

# Bay Area Air Quality Management District

375 Beale Street, Suite 600

San Francisco, CA 94106

(415) 771-6000

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**Final**

## MAJOR FACILITY REVIEW PERMIT

**Issued To:**

**University of California, Berkeley**

**Facility #A0059**

**Facility Address:**

University of California, Berkeley Campus

Berkeley, CA 94720

**Mailing Address:**

317 University Hall #1150

Berkeley, CA 94720

**Responsible Official**

Randy Howard Katz

Vice Chancellor of Research

510-642-7540

**Facility Contact**

Bernadette Santos

Environmental Protection Specialist

510-642-3073

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**Type of Facility:** University

**Primary SIC:** 8221

**Product:** Education

**BAAQMD Engineering Division Contact:**

Alfonso Borja

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

Signed by Sanjeev Kamboj

Sanjeev Kamboj, Acting Director of Engineering

December 12, 2017

Date

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## I. STANDARD CONDITIONS

### A. Administrative Requirements

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

BAAQMD Regulation 1 - General Provisions and Definitions  
(as amended by the District Board on 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 3/4/09);

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 1/6/10);

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 17, 2012, and expires on April 16, 2017. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than October 16, 2017, and no earlier than April 16, 2016. **If a complete application for renewal has not been submitted in accordance with these deadlines, the facility may not operate after April 17, 2017.** If the permit renewal has not been issued by April 16, 2017, but a complete application for renewal has been submitted in accordance with the above deadlines, the existing permit will continue in force until the District takes final action on the renewal application. (Regulation 2-6-307, 404.2, 407, & 409.6; MOP Volume II, Part 3, §4.2)
2. The permit holder shall comply with all conditions of this permit. The permit consists of this document and all appendices. Any non-compliance with the terms and conditions of this permit will constitute a violation of the law and will be grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (Regulation 2-6-307; MOP Volume II, Part 3, §4.11)

## I. Standard Conditions

3. In the event any enforcement action is brought as a result of a violation of any term or condition of this permit, the fact that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with such term or condition shall not be a defense to such enforcement action. (MOP Volume II, Part 3, §4.11)
4. This permit may be modified, revoked, reopened and reissued, or terminated for cause. (Regulation 2-6-307, 409.8, 415; MOP Volume II, Part 3, §4.11)
5. The filing of a request by the facility for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated non-compliance does not stay the applicability of any permit condition. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
6. This permit does not convey any property rights of any sort, or any exclusive privilege. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
7. The permit holder shall supply within 30 days any information that the District requests in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. (Regulation 1-441, Regulation 2-6-409.4 & 501; MOP Volume II, Part 3, §4.11)
8. Any records required to be maintained pursuant to this permit that the permittee considers to contain proprietary or trade secret information shall be prominently designated as such. Copies of any such proprietary or trade secret information which are provided to the District shall be maintained by the District in a locked confidential file, provided, however, that requests from the public for the review of any such information shall be handled in accordance with the District's procedures set forth in Section 11 of the District's Administrative Code. (Regulation 2-6-419; MOP Volume II, Part 3, §4.11)
9. Proprietary or trade secret information provided to EPA will be subject to the requirements of 40 CFR Part 2, Subpart B - Public Information, Confidentiality of Business Information. (40 CFR Part 2)
10. The emissions inventory submitted with the application for this Major Facility Review Permit is an estimate of actual emissions 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)
12. The permit holder is responsible for compliance, and certification of compliance, with all conditions of the permit, regardless whether it acts through employees, agents, contractors, or subcontractors. (Regulation 2-6-307)

## **I. Standard Conditions**

### **C. Requirement to Pay Fees**

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

### **D. Inspection and Entry**

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

### **E. Records**

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

### **F. Monitoring Reports**

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

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

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

### **G. Compliance Certification**

Compliance certifications shall be submitted annually by the responsible official of this facility to the Director of Enforcement and Compliance at the Bay Area Air Quality Management District and to the Environmental Protection Agency. The certification period will be February 1st through January 31st of the following year. The certification shall be submitted by February 28<sup>th</sup> or 29<sup>th</sup> 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

## **I. Standard Conditions**

information required by the permit. The permit holder may satisfy this requirement through submittal of District-generated Compliance Certification forms. The certification should be directed to the District's Compliance and Enforcement Division at the address above, and a copy of the certification should be sent to the Environmental Protection Agency at the following address or email to r9.aeo@epa.gov:

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

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

### **H. Emergency Provisions**

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

### **I. Severability**

In the event that any provision of this permit is invalidated by a court or tribunal of competent jurisdiction, or by the Administrator of the EPA, all remaining portions of the permit shall remain in full force and effect. (Regulation 2-6-409.5; MOP Volume II, Part 3, §4.10)

### **J. Miscellaneous Conditions**

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

## II. EQUIPMENT LIST

**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
S200	Emergency Diesel Engine-Generator	General Motor	16VA19034	950 bhp, 1136 cubic inch
S201	Turbine, 23.5 MW (Natural gas, distillate oil)	General Electric	LM-2500	243 MMbtu/hr
S202	Duct Burner (Natural gas)	COEN	PowerPlus	84.0 MMbtu/hr

### 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 would not be violated under normal, routine operations, and that no additional periodic monitoring or reporting to demonstrate compliance is warranted. In cases where a requirement, in addition to being generally applicable, is also specifically applicable to one or more sources, the requirement and the source are also included in Section IV, Source-Specific Applicable Requirements, of this permit. This section also contains provisions that may apply to temporary sources.

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

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

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

**NOTE:**

There are differences between current BAAQMD rules and the versions of the rules in the SIP. . All sources must comply with both versions of a rule until US EPA has reviewed and approved (or disapproved) 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 (3/4/09)	N
BAAQMD 2-1-429	Federal Emissions Statement (12/21/04)	N
SIP Regulation 2-1-429	Federal Emissions Statement (4/3/95)	Y
SIP Regulation 2, Rule 1	General Requirements (1/26/99)	Y

Revision date: December 12, 2017



### III. Generally Applicable Requirements

**Table III**  
**Generally Applicable Requirements**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>
BAAQMD Regulation 4	Air Pollution Episode Plan (3/20/91)	N
SIP Regulation 4	Air Pollution Episode Plan (8/06/90)	Y
BAAQMD Regulation 5	Open Burning (7/9/08)	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	Odorous Substances (3/17/82)	N
BAAQMD Regulation 8, Rule 1	Organic Compounds - General Provisions (6/15/94)	Y
BAAQMD Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (7/20/05)	N
SIP Regulation 8, Rule 2	Organic Compounds – Miscellaneous Operations (1/2/04)	Y
BAAQMD Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (7/1/09)	N
SIP Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (11/21/01)	Y
BAAQMD Regulation 8, Rule 4	Organic Compounds – General Solvent and Surface Coating Operations (10/16/02)	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)	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	Y

### III. Generally Applicable Requirements

**Table III**  
**Generally Applicable Requirements**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>
	(9/2/81)	
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 Measures 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 (2/21/95)	
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, Permit Conditions, of this permit. The full language of SIP requirements is on EPA Region 9's website. The address is <http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions>. All other text may be found in the regulations themselves.

