1, S-2, S-3, and S-4 shall be fired on natural gas only (BACT for SO ₂ and PM ₁₀)	Y	
part 14	Hourly heat input limit for each gas turbine/HRSG power train (BACT, cumulative increase)	Y	
part 15	Daily heat input limit for each gas turbine/HRSG power train (BACT, cumulative increase)	Y	
part 16	Annual heat input limit for each gas turbine/HRSG power train (BACT, cumulative increase)	Y	

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
part 17	Duct burners shall not be fired unless turbines are in operation (BACT for NO _x , CO, POC)	Y	
part 18	SCR requirement for S-1 and S-2 (BACT for NO _x)	Y	
part 19	SCR requirement for S-3 and S-4 (BACT for NO _x)	Y	
part 20	Emission limits (BACT, PSD, and Regulation 2, Rule 5)	Y	
part 20a	NO _x concentration limit (BACT for NO _x)	Y	
part 20b	NO _x mass emission limit (BACT for NO _x)	Y	
part 20c	CO concentration limit (BACT for CO)	Y	
part 20d	CO mass emission limit (BACT for CO)	Y	
part 20e	Ammonia concentration limit and monitoring (Regulation 2, Rule 5 for NH ₃)	N	
part 20f	POC concentration limits (BACT for POC)	Y	
part 20g	POC mass emission rate limits (BACT for POC)	Y	
part 20h	SO ₂ mass emission rate limits (BACT for SO ₂)	Y	
part 20i	PM ₁₀ mass emission rate limits (BACT for PM ₁₀)	Y	
part 20j	Allowable excursions from NO _x mass and concentration emission limits specified in parts 20a and 20 b (BACT for NO _x)	Y	
part 21	Gas Turbine start-up and shutdown emission rate limits for NO _x , CO, POC, and PM ₁₀ (PSD)	Y	
part 22	Total Combined daily mass emission limits from S-1, S-2, S-3, and S-4 for NO _x , CO, POC, PM ₁₀ , and SO ₂ (PSD)	Y	
part 23	Total Combined consecutive twelve-month mass emission limits from S-1, S-2, S-3, and S-4 for NO _x , CO, POC, PM ₁₀ , and SO ₂ (Offsets)	Y	
part 26	Facility annual emission limits for toxic air contaminants (Regulation 2, Rule 5)	N	
part 27	Monitoring (1-520.1, 9-9-501, BACT, Offsets, NSPS, PSD, Cumulative Increase)	Y	
part 28	Calculation of emissions and recordkeeping (Offsets, PSD, Cumulative Increase)	Y	
part 29	Calculation of emissions and recordkeeping for toxic air contaminants (Regulation 2, Rule 5)	N	
part 30	Ammonia source test (Regulation 2, Rule 5)	N	

IX. Source-Specific Applicable Requirements

Table IV – A
Source-specific Applicable Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
part 31	Source testing to assure compliance with part 20a, b, c, d, f, g, h, and i (BACT, offsets)	Y	
part 32	District review of source test procedures (BACT)	Y	
part 33	Initial and biennial source tests for toxic air contaminants (Regulation 2, Rule 5)	N	
part 34	Submittal of reports (2-6-502)	Y	
part 35	Retention of records for five years (2-6-502)	Y	
part 36	Notification of violations to District (2-1-403)	Y	
part 37	Stack heights (PSD, Regulation 2, Rule 5)	Y	
part 44	Federal CEM requirements (40 CFR part 75)	Y	
part 45	Natural gas quality characteristics (40 CFR 60.334(h)(3)(i))	Y	

Table IV - B
Source-specific Applicable Requirements
S-5 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 (12/5/07)		
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 (9/4/98)		

IX. Source-Specific Applicable Requirements

Table IV - B
Source-specific Applicable Requirements
S-5 COOLING TOWER

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
6-301	Ringelmann Number 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-401	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# 24252

For S-1 Gas Turbine #1, S-2 HRSG Duct Burner #1, S-3 Gas Turbine #2, S-4 HRSG Duct Burner#2

Definitions:

BACT: Best Available Control Technology

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

HHV: Higher Heating Value in BTU/scf (natural gas)

HRSG: Heat recovery steam generator

Rolling 3-hour period: Any consecutive three-hour period, not including start-up or shutdown periods

Firing Hours: Period of time during which fuel is flowing to a unit, measured in minutes

MMBTU: Million British Thermal Units

Startup Mode: The lesser of the first 180 minutes of continuous fuel flow to the Gas Turbine after fuel flow is initiated or the period of time from Gas Turbine fuel flow initiation until the Gas Turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of Parts 20(a) and 20(c).

Shutdown Mode: The lesser of the 60 minute period immediately prior to the termination of fuel flow to the Gas Turbine or the period of time from non-compliance with any requirement listed in Parts 20(a) and 20(c) until termination of fuel flow to the Gas Turbine.

VI. PERMIT CONDITIONS

Precursor Organic Compounds (POCs): Any compound of carbon, excluding methane, ethane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

NOX: Nitrogen oxides

PM10: Particulate matter

CO: Carbon monoxide

SO2: Sulfur dioxide

NH3: Ammonia

Specified PAHs: The polycyclic aromatic hydrocarbons (PAHs) listed below shall be considered to be Specified PAHs for these permit conditions. Any emission limits for Specified PAHs refer to the sum of the emissions for all six of the following compounds

- Benzo[a]anthracene
- Benzo[b]fluoranthene
- Benzo[k]fluoranthene
- Benzo[a]pyrene
- Dibenzo[a,h]anthracene
- Indeno[1,2,3-cd]pyrene

Corrected Concentration: The concentration of any pollutant (generally NO_x, CO, POC, or NH₃) corrected to a standard stack gas oxygen concentration. For emission points P-1 (combined exhaust of S-1 Gas Turbine and S-2 HRSG duct burners) and P-2 (combined exhaust of S-3 Gas Turbine and S-4 HRSG duct burners), the standard stack gas oxygen concentration is 15% O₂ by volume on a dry basis.

