ENGINEERING EVALUATION REPORT

Plant Name:	**Sutter Medical Center Castro Valley**
Application Number:	**21265**
Plant Number:	**3711**

BACKGROUND

The applicant, Sutter Medical Center Castro Valley, is in the process of upgrading its physical facilities at its hospital in Castro Valley.

Under this application, the applicant is applying for an Authority to Construct for two new standby generators and two new gas-fired space heat boilers. Upon start-up of the new sources, the applicant will shut down two existing boilers, four existing generators, and two existing ethylene oxide sterilizers.

The applicant is requesting an Authority to Construct for the following equipment:

S-14 EMERGENCY STANDBY DIESEL GENERATOR, CUMMINS MODEL QSK60-G6 NR2, 2,922 BHP

abated by

A-14 DIESEL OXIDATION CATALYST (MANUFACTURER TBD)

S-15 EMERGENCY STANDBY DIESEL GENERATOR, CUMMINS MODEL QSK60-G6 NR2, 2,922 BHP

abated by

A-15 DIESEL OXIDATION CATALYST (MANUFACTURER TBD)

S-16 SPACE HEAT BOILER, CLEAVER BROOKS MODEL FLX-700, 7.0 MM BTU/HR

S-17 SPACE HEAT BOILER, CLEAVER BROOKS MODEL FLX-700, 7.0 MM BTU/HR

CRITERIA POLLUTANT EMISSION CALCULATIONS

Generators

Generator emission factors for the new 2,922 BHP generators are taken from the CARB certified emission factors for the proposed engines, under CARB Executive Order U-R-002-0497. For calculating emissions from these engines, CARB certified emission factors were used for all criteria pollutants. The emission factors used are as follows:

PM10	0.0671 g/bhp-hr
POC	0.2013 g/bhp-hr
NOx	3.8254 g/bhp-hr
SO2 [1]	0.0047 g/bhp-hr
CO	0.3729 g/bhp-hr

The generators will be abated by CARB-approved Diesel Oxidation Catalysts used in conjunction with ultra-low sulfur diesel fuel (fuel with sulfur content of no more than 0.0015% bw sulfur). District policy for this configuration approves a 40% abatement efficiency for PM10 emissions, pursuant to the Policy Memorandum from Brian Bateman, dated January 9, 2006.

The applicant requested operation at 50 hours per year per engine, which is consistent with the California Air Resources Board Air Toxic Control Measure for Diesel Particulate Matter, 17 CFR 93115, Air Toxic Control Measure for Stationary Compression Ignition Engines (December 4, 2004). However, a toxic Health Risk Screening Assessment indicates that this would result in a cancer risk exceeding 10 in a million (see Toxic Risk Calculations discussion below). The applicant has agreed to limit use of the generators to no more than 38 hours per year per generator. With this limitation, the maximum cancer risk will be less than 10 in a million, therefore the application, as amended, will be acceptable under the provisions of Regulation 2, Rule 5.

Space Heat Boilers

NOx and CO emission factors for the new 7.0 MM BTU/hr boilers are from the manufacturer's guaranteed emissions specifications. PM, POC, and NPOC emission factors are from AP 42, Tables 1-4.2 and 1-4.3. SO2 emission factor is based on the local nominal average sulfur content of 0.33 grains sulfur per 100 standard cubic feet of natural gas. The emission factors used are as follows:

PM	7.5 E-3	lb/MM BTU	
POC	5.4 E-3	lb/MM BTU	
NPOC	3.0 E-3	lb/MM BTU	
NOx	1.82 E-2	lb/MM BTU	(based on 15 ppmv limitation)
SO2	9.0 E-4	lb/MM BTU	
CO	2.96 E-1	lb/MM BTU	(based on 400 ppmv limitation2)

[1] SO2 g/bhp-hr = (1000.3 lb/hr)*(0.0015 lb S/100 lb)*(64.06 lb SO2/lb mol/32.06 lb S/lb mol)* (453.6 g/lb)*(1/2922 BHP) = 0.0047 g/bhp/hr

[2] BACT for small boilers is generally 100 ppmv, but a policy decision has been made to accept up to 400 ppmv, as set out in the interim and final CO emissions limitations set out in Regulation 9, Rule 7, when low NOx limits are implemented. See "BACT/TBACT Review" below, and Attachment 6.

Total facility-wide criteria pollutant emissions for the new sources are as follows:

TABLE 1 - CRITERIA POLLUTANT EMISSIONS

SOURCE	DESCRIPTION	BHP	PM10 (g/bhp-hr)	POC (g/bhp-hr)	NPOC (g/bhp-hr)	NOx (g/bhp-hr)	SO2 (g/bhp-hr)	CO (g/bhp-hr)
S-14	GENERATOR	2922	0.0671	0.2013	0.0000	3.8254	0.0047	0.3729
S-15	GENERATOR	2922	0.0671	0.2013	0.0000	3.8254	0.0047	0.3729
BACT (Tier 2 g/bhp-hr)			0.15	0.24		4.56		2.60
Meets BACT?			YES	YES		YES		YES
ABATEMENT FACTOR			40%					
G/HOUR PER ENGINE			118	588		11,178	14	1,089
TOTAL G/HOUR			235	1,177		22,356	27	2,179
LB/HOUR PER ENGINE			0.259	1.297		24.643	0.030	2.402
TOTAL LB/HR			0.519	2.594		49.286	0.061	4.804
TOTAL LB/DAY			12.45	62.26		1,182.87	1.45	115.29
TOTAL LB/38 HOURS			19.7	98.6		1,872.9	2.3	182.5