**Table IV-A**  
**Source-specific Applicable Requirements**  
**S200, Emergency Diesel Engine Generator**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<b>BAAQMD Regulation 6, Rule 1</b>	<b>Particulate Matter, General Requirements (12/5/07)</b>		
6-1-303	Ringelmann Number 2 Limitation	N	
6-1-303.1	Ringelmann Number 2 Limitation for engines	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation	N	
6-1-401	Appearance of Emissions	N	
<b>SIP Regulation 6</b>	<b>Particulate Matter and Visible Emissions (9/4/98)</b>		
6-303	Ringelmann Number 2 Limitation	Y	
6-303.1	Ringelmann Number 2 Limitation for engines	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	

Revision date: December 12, 2017

## IV. Source-Specific Applicable Requirements

**Table IV-A**  
**Source-specific Applicable Requirements**  
**S200, Emergency Diesel Engine Generator**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
6-401	Appearance of Emissions	Y	
<b>BAAQMD Regulation 9, Rule 1</b>	<b>Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)</b>		
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-304	Fuel Burning (Liquid and Solid Fuels)	Y	
<b>BAAQMD Regulation 9, Rule 8</b>	<b>Inorganic Gaseous Pollutants-Nitrogen Oxides and CO from Internal Combustion Engines (7/25/07)</b>		
9-8-330	Emergency Standby Engines, Hours of Operation	N	
9-8-330.1	Unlimited hours during emergency	N	
9-8-330.2	Reliability related hours of operation till 1/1/2012	N	
9-8-330.3	Reliability related hours of operation effective 1/1/2012	N	1/1/2012
9-8-530	Emergency standby engines, monitoring and recordkeeping	N	
<b>40 CFR Part 63 Subpart A</b>	<b>National Emissions Standards for Hazardous Air Pollutants for Source Categories, Subpart A – General Provisions</b>		
63.1	General Applicability of the General Provisions	Y	
63.2	Definitions	Y	
63.3	Units and Abbreviations	Y	
63.4	Prohibited activities and circumvention	Y	
63.6(a)	Compliance with standards and maintenance requirements - Applicability	Y	
63.6(c)	Compliance dates for existing sources	Y	
63.6(f)(2)	Methods for determining compliance	Y	
63.6(f)(3)	Finding of compliance	Y	
63.6(g)	Use of an alternative nonopacity emission standard	Y	
63.6(i)	Compliance extension procedures and criteria	Y	
63.6(j)	Presidential compliance exemption	Y	
63.10(a)	Recordkeeping and reporting requirements, applicability and general information	Y	
63.10(b)(1)	Record retention	Y	
63.10(f)	Administrator waiver of recordkeeping or reporting requirements	Y	
63.12	State authority and delegations	Y	
63.13	Addresses of air pollution control agencies and EPA Regional Offices	Y	
63.14	Incorporation by reference	Y	
63.15	Availability of information and confidentiality	Y	

#### IV. Source-Specific Applicable Requirements

**Table IV-A  
 Source-specific Applicable Requirements  
 S200, Emergency Diesel Engine Generator**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
<b>40 CFR Part 63 Subpart ZZZZ</b>	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)		
63.6585	Applicability	Y	
63.6585(a)	Applicable to stationary RICE	Y	
63.6585(c)	Applicable to area sources of Haps	Y	
63.6590(a)(1)(iii)	Affected source under stationary RICE located at an area source of HAP emissions, constructed before 6/12/06	Y	
63.6595(a)	Comply with applicable emission limitations and operating limitations by 5/3/13.	Y	5/3/13
63.6595(c)	Comply with applicable notification requirements in 63.6645 and 40 CFR Part 63, subpart A	Y	5/3/13
63.6603(a)	Comply with requirements of Table 2d, Part 4 (operating limitations of Tables 1b and 2b do not apply): <ol style="list-style-type: none"> <li>1. Change oil &amp; filter every 500 hours of operation or annually, whichever comes first. Oil analysis program may be used to extend period.</li> <li>2. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and</li> <li>3. Inspect all hoses and belts every 500 hours or annually, whichever comes first, and replace as necessary.</li> </ol>	Y	5/3/13
63.6605	General Requirements <ol style="list-style-type: none"> <li>1. Must be in compliance with applicable emission limitations and operating limitations</li> <li>2. Operate engine in a manner consistent with safety and good air pollution control practices to minimize emissions.</li> </ol>	Y	5/3/13
63.6625(e)(3)	Maintain RICE and abatement controls according to manufacturer's instructions or develop own plan.	Y	5/3/13
63.6625(f)	Installation of non-resettable hour meter requirement.	Y	5/3/13
63.6625(h)	Minimize idling, and minimize startup time to not exceed 30 minutes.	Y	5/3/13
63.6625(i)	Oil analysis program frequency and the parameters to be analyzed.	Y	5/3/13
63.6640(a)	Demonstrate compliance with the requirements of Table 2d according to work or management practices of Table 6, Part 9a.	Y	5/3/13
63.6640(b)	Report deviations from the requirements of Table 2d.	Y	5/3/13
63.6640(e)	Report non-compliance with the any applicable requirement of Table 8.	Y	5/3/13
63.6640(f)	Comply with requirements of (f)(1)(i) through (iii) below	Y	5/3/13

#### IV. Source-Specific Applicable Requirements

**Table IV-A**  
**Source-specific Applicable Requirements**  
**S200, Emergency Diesel Engine Generator**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
63.6640(f)(1)(i)	No time limit when engine is used for emergencies	Y	5/3/13
63.6640(f)(1)(ii)	Operation of engine for maintenance checks and readiness testing limited to 100 hours per year	Y	5/3/13
63.6640(f)(1)(iii)	Operation of engine for non-emergency and not associated with maintenance checks and readiness testing is limited to 50 hours, which is counted towards the 100 hours per year maximum specified in 63.6640(f)(1)(ii)	Y	5/3/13
63.6645(a)(5)	The notification requirements of 63.6645(a) do not apply to this engine.	Y	5/3/13
63.6655	Record Keeping 1. Record hours of operation 2. Install non-resettable hour meter	Y	5/3/13
63.6660	Instructions for Records	Y	5/3/13
63.6670	Implementation and enforcement of Subpart ZZZZ	Y	5/3/13
<b>CCR, Title 17, Section 93115</b>	<b>ATCM for Stationary Compression Ignition Engines</b>		
93115.5	Fuel Requirements	N	
93115.6	ATCM for Stationary CI Engines – Emergency Standby Diesel-Fueled CI Engine (>50 bhp) Operating Requirements and Emission Standards	N	
93115.6(b)	In-Use Emergency Standby Diesel-Fueled CI Engine (> 50 bhp) Operating Requirements and Emission Standards	N	
93115.6(b)(3)	Emission and operation standards	N	
93115.6(b)(3)(A)	Diesel PM Standard and Hours of Operation Limitations	N	
93115.6(b)(3)(A)(1)	General Requirements	N	
93115.6(b)(3)(A)(1)(a)	20 hours/yr for maintenance & testing	N	
93115.10(e)(1)	Monitoring Equipment	N	
93115.10(g)	Reporting Requirements for Emergency Standby Engines	N	
93115.11	ATCM for Stationary CI Engines – Compliance Schedule for Owners or Operators of Three or Fewer Engines (>50 bhp) Located within a District	N	

## IV. Source-Specific Applicable Requirements

**Table IV-A**  
**Source-specific Applicable Requirements**  
**S200, Emergency Diesel Engine Generator**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
93115.11(a)	Compliance by 1/1/06 for engines complying by reducing hours of operation	N	
93115.15	Severability	N	
<b>BAAQMD Condition # 22820</b>		Y	
Part 1	Operating hour limit for reliability related activities (basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.6(a)(4)(A)(1)(b))	Y	
Part 2	Allowable periods of operation (basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.6(b)(3)(A)(1)(a))	Y	
Part 3	Non-resettable totalizing meter requirement (basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.10(e)(1))	Y	
Part 4	Recordkeeping (basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.10(g), Regulation 2-6-501))	Y	
Part 5	School Proximity Requirement (basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.6(a)(1) or 93115.6(b)(2))	Y	