Commissioning Activities: Deleted - Commissioning period completed

Commissioning Period: Deleted - Commissioning period completed

CEC CPM: California Energy Commission Compliance Program Manager

District: Bay Area Air Quality Management District

In addition to any applicable requirements, the Owner/Operator shall comply with the following conditions for the Gas Turbines (S-1 & S-3), the Heat Recovery Steam Generators (HRSGs; S-2 & S-4), A-1 & A-3 (SCR Systems) and A2 & A4 (Oxidation Catalysts):

VI. PERMIT CONDITIONS

1. Deleted - Commissioning period completed
2. Deleted - Commissioning period completed
3. Deleted - Commissioning period completed
4. Deleted - Commissioning period completed
5. Deleted - Commissioning period completed
6. Deleted - Commissioning period completed
7. Deleted - Commissioning period completed
8. Deleted - Commissioning period completed
9. Deleted - Commissioning period completed
10. Deleted - Commissioning period completed
11. Deleted - Commissioning period completed
12. Deleted - Commissioning period completed
13. The Owner/Operator shall fire S-1, S-2, S-3 and S-4 exclusively with natural gas. [Basis: BACT for SO₂ and PM₁₀]
14. The Owner/Operator shall not operate the units such that the combined heat input rate to each power train consisting of a Gas Turbine and its associated HRSG (S-1 & S-2 and S-3 & S-4) exceeds 610.6 MM BTU (HHV) per hour, averaged over any rolling 3-hour period. [Basis: BACT and Cumulative Increase]
15. The Owner/Operator shall not operate the units such that the combined heat input rate to each power train consisting of a Gas Turbine and its associated HRSG (S-1 & S-2 and S-3 & S-4) exceeds 13,559.2 MM BTU (HHV) per calendar day. [Basis: BACT and Cumulative Increase]
16. The Owner/Operator shall not operate the units such that the combined cumulative heat input rate for S-1, S-2, S-3 and S-4 exceeds 8,682,544 MM BTU (HHV) per year. [Basis: Offsets and Cumulative Increase]

VI. PERMIT CONDITIONS

17. The Owner/Operator shall not fire S-2 or S-4 unless its associated S-1 or S-3, respectively, is in operation. [Basis: BACT for NO_x]
18. The Owner/Operator shall ensure that the S-1 and S-2 are abated by the properly operated and properly maintained A-1 whenever fuel is combusted at those sources and the A-1 SCR catalyst bed has reached minimum operating temperature. [Basis: BACT for NO_x]
19. The Owner/Operator shall ensure that the S-3 and S-4 are abated by the properly operated and properly maintained A-3 whenever fuel is combusted at those sources and the A-3 SCR catalyst bed has reached minimum operating temperature. [Basis: BACT for NO_x]
20. The Owner/Operator shall ensure that S-1, S-2, S-3 and S-4 comply with requirements (a) through (i) under all operating scenarios, including duct burner firing mode and power augmentation mode. Requirements (a) through (i) do not apply during start-up or shutdown mode. [Basis: BACT and Regulation 2, Rule 5]
 - (a) NO_x emission concentration at emission points P-1 and P-2 each shall not exceed 2.0 ppmv, on a dry basis, corrected to 15% O₂, averaged over any 1-hour period. [Basis: BACT for NO_x]
 - (b) NO_x mass emissions (calculated as NO₂) at P-1 (the combined exhaust point for S-1 and S-2 after abatement by A-1) shall not exceed 4.49 pounds per hour. Nitrogen oxide mass emissions (calculated as NO₂) at P-2 (the combined exhaust point for S-3 and S-4 after abatement by A-3) shall not exceed 4.49 pounds per hour. [Basis: BACT for NO_x]
 - (c) CO emission concentration at P-1 and P-2 each shall not exceed 4.0 ppmv, on a dry basis, corrected to 15% O₂, averaged over any rolling 3-hour period. [Basis: BACT for CO]
 - (d) CO mass emissions at P-1 and P-2 each shall not exceed 5.47 pounds per hour, averaged over any rolling 3-hour period. [Basis: BACT for CO]
 - * (e) NH₃ emission concentrations at P-1 and P-2 each shall not exceed 10 ppmv, on a dry basis, corrected to 15% O₂, averaged over any rolling 3-hour period. This NH₃ emission concentration shall be verified by the continuous recording of the NH₃ injection rate to A-1 and A-3. The correlation between the gas turbine and HRSG heat input rates, A-1 and A-3 NH₃ injection rates, and corresponding NH₃ emission concentration at emission points P-1 and P-2 shall be determined in accordance with Part 30. [Basis: TRMP for NH₃]
 - (f) POC mass emissions (as CH₄) at P-1 and P-2 each shall not exceed 2.0 ppmv, on a dry basis, corrected to 15% O₂, averaged over any rolling 3-hour period. [Basis: BACT for POC]

VI. PERMIT CONDITIONS

(g) POC mass emissions (as CH₄) at P-1 and P-2 each shall not exceed 1.56 pounds per hour or 0.00255 lb/MM BTU of natural gas fired. [Basis: BACT for POC]

(h) SO₂ mass emissions at P-1 and P-2 each shall not exceed 0.41 pounds per hour or 0.000676 lb/MM BTU of natural gas fired. [Basis: BACT for SO₂]