**Table IV-B**  
**Source-specific Applicable Requirements**  
**S201, Turbine**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<b>BAAQMD Regulation 1</b>	<b>General Provisions and Definitions (7/9/08)</b>		
1-107	Combination of Emissions	Y	
1-521	Monitoring May Be Required	Y	
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	N	

#### IV. Source-Specific Applicable Requirements

**Table IV-B**  
**Source-specific Applicable Requirements**  
**S201, Turbine**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
1-522.1	approval of plans and specifications	Y	
1-522.2	scheduling requirements	Y	
1-522.3	CEM performance testing	Y	
1-522.4	reporting of inoperative CEMs	Y	
1-522.5	CEM calibration requirements	Y	
1-522.6	CEM accuracy requirements	Y	
1-522.7	emission limit exceedance reporting requirements	N	
1-522.8	monitoring data submittal requirements	Y	
1-522.9	recordkeeping requirements	Y	
1-522.10	Monitors Required by Sections 1-521 or 2-1-403	Y	
1-602	Area and Continuous Emission Monitoring Requirements	N	
<b>SIP Regulation 1</b>	<b>General Provisions and Definitions (6/28/99)</b>		
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y	
1-522.7	Monitor excesses	Y	
<b>BAAQMD Regulation 2, Rule 1</b>	<b>Regulation 2, Rule 1 - Permits, General Requirements (11/19/08)</b>		
2-1-501	Monitors	Y	
<b>BAAQMD Regulation 6, Rule 1</b>	<b>Particulate Matter, General Requirements (12/5/07)</b>		
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	N	
6-1-401	Appearance of Emissions	N	
<b>SIP Regulation 6</b>	<b>Particulate Matter and Visible Emissions (9/4/98)</b>		
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	



## IV. Source-Specific Applicable Requirements

**Table IV-B**  
**Source-specific Applicable Requirements**  
**S201, Turbine**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
<b>BAAQMD Regulation 9, Rule 1</b>	<b>Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)</b>		
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-302	General Emission Limitations	Y	
9-1-304	Fuel Burning – Liquid Fuels	Y	
<b>BAAQMD Regulation 9, Rule 9</b>	<b>Inorganic Gaseous Pollutants – Nitrogen Oxides from Stationary Gas Turbines (12/6/06)</b>		
9-9-113	Exemption-Inspection/Maintenance	N	
9-9-114	Exemption-Start-up/Shutdown	N	
9-9-303	Emission Limits-Alternative Schedule	N	
9-9-303.2	January 1, 2000 standard	N	
9-9-401	Efficiency Certification	N	
9-9-403.5	Modification or installation status report submittal	N	
9-9-403.6	Compliance with emission standards	N	
9-9-501	Monitoring & Recordkeeping	N	
9-9-503	Initial Demonstration of Compliance	N	
9-9-503.1	Deadline for demonstration of compliance with 9-9-303.1	N	
9-9-503.3	Deadline for demonstration of compliance with 9-9-303.2	N	
<b>SIP Regulation 9, Rule 9</b>	<b>Inorganic Gaseous Pollutants – Nitrogen Oxides from Stationary Gas Turbines (12/15/97)</b>		
9-9-113	Exemption-Inspection/Maintenance	Y	
9-9-114	Exemption-Start-up/Shutdown	Y	
9-9-303	Emission Limits-Alternative Schedule	Y	
9-9-303.2	January 1, 2000 standard	Y	
9-9-401	Efficiency Certification	Y	
9-9-403.5	Modification or installation status report submittal	Y	
9-9-403.6	Compliance with emission standards	Y	
9-9-501	Monitoring & Recordkeeping	Y	
9-9-503	Initial Demonstration of Compliance	Y	
9-9-503.1	Deadline for demonstration of compliance with 9-9-303.1	Y	
9-9-503.3	Deadline for demonstration of compliance with 9-9-303.2	Y	

## IV. Source-Specific Applicable Requirements

**Table IV-B**  
**Source-specific Applicable Requirements**  
**S201, Turbine**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
<b>BAAQMD Manual of Procedures, Volume V</b>	<b>Continuous Emission Monitoring Policy and Procedures (1/20/82)</b>	Y	
<b>40 CFR 60</b>	<b>Standards of Performance for New Stationary Sources 12/23/71)</b>	Y	
Subpart A	General Provisions	Y	
60.4(a)	Reports to EPA	Y	
60.4(b)	Reports to EPA and District	Y	
60.7(a)	Written notification	Y	
60.7(b)	Records	Y	
60.8	Performance Tests	Y	
60.9	Availability of Information	Y	
60.11(a)	Compliance with standards and maintenance requirements	Y	
60.11(d)	Minimizing emissions	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	
60.19	General notification and reporting requirements	Y	
<b>Subpart GG</b>	<b>Standards of Performance for Stationary Gas Turbines (2/24/06)</b>	Y	
60.332	Standard for nitrogen oxides	Y	
60.332 (a)(1)	NOx limit	Y	
60.332(f)	Exemption when ice fog hazard	Y	
60.332(i)	Exemption on a case-by-case basis during mandatory water restrictions	Y	
60.333	Standard for Sulfur dioxide	Y	
60.333(a)	SO2 discharge limit	Y	
60.333(b)	Fuel sulfur content limit	Y	
60.334	Monitoring of operations	Y	
60.334(b)	CEM requirements	Y	
60.334(h)(1)	Sulfur content monitoring of fuel oil	Y	
60.334(h)(2)	Exemption from fuel nitrogen monitoring (natural gas)	Y	
60.334(h)(3)	Exemption from fuel sulfur monitoring (natural gas)	Y	
60.334(h)(3)(i)	Current, valid purchase contract, tariff sheet or transportation contract	Y	
60.334(h)(3)(ii)	Representative fuel sampling data	Y	
60.334(i)(1)	Sulfur and nitrogen content of fuel oil	Y	

## IV. Source-Specific Applicable Requirements

**Table IV-B**  
**Source-specific Applicable Requirements**  
**S201, Turbine**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
60.334(j)(1)(iii)	Reports of excess NOx emissions	Y	
60.334(j)(2)(ii)	Reports of Sulfur content	Y	
60.334(j)(3)	Reporting of ice fog	Y	
60.334(j)(5)	Deadline for excess emission reports	Y	
60.335	Test Methods and Procedures	Y	
60.335(a)	Performance tests as required by 40 CFR 60.8	Y	
60.335(b)	Performance tests for NOx	Y	
60.335(b)(1)	ISO correction	Y	
60.335(b)(2)	Testing at various loads	Y	
60.335(b)(3)	Optional measurement after duct burner	Y	
60.335(b)(10)	Minimum sample requirements	Y	
60.335(b)(11)	Option of fuel analysts	Y	
60.335(c)(1)	Optional method to adjust NOx emission level	Y	
<b>40 CFR 60 Appendix B</b>	<b>Performance Specifications</b>	Y	
Performance Specification 2	Specifications and test procedures for SO2 and NOx continuous emission monitoring systems in stationary sources	Y	
Performance Specification 3	Specifications and test procedures for O2 and CO2 continuous emission monitoring systems	Y	
<b>40 CFR 60 Appendix F</b>	<b>Quality Assurance Procedures</b>		
Procedure 1	Quality assurance requirements for gas continuous emission monitoring systems used for compliance determination	Y	
<b>40 CFR Part 72</b>	Permit Regulation (Title IV – Acid Rain Program)		
72.6(b)(4)	Exemption from Acid Rain Program	Y	
<b>BAAQMD Condition 366</b>		Y	
Part 1	Operation of Boilers at Facility A0059 [cumulative increase]	Y	
Part 2	Sulfur Limit [BACT]	Y	

#### IV. Source-Specific Applicable Requirements

**Table IV-B**  
**Source-specific Applicable Requirements**  
**S201, Turbine**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
Part 3	Sulfur Limit (natural gas curtailment) [BACT]	Y	
Part 4	NOx Limit (natural gas) [BAAQMD Regulation 9-9]	Y	
Part 4a	CO Limit [RACT]	Y	
Part 4b	PUC Quality Natural Gas [BAAQMD Regulation 2-1-403]	Y	
Part 5	NOx Concentration limit (natural gas) – combined S201 & 41 emissions [BAAQMD Regulation 1-107]	Y	
Part 5a	CO Concentration Limit – combined S201 & S202 emissions [BAAQMD Regulation 1-107]	Y	
Part 6	NOx Limit (fuel oil) [BAAQMD Regulation 9-9]	Y	
Part 7	NOx Concentration Limit (fuel oil) – combined S201 & 41 emissions [BACT]	Y	
Part 8	Steam injection [BAAQMD Regulation 2-1-403]	Y	
Part 10	NOx and CO Limit (lb/day) – combined S201 & 41 emissions [cumulative increase]	Y	
Part 11	SO2 Limit (lb/day & tpy) – combined S201 & 41 emissions [cumulative increase]	Y	
Part 12	Monitoring [BACT]	Y	
Part 12a	Monitoring [RACT]	Y	
Part 14	Sampling ports [RACT-BAAQMD Regulation 9-9]	Y	
Part 17	Records [BACT]	Y	
Part 18	CO Source Test [RACT]	Y	
Part 19	Visible emissions inspection [BAAQMD Regulation 6-1-301, SIP 6-301, BAAQMD Regulation 2-6-501]	Y	

## IV. Source-Specific Applicable Requirements

**Table IV-C**  
**Source-specific Applicable Requirements**  
**S202, Duct Burner**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
<b>BAAQMD Regulation 1</b>	<b>General Provisions and Definitions (7/9/08)</b>		
1-107	Combination of Emissions	Y	
1-521	Monitoring May Be Required	Y	
1-522	Continuous Emission Monitoring and Recordkeeping Procedures		
1-522.1	approval of plans and specifications	Y	
1-522.2	scheduling requirements	Y	
1-522.3	CEM performance testing	Y	
1-522.4	reporting of inoperative CEMs	Y	
1-522.5	CEM calibration requirements	Y	
1-522.6	CEM accuracy requirements	Y	
1-522.7	emission limit exceedance reporting requirements	N	
1-522.8	monitoring data submittal requirements	Y	
1-522.9	recordkeeping requirements	Y	
1-522.10	Monitors Required by Sections 1-521 or 2-1-403	Y	
1-602	Area and Continuous Emission Monitoring Requirements	N	
<b>SIP Regulation 1</b>	<b>General Provisions and Definitions (6/28/99)</b>		
1-522	Continuous Emission Monitoring and Recordkeeping Procedures	Y	
1-522.7	Monitor excesses	Y	
<b>BAAQMD Regulation 2, Rule 1</b>	<b>Regulation 2, Rule 1 – Permits, General Requirements (11/19/08)</b>		
2-1-501	Monitors	Y	
<b>BAAQMD Regulation 6, Rule 1</b>	<b>Particulate Matter, General Requirements (12/5/07)</b>		
6-301	Ringelmann Number 1 Limitation	N	
6-305	Visible Particles	N	
6-310	Particulate Weight Limitation	N	
6-310.3	Heat Transfer Operations	N	
6-401	Appearance of Emissions	N	
<b>SIP Regulation 6</b>	<b>Particulate Matter and Visible Emissions (9/4/98)</b>		
6-301	Ringelmann Number 1 Limitation	Y	

#### IV. Source-Specific Applicable Requirements

**Table IV-C  
 Source-specific Applicable Requirements  
 S202, Duct Burner**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-310.3	Heat Transfer Operations	Y	
6-401	Appearance of Emissions	Y	
<b>BAAQMD Regulation 9, Rule 1</b>	<b>Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)</b>		
9-1-301	Limitations on Ground Level Concentrations	Y	
9-1-302	General Emission Limitations	Y	
9-1-304	Fuel Burning – Liquid Fuels	Y	
<b>BAAQMD Regulation 9, Rule 9</b>	<b>Inorganic Gaseous Pollutants – Nitrogen Oxides from Stationary Gas Turbines (12/6/06)</b>		
9-9-303	Emission Limits-Alternative Schedule	N	
9-9-303.2	January 1, 2000 standard	N	
9-9-401	Efficiency Certification	N	
<b>SIP Regulation 9, Rule 9</b>	<b>Inorganic Gaseous Pollutants – Nitrogen Oxides from Stationary Gas Turbines (12/15/97)</b>		
9-9-303	Emission Limits-Alternative Schedule	Y	
9-9-303.2	January 1, 2000 standard	Y	
9-9-401	Efficiency Certification	Y	
<b>BAAQMD Manual of Procedures, Volume V</b>	<b>Continuous Emission Monitoring Policy and Procedures (1/20/82)</b>	Y	
<b>Subpart GG</b>	<b>Standards of Performance for Stationary Gas Turbines (2/24/06)</b>	Y	
60.332 (a)(1)	Standard for nitrogen oxides	Y	
60.333	Standard for sulfur dioxide	Y	
60.333(a)	SO2 discharge limit	Y	
60.333(b)	Fuel sulfur content limit	Y	
<b>BAAQMD Condition 366</b>	<b>Permit to Operate Condition</b>	Y	
Part 1	Operation of Boilers at Facility A0059 [cumulative increase]	Y	

#### IV. Source-Specific Applicable Requirements

**Table IV-C**  
**Source-specific Applicable Requirements**  
**S202, Duct Burner**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
Part 2	Sulfur Limit [BACT]	Y	
Part 3	Sulfur Limit (natural gas curtailment) [BACT]	Y	
Part 5	NOx Concentration Limit (natural gas) – combined S201 & 41 emissions [BAAQMD Regulation 1-107]	Y	
Part 5a	CO Concentration Limit – combined S201 & S202 emissions [BAAQMD Regulation 1-107]	Y	
Part 7	NOx Concentration Limit (fuel oil) – combined S201 & 41 emissions [BACT]	Y	
Part 10	NOx and CO Limit (lb/day) - combined S201 & 41 emissions [cumulative increase]	Y	
Part 11	SO2 Limit (lb/day & tpy) - combined S201 & 41 emissions [cumulative increase]	Y	
Part 12	monitoring [BACT]	Y	
Part 12a	Monitoring [RACT]	Y	
Part 14	Sampling ports [RACT-BAAQMD Regulation 9-9]	Y	
Part 17	Records [BACT]	Y	
Part 18	CO Source Test [BACT]	Y	
Part 19	Visible emissions inspection [cumulative increase]	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