(i) PM₁₀ mass emissions at P-1 and P-2 each shall not exceed 3.0 pounds per hour when the HRSG duct burners are not in operation. PM₁₀ mass emissions at P-1 and P-2 each shall not exceed 4.3 pounds per hour when HRSG duct burners are in operation. [Basis: BACT for PM₁₀]

(j) Compliance with the hourly NO_x emission limitations specified in Part 20(a) and 20(b), at both P1 and P2, shall not be required during short-term excursions, limited to a cumulative total of 160 hours per rolling 12 month period. Short-term excursions are defined as 15-minute periods designated by the Owner/Operator that are the direct result of transient load conditions, not to exceed four consecutive 15-minute periods, when the 15-minute average NO_x concentration exceeds 2.0 ppmv, dry @ 15% O₂. Examples of transient load conditions include, but are not limited to the following:

1. Initiation/shutdown of combustion turbine inlet air cooling
2. Initiation/shutdown of combustion turbine water mist or steam injection for power augmentation
3. Rapid combustion turbine load changes
4. Initiation/shutdown of HRSG duct burners
5. Provision of Ancillary Services and Automatic Generation Control at the direction of the California Independent System Operator (Cal-ISO)

The maximum 1-hour average NO_x concentration for short-term excursions at P-1 and P-2 each shall not exceed 5 ppmv, dry @ 15% O₂ or 11.2 lb/hr (2.80 lb per 15 minute period). All emissions during short-term excursions shall be included in all calculations of hourly, daily and annual mass emission rates as required by this permit.

21. The Owner/Operator shall ensure that the regulated air pollutant mass emission rates from S-1 or S-3 during startup or shutdown mode does not exceed the respective limits established below.

Startup (lb/startup)

Nitrogen Oxides (as NO ₂)	41
Carbon Monoxide (CO)	35
POC (as CH ₄)	2
Particulate Matter (PM ₁₀)	3

VI. PERMIT CONDITIONS

Shutdown (lb/shutdown)

Nitrogen Oxides (as NO ₂)	8
Carbon Monoxide (CO)	10
POC (as CH ₄)	1
Particulate Matter (PM ₁₀)	3

22. The Owner/Operator shall not allow total combined emissions from S-1, S-2, S-3 and S-4 including emissions generated during startup mode, shutdown mode and transient excursions to exceed the following limits during any calendar day:

- (a) 358.9 pounds of NO_x (as NO₂) per day
- (b) 377.9 pounds of CO per day
- (c) 71.9 pounds of POC (as CH₄) per day
- (d) 197.8 pounds of PM₁₀ per day
- (e) 18.2 pounds of SO₂ per day

23. The Owner/Operator shall not allow cumulative combined emissions from S-1, S-2, S-3 and S-4 including emissions generated during startup mode, shutdown mode and transient excursions to exceed the following limits during any consecutive twelve-month period:

- (a) 43.3 tons of NO_x (as NO₂) per year
 - (b) 48.4 tons of CO per year
 - (c) 11.2 tons of POC (as CH₄) per year
 - (d) 28.1 tons of PM₁₀ per year
 - (e) 2.93 tons of SO₂ per year
- [Basis: Offsets and Cumulative Increase]

24. Deleted - Redundant requirement to Part 15

25. Deleted - Redundant requirement to Part 16

*26. The Owner/Operator shall not allow the maximum projected annual toxic air contaminant emissions (per Parts 29 and 33) from the Gas Turbines and HRSGs (S-1 & S-2 and S-3 & S-4) combined to exceed the following limits:

Acetaldehyde	1,155 pounds per year
Formaldehyde	2,706 pounds per year
Benzene	112 pounds per year
Specified PAHs	0.71 pound per year

VI. PERMIT CONDITIONS

unless the following requirement is satisfied:

The Owner/Operator shall perform a health risk assessment to determine the total facility risk using the emission rates determined by District approved source testing and the most current Bay Area Air Quality Management District approved procedures and unit risk factors in effect at the time of the analysis. This risk analysis shall be submitted to the District and the CEC CPM within 60 days of the source test date. The Owner/Operator may request that the District and the CEC CPM revise the carcinogenic compound emission limits specified above. If the Owner/Operator demonstrates to the satisfaction of the Air Pollution Control Officer (APCO) that these revised emission limits will not result in a significant cancer risk, the District and the CEC CPM may, at their discretion, adjust the carcinogenic compound emission limits listed above. [Basis: Regulation 2, Rule 5]

27. The Owner/Operator shall demonstrate compliance with Parts 14 through 17, 20(a) through 20(d), 21, 22(a), 22(b), 23(a), and 23(b) by using properly operated and maintained continuous monitors (during all hours of operation including startup and shutdown mode) for all of the following parameters:

- (a) Firing Hours and Fuel Flow Rates for each of the following sources: S-1 & S-2 combined, S-3 & S-4 combined.
- (b) Oxygen (O₂) concentration, nitrogen oxides (NO_x) concentration, and carbon monoxide (CO) concentration at each of the following exhaust points: P-1 and P-2.
- (c) Ammonia injection rate at A-1 and A-3 SCR Systems
- (d) Any transient load conditions recorded in Part 27(a) above and as described in 20(j) shall be fully characterized and recorded on a quarter hour (15-minute period) basis.

The Owner/Operator shall record all of the above parameters every 15 minutes (excluding normal calibration periods) and shall summarize all of the above parameters for each clock hour. For each calendar day, the Owner/Operator shall calculate and record the total firing hours, the average hourly fuel flow rates, and pollutant emission concentrations.