### VI. PERMIT CONDITIONS

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

#### **Condition # 366**

For S201, Turbine and S202, Duct Burner

1. "Operation" for the purposes of this condition refers only to firing of fuel in the boiler; hot standby maintained with steam does not constitute operation. The existing boilers at Plant No. 59, Sources 2, 3, and 4 shall operate only during periods when the Gas Turbine (S201) and Duct Burner (S202) are not operating, except the following cases; (basis: cumulative increase)
  - a. during switch-over periods.
  - b. if the steam demand of the campus exceeds the 120,000 lb/hr design rate available from the gas turbine and duct burners, then the existing boilers may fire only to the extent necessary to satisfy campus steam demands, up to a rolling annual average of 95,000 lbm/hr. This limit on the existing boilers will go into effect when the cogeneration plant begins operation and will not apply when the cogeneration plant is non-operative.
  - c. If either Source 40, Gas Turbine, or Source 41, Duct burner malfunctions and the cogeneration system can not meet the 120,000 lb/hr steam rate, then the existing boilers may fire only to the extent necessary to satisfy the campus steam demands. The duct burners will not operate when the gas turbine is not operational, except during switch-over periods.
2. Any fuel oil used as a primary fuel shall not exceed a maximum sulfur content of 0.12% (by weight). Compliance shall be determined from fuel samples taken and analyzed using the District's Laboratory Procedure Method 10. Such fuel oil use shall not exceed the equivalent of 85 days per year at full-load operation of the gas turbine and duct burner. (basis: BACT)
3. During periods of natural gas curtailment or shutdown, the maximum sulfur content of the fuel oil burned shall not exceed 0.25% (by weight), provided that the gas turbine was being fired on natural gas prior to the curtailment or shutdown. (basis: BACT)
4. When the gas turbine is burning natural gas, the concentration of oxides of nitrogen (NO<sub>x</sub>) in the gas turbine's exhaust shall not exceed 20.2 ppm<sub>dv</sub> NO<sub>x</sub> (measured as NO<sub>2</sub>) at 15% oxygen, averaged over any three-hour period, except during a start-up, which is not to exceed two hours. (basis: BAAQMD Regulation 9-9-303.2, adjusted for efficiency certified at 33.7% per BAAQMD Regulation 9-9-401)
- 4a. When the gas turbine is burning natural gas or fuel oil, the concentration of carbon monoxide (CO) in the gas turbine's exhaust shall not exceed 200 ppm at 15% oxygen, averaged over any three-hour period, except during a start-up, which is not

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#### IV. Source-Specific Applicable Requirements

- to exceed two hours. (basis: RACT)
- 4b. All natural gas burned at sources S40, Gas Turbine, and S41, Duct Burner, shall be PUC quality gas. (basis: BAAQMD Regulation 2-1-403)
  5. When the gas turbine and the duct burner are firing natural gas, the concentration of oxides of nitrogen (NO<sub>x</sub>) in the combined exhaust from the gas turbine and the duct burner shall not exceed a weighted averaged of 20.2 ppm<sub>dv</sub> @ 15% oxygen, averaged over any three-hour period, except during a startup, which is not to exceed two hours. (basis: BAAQMD Regulation 1-107)
  - 5a. When the gas turbine and the duct burner are firing natural gas or fuel oil, the concentration of carbon monoxide (CO) in the combined exhaust from the gas turbine and the duct burner shall not exceed a weighted averaged of 200 ppm @ 15% oxygen, averaged over any three-hour period, except during a startup, which is not to exceed two hours. (basis: BAAQMD Regulation 1-107)
  6. When the gas turbine is burning fuel oil, the concentration of oxides of nitrogen (NO<sub>x</sub>) in the gas turbine's exhaust shall not exceed 42 ppm<sub>dv</sub> NO<sub>x</sub> (measured as NO<sub>2</sub>) at 15% oxygen, averaged over any three-hour period, except during a start-up, which is not to exceed two hours. In the event that NO<sub>x</sub> emissions exceed the 42 ppm limit while burning fuel oil, PE-Berkeley shall switch to natural gas as soon as practicable until the 42 ppm can be met while burning fuel oil. (basis: BACT, BAAQMD Regulation 9-9-303)
  7. When the gas turbine is firing fuel oil and the duct burner is in operation, the concentration of oxides of nitrogen (NO<sub>x</sub>) in the combined exhaust from the gas turbine and the duct burner shall not exceed a weighted averaged of 39 ppm<sub>dv</sub> @ 15% oxygen, averaged over any three-hour period, except during a startup, which is not to exceed two hours. (basis: BACT)
  8. The steam injection to control NO<sub>x</sub> emissions shall be operated during all periods of gas-turbine operation. PE-Berkeley shall, during the start-up period, perform tests to determine the steam injection rate necessary to assure compliance with parts 4 and 6. The steam injection rate will be controlled by the gas turbine control system at all times during the operation of the turbine. (basis: BAAQMD 2-1-403)
  9. Deleted (water injection no longer used)
  10. The emission of nitrogen oxides (NO<sub>x</sub>) from the full-load operation of the gas turbine and duct burners shall not exceed 547 lb/day when firing natural gas and 1,093 lb/day when firing fuel oil. The emission of carbon monoxide (CO) from the full-load operation of the gas turbine and duct burners shall not exceed 2195 lb/day when firing natural gas or fuel oil. (basis: BACT, BAAQMD Regulation 9-9-303.2, RACT and cumulative increase for CO)

#### IV. Source-Specific Applicable Requirements

11. The total emission of sulfur dioxide (SO<sub>2</sub>) shall not exceed 987 lb/day, except under natural gas curtailment or shutdown as allowed in part 3. In no event shall SO<sub>2</sub> emissions exceed 40 tons per year (tpy). Compliance with this condition shall be based on calculating SO<sub>2</sub> emissions from fuel oil density, usage rate, and actual sulfur content. PE-Berkeley shall determine the sulfur content of the fuel oil by sampling and analyzing, according to the District's Laboratory Procedure Method 10 or an equivalent procedure approved by the APCO, either each fuel oil delivery or once during each 24-hour period that fuel oil is fired. (basis: cumulative increase)
12. PE-Berkeley shall install, calibrate and operate District-approved continuous in-stack emission monitors and recorders for oxides of nitrogen, and either oxygen or carbon dioxide. (basis: BACT)
- 12a. PE-Berkeley shall install, calibrate and operate District-approved continuous in-stack emission monitors and recorders for carbon monoxide, and either oxygen or carbon dioxide. [(basis: RACT); (Effective May 1, 2001)]
13. Deleted (initial startup source test)
14. For purposes of source testing, the exhaust stack shall be equipped with stack sampling ports and platforms, the location of which shall be subject to the approval of the APCO. (basis: RACT, – BAAQMD Regulation 9-9)
15. Deleted (offsets provided already)
16. Deleted (PSD review not required)
17. All records associated with the above conditions shall be retained by PE-Berkeley for at least five years and shall be made available to the District upon request. The recording format for parts 2, 3, 4a, 5a, 7, 10 and 14, shall be subject to the approval of the APCO. (basis: BACT)
18. PE-Berkeley shall perform an annual source test for carbon monoxide. (basis: RACT)
19. If the gas turbine is fired on fuel oil more than 200 hours in any consecutive twelve-month period, on the first day of oil firing following the accumulation of 200 hours, and on the first day following every 1000 hours of cumulative operation afterwards during a twelve-month period, the permit holder shall conduct a visible emission inspection of the stack gas effluent. This visible emissions inspection shall be conducted during daylight hours while the gas turbine is firing on fuel oil, but need not be conducted by a trained observer. [basis: BAAQMD Regulation 6-1-301, SIP Regulation 6-301, BAAQMD Regulation 2-6-501]

#### IV. Source-Specific Applicable Requirements

If any visible emissions, excluding condensed water vapor, are detected during an inspection and the emissions are observed continuously or intermittently for more than three minutes, the permit holder shall either take corrective action that eliminates the visible emissions and report the visible emissions as a potential exceedance, or have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures outlined in the CARB manual, "Visible Emissions Evaluation." The certified smoke reader shall continue to conduct the Method 9 or CARB Visible Emission Evaluation on a daily basis on every subsequent day that oil is fired until the daily reading shows compliance with the applicable limit.

The permit holder shall record and maintain the following records for each day of any fuel oil firing of gas turbine:

- calendar day;
- total elapsed time of fuel oil firing;
- running 12-month total accumulated time of fuel oil firing;
- if 12-month total exceeds 200 hours or for every 1000 hours of cumulative operation during a 12-month period, name of inspector, time inspection was made, presence of visible emissions, description of corrective action taken to abate visible emissions, date and time visible emissions were abated.

All records made pursuant to the above shall be retained for five (5) years and shall be made available to District personnel upon request.

Condition # 22820 -----

S200, Emergency Standby Diesel Engine-Generator:

1. The owner/operator shall not exceed 20 hours per year per engine for reliability-related testing.  
[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection 93115.6 (b)(3)(A)(1)(a)]
2. The owner/operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, State or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating while mitigating emergency conditions or while emission testing to show compliance with District, State or Federal emission limits is not limited.  
[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection

#### IV. Source-Specific Applicable Requirements

93115.6 (b)(3)(A)(1)(a)]

3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained.  
[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection 93115.10 (e)(1)]
4. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.
  - a. Hours of operation for reliability-related activities (maintenance and testing).
  - b. Hours of operation for emission testing to show compliance with emission limits.
  - c. Hours of operation (emergency).
  - d. For each emergency, the nature of the emergency condition.
  - e. Fuel usage for each engine(s).

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection 93115.10 (g) (or, Regulation 2-6-501)]

5. At School and Near-School Operation:  
If the emergency standby engine is located on school grounds or within 500 feet of any school grounds, the following requirements shall apply:  
The owner/operator shall not operate each stationary emergency standby diesel-fueled engine for non-emergency use, including maintenance and testing, during the following periods:
  - a. Whenever there is a school sponsored activity (if the engine is located on school grounds)
  - b. Between 7:30 a.m. and 3:30 p.m. on days when school is in session."School" or "School Grounds" means any public or private school used for the purposes of the education of more than 12 children in kindergarten or any of grades 1 to

#### **IV. Source-Specific Applicable Requirements**

12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s). "School" or "School Grounds" includes any building or structure, playground, athletic field, or other areas of school property but does not include unimproved school property.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection 93115.6 (b)(2)]

## VII. APPLICABLE EMISSION LIMITS & COMPLIANCE MONITORING REQUIREMENTS

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

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

**Table VII-A  
 Applicable Limits and Compliance Monitoring Requirements  
 S200, Emergency Diesel-Engine Generator**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD Regulation 6-1-303.1	N		≥Ringelmann 2.0 for no more than 3 minutes in any hour		N	
Opacity	SIP Regulation 6-303.1	Y		≥Ringelmann 2.0 for no more than 3 minutes in any hour		N	
FP	BAAQMD Regulation 6-1-310	N		0.15 gr/dscf		N	
FP	SIP Regulation 6-310	Y		0.15 gr/dscf		N	
SO <sub>2</sub>	BAAQMD 9-1-301	Y		Property Line Ground Level Limits: ≤ 0.5 ppm for 3 minutes and ≤ 0.25 ppm for 60 min. and ≤ 0.05 ppm for 24 hours	None	N	N/A

Revision date: December 12, 2017

## VII. Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S200, Emergency Diesel-Engine Generator**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQMD 9-1-304	Y		0.5% wt Sulfur in liquid fuel		P/E	Fuel certification of each delivery
Hours of Operation	BAAQMD 9-8-330.1	N		Unlimited hours for emergencies	BAAQMD 9-8-530.2	C P/M	Hour meter, Records of Operating Hours
	BAAQMD 9-8-330.2	N		100 hours per calendar year or permit limit whichever is lower for reliability-related activities	BAAQMD 9-8-530	C P/M	Hour meter, Records of Operating Hours
	BAAQMD 9-8-330.3	N	1/1/2012	50 hours per calendar year or permit limit whichever is lower for reliability-related activities	BAAQMD 9-8-530	C P/M	Hour meter, Records of Operating Hours
	BAAQMD Condition # 22820 Part 2	Y		Unlimited hours for emergencies	BAAQMD Condition # 22820 Part 3 and 4	C P/M	Hour meter, record keeping
	BAAQMD Condition # 22820 Part 1	Y		≤ 20 hours per year for reliability-related activities	BAAQMD Condition # 22820 Part 3 and 4	C P/M	Hour meter, record keeping



## VII. Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-B**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S201, Turbine**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOX	BAAQMD 9-9-303.2	N		20.2 ppmv @ 15% O <sub>2</sub> , dry (adjusted per 9-9-401) , except during start-up	BAAQMD 9-9-501	C	CEM
NOX	SIP 9-9-303.2	Y		20.2 ppmv @ 15% O <sub>2</sub> , dry (adjusted per 9-9-401) , except during start-up	SIP 9-9-501	C	CEM
	BAAQMD 9-9-303.2	N		42 ppmv @ 15% O <sub>2</sub> , dry during natural gas curtailment or short testing periods	BAAQMD 9-9-501	C	CEM
	SIP 9-9-303.2	Y		42 ppmv @ 15% O <sub>2</sub> , dry during natural gas curtailment or short testing periods	SIP 9-9-501	C	CEM
	BAAQMD Cond #366 Part 4	Y		20.2 ppmv - natural gas: @15 % O <sub>2</sub> , 3 hr avg, except during start- up	BAAQMD Cond #366 Part 12	C	CEM
NO <sub>x</sub>	BAAQMD Cond #366 Part 5	Y		20.2 ppmv - natural gas: @15 % O <sub>2</sub> (combined S201 & S202), 3 hr avg, except during start-up	BAAQMD Cond #366 Part 12	C	CEM
	BAAQMD Cond #366 Part 6	Y		42 ppmv - fuel oil: @15 % O <sub>2</sub> , 3 hr avg, except during start-up	BAAQMD Cond #366 Part 12	C	CEM
NO <sub>x</sub>	BAAQMD Cond #366 Part 7	Y		39 ppmv - fuel oil: @15 % O <sub>2</sub> (combined S201 & S202), 3 hr avg, except during start-up	BAAQMD Cond #366 Part 12	C	CEM

## VII. Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-B**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S201, Turbine**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQMD Cond #366 Part 10	Y		547 lb/day when burning natural gas and 1093 lb/day when burning fuel oil (combined S201 & 41)	BAAQMD Cond #366 Part 12	C	CEM
	NSPS Subpart GG, 60.332(a)(1)	Y		99 ppm <sub>dv</sub> @ 15% O <sub>2</sub> dry, 4 - hr average	NSPS Subpart GG, 60.334(b)	C	CEM
CO	BAAQMD Cond #366 Part 4a	Y		200 ppm @ 15% O <sub>2</sub> , 3- hour average except during start-up	BAAQMD Cond #366 Part 12a	C	CEM
CO	BAAQMD Cond #366 Part 5a	Y		200 ppm @ 15% O <sub>2</sub> (combined S201 & 41) 3-hour average except during start-up	BAAQMD Cond #366 Part 12a	C	CEM
CO	BAAQMD Cond #366 Part 10	Y		2195 lb/day (natural gas or fuel oil) (combined S201 & 41)	BAAQMD Cond #366 Parts 10, 12a, and 18	C	CEM, annual source test
SO <sub>2</sub>	BAAQMD Cond #366 Part 2	Y		Maximum of 0.12% by wt. Sulfur in fuel oil	BAAQMD Cond #366 Parts 2	P/E	At Each Delivery, Fuel Sampling using District's Laboratory Procedure Method 10