The Owner/Operator shall use the parameters measured above and District-approved calculation methods to calculate the following parameters:

- (e) Heat Input Rate for each of the following sources: S-1 & S-2 combined and S-3 & S-4 combined.
- (f) Corrected NO_x concentration, NO_x mass emission rate (as NO₂), corrected CO concentration, and CO mass emission rate at each of the following exhaust points: P-1 and P-2.

For each source, source grouping, or exhaust point, the Owner/Operator shall record the parameters specified in Parts 27(e) and 27(f) at least once every 15 minutes (excluding

VI. PERMIT CONDITIONS

normal calibration periods). As specified below, the Owner/Operator shall calculate and record the following data:

- (g) Total Heat Input Rate for every clock hour and the average hourly Heat Input Rate for every rolling 3-hour period.
- (h) On an hourly basis, the cumulative total Heat Input Rate for each calendar day for the following: each Gas Turbine and associated HRSG combined and all four sources (S-1, S-2, S-3, and S-4) combined.
- (i) The average NO_x mass emission rate (as NO₂) and corrected NO_x emission concentration for every clock hour and for every quarter hour (15-minute) period.
- (j) The average CO mass emission rate and corrected CO emission concentration for every clock hour and for every rolling 3-hour period.
- (k) On an hourly basis, the cumulative total NO_x mass emissions (as NO₂) and the cumulative total CO mass emissions, for each calendar day for each Gas Turbine and associated HRSG combined, and all four sources (S-1, S-2, S-3, and S-4) combined.
- (l) For each calendar day, the average hourly Heat Input Rates, Corrected NO_x emission concentration, NO_x mass emission rate (as NO₂), corrected CO emission concentration, and CO mass emission rate for each Gas Turbine and associated HRSG combined
- (m) On a daily basis, the cumulative total NO_x mass emissions (as NO₂) and cumulative total CO mass emissions, for the previous consecutive twelve-month period for all four sources (S-1, S-2, S-3, and S-4) combined. [Basis: Regulation 1-520.1, 9-9-501, BACT, NSPS, Cumulative Increase]

28. To demonstrate compliance with Parts 20(f), 20(g), 20(h), 20(i), 21, 22(c) through 22(e), and 23(c) through 23(e), the Owner/Operator shall calculate and record on a daily basis, the POC mass emissions, PM₁₀ mass emissions (including condensable particulate matter), and SO₂ mass emissions from each power train. The Owner/Operator shall use the actual Heat Input Rates calculated pursuant to Part 27, actual Start-up Mode Times, actual Shutdown Mode Times, and CEC and District-approved emission factors to calculate these emissions. The calculated emissions shall be presented as follows:

- (a) For each calendar day, POC, PM₁₀, and SO₂ emissions shall be summarized for: each power train (Gas Turbine and its respective HRSG combined) and all four sources (S-1, S-2, S-3, and S-4) combined.
- (b) On a daily basis, the cumulative total POC, PM₁₀, and SO₂ mass emissions, for each year for all four sources (S-1, S-2, S-3, and S-4) combined.
[Basis: Offsets, Cumulative Increase]

*29. To demonstrate compliance with Part 26, the Owner/Operator shall calculate and record on an annual basis the maximum projected annual emissions of: acetaldehyde, formaldehyde, benzene, and Specified PAHs. Maximum projected annual emissions shall be calculated using the maximum Heat Input Rate of 8,682,544 MMBTU/year and the highest emission

VI. PERMIT CONDITIONS

factor (pounds of pollutant per MMBTU of heat input) determined by any District approved source test of the S-1 and S-3 Gas Turbines and/or S-2 and S-4 Heat Recovery Steam Generators. If the highest emission factor for a given pollutant occurs during minimum-load turbine operation, a reduced annual heat input rate may be utilized to calculate the maximum projected annual emissions to reflect the reduced heat input rates during gas turbine start-up and minimum-load operation. The reduced annual heat input rate shall be subject to District review and approval. [Basis: Regulation 2, Rule 5]

- *30. Within 60 days of start-up, the Owner/Operator shall conduct District-approved source tests on exhaust point P-1 and P-2 to determine the corrected NH₃ emission concentration to determine compliance with Part 20(e). The source test shall determine the correlation between the heat input rates of each gas turbine (S-1 and S-3) and associated HRSG (S-2 and S-4), A-1, and A-3 SCR System ammonia injection rates, and the corresponding NH₃ emission concentrations at emission point P-1 and P-2. The source tests shall be conducted over the expected operating range of the turbine and HRSG (including, but not limited to, minimum and full load, and SPRINT power augmentation mode) to establish the range of ammonia injection rates necessary to achieve required NO_x emission reductions while maintaining ammonia slip levels. Source testing shall be repeated on an annual basis thereafter. Ongoing compliance with Part 20(e) shall be demonstrated through calculations of corrected ammonia concentrations based upon the source test correlations and continuous records of ammonia injection rate. Source test results shall be submitted to the District and the CEC CPM within 90 days of conducting the tests. [Basis: Regulation 2, Rule 5]
31. Within 90 days of start-up and on an annual basis thereafter, the Owner/Operator shall conduct a District-approved source test on exhaust points P-1 and P-2 while each Gas Turbine and associated Heat Recovery Steam Generator are operating at maximum load (including SPRINT power augmentation mode) to determine compliance with Parts 20(a), (b), (c), (d), (f), (g), (h), and (i) while each Gas Turbine and associated Heat Recovery Steam Generator are operating at minimum load to determine compliance with Parts 20(c) and (d), and to verify the accuracy of the continuous emission monitors required in Part 27. The Owner/Operator shall test for (at a minimum): water content, stack gas flow rate, oxygen concentration, precursor organic compound concentration and mass emissions, nitrogen oxide concentration and mass emissions (as NO₂), carbon monoxide concentration and mass emissions, sulfur dioxide concentration and mass emissions, methane, ethane, and PM₁₀ emissions including condensable particulate matter. Source test results shall be submitted to the District and the CEC CPM within 60 days of conducting the tests. [Basis: BACT]
32. The Owner/Operator shall obtain approval for all source test procedures from the District's Source Test Section and the CEC CPM prior to conducting any tests. The Owner/Operator shall comply with all applicable testing requirements for continuous emission monitors as specified in Volume V of the District's Manual of Procedures. The Owner/Operator shall notify the District's Source Test Section and the CEC CPM in writing of the source test