## VII. Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-B**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S201, Turbine**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
SO2	BAAQMD Cond #366 Part 3	Y		Maximum of 0.25% by wt. Sulfur in fuel oil during periods of natural gas curtailment	BAAQMD Cond #366 Parts 2	P/E	At Each Delivery, Fuel Sampling using District's Laboratory Procedure Method 10
	BAAQMD Cond #366 Part 11	Y		987 lb/day (natural gas) 40 tons/year (combined S201 & 41)	BAAQMD Cond #366 Parts 11	P/E	Fuel Sampling using District's Laboratory Procedure Method 10
SO2	BAAQMD 9-1-301	Y		GLC <sup>1</sup> of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N	
SO2	BAAQMD 9-1-302	Y		300 ppm (dry)		N	
	BAAQMD 9-1-304	Y		0.5% wt. Sulfur in liquid fuel		P/E	Fuel certification

## VII. Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-B**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S201, Turbine**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
SO2	NSPS Subpart GG, 60.333 (a)	Y		0.015% (vol) @ 15% O2 (dry), or 0.8 % sulfur in gaseous fuel by weight	NSPS Subpart GG, 60.334 (h)(3)	P/M or EN	Monthly gaseous fuel analysis or current, valid purchase contract, tariff sheet or transportation contract
SO2	NSPS Subpart GG, 60.333 (b)	Y		0.8 % sulfur in fuel oil by weight	NSPS Subpart GG, 60.334 (h)(1), 60.334(i)(1)	P/E	At Each Fuel Oil Delivery, Fuel Sampling using District's Laboratory Procedure Method 10
Opacity	BAAQMD 6-1-301	N		≥Ringelmann No. 1 for no more than 3 minutes in an hour	BAAQMD Cond #366 Part 19	P/E, during distillate oil combustion	Visible emissions monitoring
Opacity	SIP 6-301	Y		≥Ringelmann No. 1 for no more than 3 minutes in an hour	BAAQMD Cond #366 Part 19	P/E, during distillate oil combustion	Visible emissions monitoring
FP	BAAQMD 6-1-310	N		0.15 grain/dscf @ 6% O2		N	
FP	SIP 6-310	Y		0.15 grain/dscf @ 6% O2		N	

<sup>1</sup> Ground Level Concentration

## VII. Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-C**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S202, Duct Burner**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOX	BAAQMD 9-9-303.2	N		20.2 ppmv @ 15% O <sub>2</sub> , dry (adjusted per 9-9-401) , except during start-up	BAAQMD 9-9-501	C	CEM
NOX	SIP 9-9-303.2	Y		20.2 ppmv @ 15% O <sub>2</sub> , dry (adjusted per 9-9-401) , except during start-up	BAAQMD 9-9-501	C	CEM
	BAAQMD 9-9-303.2	N		42 ppmv @ 15% O <sub>2</sub> , dry during natural gas curtailment or short testing periods	BAAQMD 9-9-501	C	CEM
	SIP 9-9-303.2	Y		42 ppmv @ 15% O <sub>2</sub> , dry during natural gas curtailment or short testing periods	BAAQMD 9-9-501	C	CEM
NO <sub>x</sub>	BAAQMD Cond #366 Part 5	Y		20.2 ppmv - natural gas: @15 % O <sub>2</sub> (combined S201 & S202), 3 hr avg, except during start-up	BAAQMD Cond #366 Part 12	C	CEM
	BAAQMD Cond #366 Part 7	Y		39 ppmv - fuel oil: @15 % O <sub>2</sub> (combined S201 & S202), 3 hr avg, except during start-up	BAAQMD Cond #366 Part 12	C	CEM
	BAAQMD Cond #366 Part 10	Y		547 lb/day when burning natural gas and 1093 lb/day when burning fuel oil (combined S201 & 41)	BAAQMD Cond #366 Parts 9 and 12	C	CEM
	NSPS Subpart GG, 60.332(a)(1)	Y		99 ppmv @ 15% O <sub>2</sub> dry, 4 - hr average	NSPS Subpart GG, 60.334(b)	C	CEM

## VII. Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-C**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S202, Duct Burner**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
CO	BAAQMD Cond #366 Part 5a	Y		200 ppm @ 15% O <sub>2</sub> (combined S201 & 41) 3-hour average except during start-up	BAAQMD Cond #366 Part 12a	C	CEM
	BAAQMD Cond #366 Part 10	Y		2195 lb/day (natural gas) 2195 lb/day (fuel oil) (combined S201 & 41)	BAAQMD Cond #366 Parts 10, 12a, and 18	C	CEM, annual source test
SO <sub>2</sub>	BAAQMD Cond #366 Part 11	Y		987 lb/day (natural gas) 40 tons/year (combined S201 & 41)	BAAQMD Cond #366 Parts 11	P/E	At Each Delivery, Fuel Sampling using District's Laboratory Procedure Method 10
SO <sub>2</sub>	BAAQMD 9-1-301	Y		GLC <sup>1</sup> of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N	
SO <sub>2</sub>	BAAQMD 9-1-302	Y		300 ppm (dry)		N	
	BAAQMD 9-1-304	Y		0.5% wt Sulfur in liquid fuel		P/E	Fuel certi- fication

## VII. Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-C**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S202, Duct Burner**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
SO2	NSPS Subpart GG, 60.333 (a)	Y		0.015% (vol) @ 15% O2 (dry), or 0.8 % sulfur in gaseous fuel by weight	NSPS Subpart GG, 60.334 (h)(3)	P/M or EN	Monthly gaseous fuel analysis or current, valid purchase contract, tariff sheet or transportation contract
SO2	NSPS Subpart GG, 60.333 (b)	Y		0.8 % sulfur in fuel oil by weight	NSPS Subpart GG, 60.334 (h)(1), 60.334(i)(1)	P/E	At Each Fuel Oil Delivery, Fuel Sampling using District's Laboratory Procedure Method 10
Opacity	BAAQMD 6-1-301	N		≥Ringelmann No. 1 for no more than 3 minutes in an hour	BAAQMD Cond #366 Part 19	P/E, during distillate oil combustion	Visible emissions monitoring
Opacity	SIP 6-301	Y		≥Ringelmann No. 1 for no more than 3 minutes in an hour	BAAQMD Cond #366 Part 19	P/E, during distillate oil combustion	Visible emissions monitoring
FP	BAAQMD 6-1-310	N		0.15 grain/dscf @ 6% O2		N	
FP	SIP 6-310	Y		0.15 grain/dscf @ 6% O2		N	