VI. PERMIT CONDITIONS

protocols and projected test dates at least 7 days prior to the testing date(s). As indicated in Part 31 above, the Owner/Operator shall measure and include the contribution of condensable PM (back half) to the total PM10 emissions. However, the Owner/Operator may propose alternative measuring techniques to measure condensable PM such as the use of a dilution tunnel or other appropriate method used to capture semi-volatile organic compounds. Source test results shall be submitted to the District and the CEC CPM within 60 days of conducting the tests. [Basis: BACT]

- *33. Within 90 days of start-up, the Owner/Operator shall conduct a District-approved source tests on exhaust point P-1 and P-2 while the Gas Turbine and associated Heat Recovery Steam Generator are operating at maximum allowable operating rates to demonstrate compliance with Part 26. [Basis: TRMP]
- 34. The Owner/Operator shall submit all reports (including, but not limited to monthly CEM reports, monitor breakdown reports, emission excess reports, equipment breakdown reports, etc.) as required by District Rules or Regulations and in accordance with all procedures and time limits specified in the Rule, Regulation, Manual of Procedures, or Enforcement Division Policies & Procedures Manual. [Basis: Regulation 2-6-502]
- 35. The Owner/Operator shall maintain all records and reports on site for a minimum of 5 years. These records shall include but are not limited to: continuous monitoring records (firing hours, fuel flows, emission rates, monitor excesses, breakdowns, etc.), source test and analytical records, natural gas sulfur content records, emission calculation records, records of plant upsets and related incidents. The Owner/Operator shall make all records and reports available to District and the CEC CPM staff upon request. [Basis: Regulation 2-6-501]
- 36. The Owner/Operator shall notify the District and the CEC CPM of any violations of these permit conditions. Notification shall be submitted in a timely manner, in accordance with all applicable District Rules, Regulations, and the Manual of Procedures. Notwithstanding the notification and reporting requirements given in any District Rule, Regulation, or the Manual of Procedures, the Owner/Operator shall submit written notification (facsimile is acceptable) to the Enforcement Division within 96 hours of the violation of any permit condition. [Basis: Regulation 2-1-403]
- *37. The Owner/Operator shall ensure that the stack height of emission points P-1 and P-2 is each at least 95 feet above grade level at the stack base. [Basis: Regulation 2, Rule 5]
- 38. Deleted Authority to Construct Condition
- 39. Deleted Authority to Construct Condition
- 40. Deleted Authority to Construct Condition

VI. PERMIT CONDITIONS

41. Deleted Authority to Construct Condition

42. Deleted Authority to Construct Condition

43. Deleted Authority to Construct Condition

44. The Owner/Operator shall comply with the continuous emission monitoring requirements of 40 CFR Part 75. [Basis: Regulation 2, Rule 7]

45. The Owner/Operator shall maintain records specifying that the maximum total sulfur content of the natural gas combusted at S-1, S-2, S-3 and S-4 is 20 grains/100 scf or less. These records shall be in the form of a current valid purchase contract, tariff sheet, or transportation contract or equivalent as deemed by the BAAQMD. [Basis: 40 CFR 60.334(h)(3)(i)]

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
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NO _x	BAAQMD 9-3-303	N		125 ppm	BAAQMD 1-520.1	C	CEM
NO _x	BAAQMD 9-9-301.2	N		0.15 lb/MW-hr or 5 ppmv	BAAQMD 9-9-501	C	CEM
NO _x	SIP 9-9-301.3	Y		9 ppmv @ 15% O ₂ , dry	BAAQMD 9-9-501	C	CEM
NO _x	NSPS, 40 CFR 60.332 (a)(1)	Y		75 ppmv, @ 15% O ₂ , dry 4-hr average	40 CFR 60.334(c) and BAAQMD Condition 24252, Part 27b	C	CEM
NO _x		Y		None	40 CFR 75.10	C	CEM

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NO _x	BAAQMD condition #24252, part 20b	Y		4.49 lb/hr, for each turbine and HRSG combined, except during turbine startup and shutdown	BAAQMD condition #24252, part 27b	C	CEM
NO _x	BAAQMD condition #24252, part 20b	Y		4.49 lb/hr, for each turbine and HRSG combined, except during turbine startup and shutdown	BAAQMD condition #24252, part 31	P/A	Source test at maximum load
NO _x	BAAQMD condition #24252, part 20a	Y		2.0 ppmv, @ 15% O ₂ , dry, for each turbine and HRSG combined, 1-hr average except during turbine startup and shutdown	BAAQMD condition #24252, part 27b	C	CEM
NO _x	BAAQMD condition #24252, part 20a	Y		2.0 ppmv, @ 15% O ₂ , dry, for each turbine and HRSG combined, 1-hr average except during turbine startup and shutdown	BAAQMD condition #24252, part 31	P/A	Source test at maximum load
NO _x	BAAQMD condition #24252, part 21	Y		41 lb/turbine during start-up	BAAQMD condition #24252, part 27	P/D	Records, calculations
NO _x	BAAQMD condition #24252, part 21	Y		8 lb/turbine during shutdown	BAAQMD condition #24252, part 27	P/D	Records, calculations
NO _x	BAAQMD condition #24252, part 22a	Y		358.9 lb/day for turbines and HRSGs combined	BAAQMD condition #24252, part 27	C	CEM