<sup>1</sup> Ground Level Concentration

## VIII. TEST METHODS

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

**Table VIII  
 Test Methods**

<b>Applicable Requirement</b>	<b>Description of Requirement</b>	<b>Acceptable Test Methods</b>
BAAQMD 6-301	Ringelmann No. 1 Limitation	Manual of Procedures, Volume I, Evaluation of Visible Emissions
BAAQMD 6-310	Particulate Weight Limitation	Manual of Procedures, Volume IV, ST-15, Particulates Sampling
BAAQMD 9-1-302	General Emission Limitation	Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide, Continuous Sampling, or ST-19B, Total Sulfur Oxides Integrated Sample
BAAQMD 9-1-304	Fuel Burning (Liquid and Solid Fuels)	Manual of Procedures, Volume III, Method 10, Determination of Sulfur in Fuel Oils.
BAAQMD 9-9-303	Emission Limits-Alternative Schedule (9/21/94)	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-9-303.2	January 1, 2000 standard	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
BAAQMD 9-9-401	Certification, Efficiency	ASTM D240-87 or ASTM D-2382-88 for liquid hydrocarbon fuel or ASTM 1826-88 or ASTM 1945-81 in conjunction w/ASTM D3588-89 for gaseous fuels
NSPS 40CFR60, Subpart GG	Standards of Performance for Stationary Gas Turbines(2/24/06)	
60.332 (a)(1)	Performance Standard, NOx	EPA Method 20, Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
60.333 (a)	SO2 Volumetric Emission Limit	EPA Method 20, Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
60.333(b)	Fuel Sulfur Limit (liquid fuel)	ASTM D 2880-71 Standard specification for Gas Turbine Fuel Oils

Revision date: December 12, 2017



## VIII. Test Methods

**Table VIII  
 Test Methods**

<b>Applicable Requirement</b>	<b>Description of Requirement</b>	<b>Acceptable Test Methods</b>
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
<b>BAAQMD Condition 366</b>		
Part 2	Sulfur Limit [BACT]	Manual of Procedures, Volume III, Method 10, Determination of Sulfur in Fuel Oils.
Part 3	Sulfur Limit (natural gas curtailment) [BACT]	Manual of Procedures, Volume III, Method 10, Determination of Sulfur in Fuel Oils.
Part 4	BACT NO <sub>x</sub> Limit (natural gas) [BACT]	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
Part 4a	RACT CO Limit (natural gas & fuel oil)[RACT]	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
Part 6	BACT NO <sub>x</sub> Limit (fuel oil) [BACT]	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
Part 10	NO <sub>x</sub> and CO Limit (lb/day) - combined S201 & 41 emissions [BACT]	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
Part 11	SO <sub>2</sub> Limit (lb/day & tpy) - combined S201 & 41 emissions [BACT]	Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide, Continuous Sampling, or ST-19B, Total Sulfur Oxides Integrated Sample
Part 18	CO Source Test	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling
Part 19	Visible Emission Inspection	EPA Method 9

## IX. PERMIT SHIELD

### A. Non-applicable Requirements

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

**Table IX**  
**S201, Turbine and S202, Duct Burner**

<b>Citation</b>	<b>Title or Description (Reason not applicable)</b>
Regulation 8, Rule 2	Organic Compounds - Miscellaneous Operations (Rule not applicable to combustion sources)

## X. Revision History

Initial Issuance:	February 16, 1999
Administrative Amendment: Inclusion of efficiency adjustment to 9-9-303.1 NOx limit	December 29, 1999
Significant Modification (Application # 579): Increase in daily mass emission limit for carbon monoxide to allow increase in steam injection for NOx control. Subsumption of Turbine NSPS fuel monitoring requirement; periodic monitoring for NSPS NOx limit.	August 22, 2000
Renewal (Application # 8132)	July 18, 2005
Renewal (Application # 21344)	April 17, 2012
<ul style="list-style-type: none"><li>- Changed the name of responsible official;</li><li>- Mailing address is updated;</li><li>- Regulations, which were inadvertently omitted earlier, are added to the Generally Applicable Requirements;</li><li>- Corrected the dates of adoption and/or most recent amendment of regulations;</li><li>- Source-Specific regulatory requirements are added, updated, or rewritten for better clarity;</li><li>- ATCM requirements are added to the Source-Specific Table for S-1;</li><li>- Permit condition # 22010 for S-1 is replaced by Standard Template Condition # 22820;</li><li>- Basis of permit conditions, wherever required, are updated</li></ul>	
Administrative Amendment (Application #28813)	November 28, 2017
<ul style="list-style-type: none"><li>- The following changes were made:<ul style="list-style-type: none"><li>- Facility name changed from PE Berkeley to University of California, Berkeley.</li><li>- The facility number was changed from #B1326 to A0059.</li><li>- The responsible official was changed to G. Steven Martin, Vice Chancellor for Research.</li><li>- The facility contact was changed to Bernadette Santos.</li><li>- The mailing address was changed to 317 University Hall #1140, Berkeley, CA 94720.</li><li>- The phone numbers were changed to 510-642-7540 and 510-642-3073.</li><li>- The type of facility was changed to "University".</li><li>- The SIC code was changed to 8221.</li><li>- The District contact was changed to Alfonso Borja.</li></ul></li></ul>	

Revision date: December 12, 2017

## **X. Revision History**

- The number of Source 1, Emergency Diesel Engine-Generator, was changed to Source 200.
- The number of Source 40, Turbine, was changed to Source 201.
- The number of Source 41, Duct Burner, was changed to Source 202.

Correction to Administrative Amendment (Application #28813) December 12, 2017

- The following changes were made:
  - The facility mailing address was corrected from 317 University Hall #1140, Berkeley, CA 94720 to 317 University Hall #1150, Berkeley, CA 94720.
  - The responsible official was updated from G. Steven Martin, Vice Chancellor for Research to Randy Howard Katz, Vice Chancellor of Research.
  - The facility contact's title was corrected from Facility Manager to Environmental Protection Specialist.
  - The facility contact's number was corrected from 510-486-0313 to 510-642-3073.

## **XI. Glossary**

### **ACT**

Federal Clean Air Act

### **BAAQMD**

Bay Area Air Quality Management District

### **BACT**

Best Available Control Technology

### **CFR**

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

### **CO**

Carbon Monoxide

### **Cumulative Increase**

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

### **District**

The Bay Area Air Quality Management District

### **EPA**

The federal Environmental Protection Agency.

### **Excluded**

Not subject to any District Regulations.

### **Federally Enforceable, FE**

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60, (NSPS), Part 61, (NESHAPS), Part 63 (HAP), and Part 72 (Permits Regulation, Acid Rain), and also including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

### **FP**

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

### **GLC**

Ground Level Concentration

### **MOP**

The District's Manual of Procedures.

## **XI. Glossary**

### **NMHC**

Non-methane Hydrocarbons

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

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 both 40 CFR Part 60 and District Regulation 10.

### **NSR**

New Source Review. A federal program for preconstruction review and permitting of new and modified sources of air pollutants for which the District is classified "non-attainment". Mandated by Title I of the Clean Air Act and implemented by 40 CFR Parts 51 and 52 as well as District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

### **Offset Requirement**

A New Source Review requirement to provide federally enforceable emission offsets at a specified ratio for the emissions from a new or modified source and any pre-existing cumulative increase minus any onsite contemporaneous emission reduction credits. Applies to emissions of POC, NO<sub>x</sub>, PM<sub>10</sub>, and SO<sub>2</sub>.

### **POC**

Precursor Organic Compounds

### **PM**

Total Particulate Matter

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

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

### **SIP**

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

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

Sulfur dioxide

### **Title V**

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

### **TSP**

Total Suspended Particulate

## **XI. Glossary**

### **VOC**

Volatile Organic Compounds

#### **Units of Measure:**

Btu	=	British Thermal Unit
gal	=	gallon
hp	=	horsepower
hr	=	hour
lb	=	pound
max	=	maximum
min	=	minute
MM	=	million
ppmdv	=	parts per million, dry, by volume
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
scfm	=	standard cubic feet per minute
yr	=	year