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
CO	BAAQMD condition #24252, part 23a	Y		43.3 ton/yr for turbines and HRSGs combined	BAAQMD condition #24252, part 27	C	CEM
CO	BAAQMD condition #24252, part 20d	Y		5.47 lb/hr, for each turbine and HRSG combined, except during turbine startup and shutdown	BAAQMD condition #24252, part 27	C	CEM
CO	BAAQMD condition #24252, part 20d	Y		5.47 lb/hr, for each turbine and HRSG combined, except during turbine startup and shutdown	BAAQMD condition #24252, part 31	P/A	Source test at maximum and minimum load
CO	BAAQMD condition #24252, part 20c	Y		4 ppmv, @ 15% O ₂ , dry, for each turbine and HRSG combined, 3-hr average except during turbine startup and shutdown	BAAQMD condition #24252, part 27	C	CEM
CO	BAAQMD condition #24252, part 20c	Y		4 ppmv, @ 15% O ₂ , dry, for each turbine and HRSG combined, 3-hr average except during turbine startup and shutdown	BAAQMD condition #24252, part 31	P/A	Source test at maximum and minimum load
CO	BAAQMD condition #24252, part 21	Y		35 lb/turbine during start-up	BAAQMD condition #24252, part 27	P/D	Records, calculations
CO	BAAQMD condition #24252, part 21	Y		10 lb/turbine during shutdown	BAAQMD condition #24252, part 27	P/D	Records, calculations

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
CO	BAAQMD condition #24252, part 22b	Y		377.9 lb/day for turbines and HRSGs combined	BAAQMD condition #24252, part 27	C	CEM
CO	BAAQMD condition #24252, part 23b	Y		48.4 ton/yr for turbines and HRSGs combined	BAAQMD condition #24252, part 27	C	CEM
CO ₂		Y		None	40 CFR 75.10	C	fuel flow monitor and CO ₂ calculation
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	
SO ₂	BAAQMD 9-1-302	Y		300 ppm (dry)		N	
SO ₂	NSPS 40 CFR 60.333	Y		0.015% (vol) @ 15% O ₂ (dry) or total sulfur content of fuel less than or equal to 0.8% sulfur by weight (8,000 ppmw)	NSPS 40 CFR 60.334(h)(3) (ii) and BAAQMD Condition 24252, Part 45	P/M	Monthly fuel sulfur analysis
SO ₂		Y		None	40 CFR 75.11, 40 CFR 75, Appendix D, part 2.3		Fuel measurements, calculations

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
SO ₂	BAAQMD condition #24252, part 20h	Y		0.41 lb/hr for each turbine and HRSG power train	BAAQMD condition #24252, part 31	P/A	Source test at maximum and minimum load
SO ₂	BAAQMD condition #24252, part 20h	Y		0.000676 lb/MM BTU of natural gas fired for each turbine and HRSG power train	BAAQMD condition #24252, part 31	P/A	Source test at maximum and minimum load
SO ₂	BAAQMD condition #24252, part 22e	Y		18.2 lb/day for turbines and HRSGs combined	BAAQMD condition #24252, part 28	P/D	Records, calculations
SO ₂	BAAQMD condition #24252, part 23e	Y		2.93 ton/yr for turbines and HRSGs combined	BAAQMD condition #24252, part 28	P/D	Records, calculations
Opacity	BAAQMD 6-1-301	N		> Ringelmann No. 1 for no more than 3 minutes in any hour		N	
Opacity	SIP 6-301	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour		N	
FP	BAAQMD 6-1-310	N		0.15 grain/dscf		N	
FP	SIP 6-310	Y		0.15 grain/dscf		N	
FP	BAAQMD 6-1-310.3	N		0.15 grain/dscf @ 6% O ₂		N	
FP	SIP 6-310.3	Y		0.15 grain/dscf @ 6% O ₂		N	

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
PM ₁₀	BAAQMD condition #24252, part 20i	Y		3.0 lb/hr, for each turbine when HRSG is not in operation	BAAQMD condition #24252, part 28	P/D	Records, calculations
PM ₁₀	BAAQMD condition #24252, part 20i	Y		4.3 lb/hr, for each turbine and HRSG combined	BAAQMD condition #24252, part 28	P/D	Records, calculations
PM ₁₀	BAAQMD condition #24252, part 21	Y		3 lb/turbine during start-up	BAAQMD condition #24252, part 27	P/D	Records, calculations
PM ₁₀	BAAQMD condition #24252, part 21	Y		3 lb/turbine during shutdown	BAAQMD condition #24252, part 27	P/D	Records, calculations
PM ₁₀	BAAQMD condition #24252, part 22d	Y		197.8 lb/day for turbines and HRSGs combined	BAAQMD condition #24252, part 28	P/D	Records, calculations
PM ₁₀	BAAQMD condition #24252, part 23d	Y		28.1 ton/yr for turbines and HRSGs combined	BAAQMD condition #24252, part 28	P/D	Records, calculations
POC	BAAQMD condition #24252, part 20g	Y		1.56 lb/hr (as CH ₄) for each turbine and HRSG combined except during turbine startup and shutdown	BAAQMD condition #24252, part 31	P/A	Source test at maximum and minimum load

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

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 #24252, part 20g	Y		0.00255 lb/MM BTU of natural gas fired (as CH4) for each turbine and HRSG combined except during turbine startup and shutdown	BAAQMD condition #24252, part 31	P/A	Source test at maximum and minimum load
POC	BAAQMD condition #24252, part 21	Y		2 lb/turbine during start-up (as CH4)	BAAQMD condition #24252, part 27	P/D	Records, calculations
POC	BAAQMD condition #24252, part 21	Y		1 lb/turbine during shutdown (as CH4)	BAAQMD condition #24252, part 27	P/D	Records, calculations
POC	BAAQMD condition #24252, part 22c	Y		71.9 lb/day (as CH4) for turbines and HRSGs combined	BAAQMD condition #24252, part 28	P/D	Records, calculations
POC	BAAQMD condition #24252, part 23c	Y		11.2 ton/yr (as CH4) for turbines and HRSGs combined	BAAQMD condition #24252, part 28	P/D	Records, calculations
NH ₃	BAAQMD condition #24252, Part 20e	N		10 ppmv, @ 15% O ₂ , dry, averaged over 3 hours for each turbine and HRSG combined except during turbine startup or shutdown	BAAQMD condition #24252, part 30	P	Source Testing

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NH ₃	BAAQMD condition #24252, Part 20e	N		10 ppmv, @ 15% O ₂ , dry, averaged over 3 hours for each turbine and HRSG combined except during turbine startup or shutdown	BAAQMD condition #24252, part 20e	C	Ammonia injection rate monitor
Formaldehyde	BAAQMD condition #24252, part 26	N		2706 lb/yr for turbines and HRSGs combined	BAAQMD condition #24252, part 29	P/D	Records, calculations
Benzene	BAAQMD condition #24252, part 26	N		112 lb/yr for turbines and HRSGs combined	BAAQMD condition #24252, part 29	P/D	Records, calculations
Specified PAH's	BAAQMD condition #24252, Part 26	N		0.71 lb/yr for turbines and HRSGs combined	BAAQMD condition #24252, part 29	P/D	Records, calculations
Heat input limit	BAAQMD condition #24252, part 14	Y		610.6 MM BTU/hr, 3-hr average for each Turbine and HRSG power train	BAAQMD condition #24252, part 27	C	Fuel meter, firing monitor, calculations
Heat Input Limit	BAAQMD condition #24252, part 15	Y		13,559.2 MM BTU/calendar day, for each Turbine and HRSG power train	BAAQMD condition #24252, part 27	C	fuel meter, firing monitor, calculations
	BAAQMD condition #24252, part 16	Y		8,682,544 MM BTU/yr for S-1, S-3, Turbines and S-2, S-4, HRSGs combined	BAAQMD condition #24252, part 27	C	fuel meter, firing monitor, calculations

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 GAS TURBINE #1
S-2 HRSG DUCT BURNER #1
S-3 GAS TURBINE #2
S-4 HRSG DUCT BURNER #2

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 #24252, part 30	Y		109,157 MM BTU/day, for turbines, HRSGs, and boiler combined	BAAQMD condition #24252, part 35a	C	Fuel meters
	BAAQMD condition #24252, part 31	Y		34,490,400 MM BTU/yr for turbines, HRSGs, and boiler combined	BAAQMD condition #24252, part 35a	C	Fuel meters
Steam turbine cold start-up or combustor tuning	BAAQMD condition #24252, part 24	Y		30 hours per year per turbine	BAAQMD condition #24252, part 55	P/H	records

Table VII - B
Applicable Limits and Compliance Monitoring Requirements
S-5 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 6-1-301	N		≥ Ringelmann No. 1 for no more than 3 minutes in any hour		N	
Opacity	SIP 6-301	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour	N	N	

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII - B
Applicable Limits and Compliance Monitoring Requirements
S-5 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
FP	BAAQMD 6-1-310	N		0.15 grain/dscf	N	N	
FP	SIP 6-310	Y		0.15 grain/dscf	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 6-304	Tube Cleaning	Manual of Procedures, Volume I, Evaluation of Visible Emissions
BAAQMD 6-310	Particulate Weight Limitation	Manual of Procedures, Volume IV, ST-15, Particulates Sampling
BAAQMD 9-1-302	General Emission Limitation	Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide, Continuous Sampling, or ST-19B, Total Sulfur Oxides Integrated Sample
BAAQMD 9-3-303	New or Modified Heat Transfer Operation Limits	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling
BAAQMD 9-7-301.1	Performance Standard, NO _x , 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 9-9-301.3	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
Subpart GG	Standards of Performance for Stationary Gas Turbines	
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

VIII. Test Methods

Table VIII
Test Methods

Applicable Requirement	Description of Requirement	Acceptable Test Methods
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

IX. PERMIT SHIELD

Not applicable

X. REVISION HISTORY

Not applicable

XI. 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

XI. Glossary

CEM

Continuous Emission Monitor: a monitoring device that provides a continuous direct measurement of some pollutant (e.g. NO_x concentration) in an exhaust stream.

CFP

Clean Fuels Project

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.

DAF

A "dissolved air flotation" unit is a process vessel where air bubbles injected at the bottom of the vessel are used to carry solids in the liquid into a froth on the liquid surface, where it is removed.

DWT

Dead Weight Ton

District

The Bay Area Air Quality Management District

DNF

Dissolved Nitrogen Flotation (See DAF)

dscf

Dry Standard Cubic Feet

dscm

Dry Standard Cubic Meter

XI. Glossary

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.

EFRT

An "external floating roof tank" minimizes VOC emissions with a roof with floats on the surface of the liquid, thus preventing the formation of a VOC-rich vapor space above the liquid surface as the level in the tank drops. If such a vapor space were allowed to form, it would be expelled when the tank was re-filled. On an EFRT, the floating roof is not enclosed by a second, fixed tank roof, and is thus described as an "external" roof.

EPA

The federal Environmental Protection Agency.

ETP

Effluent Treatment Plant

Excluded

Not subject to any District Regulations.

FCC

Fluid Catalytic Cracker

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.

FR

Federal Register

FRT

Floating Roof Tank (See EFRT and IFRT)

GDF

Gasoline Dispensing Facility

XI. Glossary

GLM

Ground Level Monitor

grain

1/7000 of a pound

Graphitic

Made of graphite.

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

H₂SO₄

Sulfuric Acid

Hg

Mercury

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.

IFRT

An "internal floating roof tank" minimizes VOC emissions with a roof with floats on the surface of the liquid, thus preventing the formation of a VOC-rich vapor space above the liquid surface as the level in the tank drops. If such a vapor space were allowed to form, it would be expelled when the tank was re-filled. On an IFRT, the floating roof is enclosed by a second, fixed tank roof, and thus is described as an "internal" roof.

ISOM

Isomerization plant

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.

XI. Glossary

Lighter

"Lightering" is a transfer operation during which liquid is pumped from an ocean-going tanker vessel to a smaller vessel such as a barge. Like any liquid transfer operation, lightering of organic liquids produces organic vapor emissions.

Long ton

2200 pounds

Major Facility

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

MDEA

Methyl Diethanolamine

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.

Mo Gas

Motor gasoline

MOP

The District Manual of Procedures

MOSC

Mobil Oil Sludge Conversion (licensed technology)

MSDS

Material Safety Data Sheet

MTBE

methyl tertiary-butyl ether

NA

Not Applicable

NAAQS

National Ambient Air Quality Standard

XI. Glossary

NESHAP

National Emission Standard for Hazardous Air Pollutants as codified 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.

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

XI. Glossary

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.

Regulated Organic Liquid

"Regulated organic liquids" are those liquids which require permits, or which are subject to some regulation, when processed at a liquid-handling operation. For example, for refinery marine terminals, regulated organic liquids are defined as "organic liquids" in Regulation 8, Rule 44.

RFG

Refinery Fuel Gas

RMG

Refinery Make Gas

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

XI. Glossary

THC

Total Hydrocarbons (NMHC + Methane)

therm

100,000 British Thermal Units

Title V

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

TOC

Total Organic Compounds (NMOC + Methane, equivalent to THC)

TPH

Total Petroleum Hydrocarbons

TRMP

Toxic Risk Management Plan

TRS

"Total reduced sulfur" is a measure of the amount of sulfur-containing compounds in a gas stream, typically a fuel gas stream, including, but not limited to, hydrogen sulfide. The TRS content of a fuel gas determines the concentration of SO₂ that will be present in the combusted fuel gas, since sulfur compounds are converted to SO₂ by the combustion process.

TSP

Total Suspended Particulate

TVP

True Vapor Pressure

VOC

Volatile Organic Compound

XI. Glossary

Units of Measure:

bbl	=	barrel of liquid (42 gallons)
bhp	=	brake-horsepower
btu	=	British Thermal Unit
C	=	degrees Celcius
F	=	degrees Fahrenheit
f ³	=	cubic feet
g	=	gram
gal	=	gallon
gpm	=	gallons per minute
gr	=	grain
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)
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

XII. TITLE IV ACID RAIN PERMIT

Effective April 12, 2013 through April 11 , 2018

ISSUED TO:

Donald Von Raesfeld Power Plant
1500 Warburton Avenue
Santa Clara, CA 95050

PLANT SITE LOCATION:

850 Duane Avenue
Santa Clara, CA 95050

ISSUED BY:

Signed by Jeff McKay for Jack P. Broadbent
Jack P. Broadbent Executive Officer/
Air Pollution Control Officer

April 12, 2013
Date

Type of Facility: Power Plant
Primary SIC: 4913
Product: Electricity

DESIGNATED REPRESENTATIVE:

Name: John Roukema
Title: Director of Silicon Valley Power
Phone: 408-261-5490

ALTERNATE DESIGNATED REPRESENTATIVE:

Name: Damon Beck
Title: Compliance Manager - Generation
Phone: 408-615-6555

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	2013	2014	2015	2016	2017
	SO₂ allowances under Table 2 of 40 CFR Part 73	None	None	None	None	None
S-1 Gas Turbine #1	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.				

ACID RAIN PERMIT CONTENTS

	Year	2013	2014	2015	2016	2017
	SO ₂ allowances under Table 2 of 40 CFR Part 73	None	None	None	None	None
S-2 HRSG Duct Burner #1	NOx Limit	This unit is not subject to the NOx requirements from 40 CFR Part 76 as this unit is not capable of firing on coal.				

	Year	2013	2014	2015	2016	2017
	SO ₂ allowances under Table 2 of 40 CFR Part 73	None	None	None	None	None
S-3 Gas Turbine #2	NOx Limit	This unit is not subject to the NOx requirements from 40 CFR Part 76 as this unit is not capable of firing on coal.				

	Year	2013	2014	2015	2016	2017
	SO ₂ allowances under Table 2 of 40 CFR Part 73	None	None	None	None	None
S-2 HRSG Duct Burner #2	NOx Limit	This unit is not subject to the NOx requirements from 40 CFR Part 76 as this unit is not capable of firing on coal.				

3) COMMENTS, NOTES AND JUSTIFICATIONS

None

4) PERMIT APPLICATION

Attached