		MM BTU/HR	PM LB/MMBTU	POC LB/MMBTU	NPOC LB/MMBTU	NOx LB/MMBTU	SO2 LB/MMBTU	CO LB/MMBTU
S-16	BOILER	7.0	0.007	0.005	0.003	0.018	0.001	0.296
S-17	BOILER	7.0	0.007	0.005	0.003	0.018	0.001	0.296
LB/HOUR PER BOILER			0.052	0.038	0.021	0.127	0.007	2.069
LB/DAY PER BOILER			0.179	0.129	0.073	0.437	0.022	7.092
TOTAL LB/HR			0.104	0.085	0.043	0.255	0.013	4.137
TOTAL LB/DAY			0.36	0.26	0.15	0.87	0.05	14.18
TOTAL LB/YEAR			913.8	661.3	372.7	2,232.1	114.2	36,240.1
PROJECT TOTAL LBS/YEAR			933.5	759.9	372.7	4,105.0	116.5	36,422.6
PROJECT TOTAL TONS/YEAR			0.467	0.380	0.186	2.053	0.058	18.211

The total Potential to Emit for the facility will be less than 100 TPY for each criteria pollutant and less than 10 TPY for each ozone precursor (NOx and POC).

OLD SOURCES: EMISSION REDUCTIONS

Emission reduction credits for the reduction in criteria emissions are calculated using the procedures set out in Regulation 2-2-605, Emission Calculation Procedures, Emission Reduction Credits. This regulation defines the baseline period as the three-year period immediately preceding the date that the application is complete. The baseline throughput is the lesser of the actual average throughput during the baseline period, or the average permitted throughput during the baseline period, if permitted by permit condition.

Based on these calculation procedures, the contemporaneous on-site emission reductions for the existing eight sources are as follows:

TABLE 2 - CONTEMPORANEOUS ON-SITE EMISSION REDUCTIONS FROM SHUTDOWN OF SOURCES S-3, S-4, S-8, S-9, S-10, S-11, S-12 AND S-13

	S-3 Sterilizer (lb/yr)	S-4 Sterilizer (lb/yr)	S-8 Boiler (lb/yr)	S-9 Boiler (lb/yr)	S-10 Generator (lb/yr)	S-11 Generator (lb/yr)	S-12 Generator (lb/yr)	S-13 Generator (lb/yr)	TOTAL (lb/yr)	TOTAL (tpy)
PM			187	187	15	31	31	7	458	0.229
POC	3	3	136	136	27	16	16	12	347	0.174
NOX			2,464	2,464	335	531	531	149	6,473	3.237
SO2			15	15	22	0	0	10	62	0.031
CO			2,070	2,070	72	122	122	32	4,487	2.244

Baseline throughput calculations and contemporaneous reduction credit calculations are shown in Attachment 1.

OFFSETS

Since the facility will not have the potential to emit more than 100 tons per year of any criteria pollutant, the facility is not a "Major Facility" as defined in Regulation 2-1-203, and is not subject to PM10 or SO2 offsets under Regulation 2-2-303.

As shown in Table 1 above, the facility does not have the potential to emit more than 10 tons per year of nitrogen oxide or precursor organic compounds emissions on a pollutant-specific basis, therefore the facility is not subject to NOx or POC offsets under Regulation 2-2-302.

CUMULATIVE EMISSIONS INCREASE

Changes to the cumulative emissions inventory are as follows:

TABLE 3 - CUMULATIVE EMISSION INCREASE INVENTORY

	Current Balance (tons/yr)	Emission Increases (tons/yr)	On-Site Reductions (tons/yr)	Offsets Required (tons/yr)	New Total (tons/yr)
PM	0.640	0.467	0.229	0.00	0.878
POC	0.860	0.380	0.174	0.00	1.066
NPOC	0.000	0.186	0.000	0.00	0.186
NOx	4.630	2.053	3.237	0.00	3.446
SO2	0.085	0.058	0.031	0.00	0.112
CO	7.230	18.211	2.244	0.00	23.197
TOTAL	13.445	21.355	5.915	0.00	28.884

TOXIC RISK CALCULATIONS

This application was submitted to the District on November 5, 2009, therefore it is not subject to the new toxic risk Age Sensitivity Factors that were adopted by the District on January 6, 2010.

Toxic air pollutants are emitted by all of the combustion sources under consideration. Because Diesel PM produced by the generators exceeds the trigger level set in Regulation 2, Rule 5 for that pollutant on the date that the application was received by the District (0.58 lb/year), a health risk assessment must be performed for the project

A summary of toxic pollutant emission factors is given in Attachment 2, and total toxic chronic and acute emissions are shown in Attachment 3. The boilers, considered separately, do not trigger BACT. None of the toxic emissions exceed the acute trigger levels for the pollutants of concern.

MODELING

The ISCST3 air dispersion computer model was used to estimate maximum annual ambient toxic pollutant concentrations for the four identified pollutants emitted by the boilers and generators, emitted at their respective emission release points. Since the ISCST3 model does not estimate air concentrations within a building cavity region, where potential receptors are located, the ISC-Prime model was also run for residential receptors only. The model was run with "CHA" meteorological data, and "Hayward" elevated terrain data, assuming that the generators were run 38 hours per year per generator, and that the boilers were run 8,760 hours per year per boiler. The model incorporated emission rate scalars to account for generator operations that occur only during normal operating hours. Model runs were made with both urban and rural dispersion coefficients. The highest residential risks occur for the model run using urban dispersion coefficients, and the highest worker and student risks occur for the model run using rural dispersion coefficients, therefore these values were used in the health risk calculations. Stack and building parameters for the analysis were based on information provided by the applicant.

A summary of the risk-adjusted model inputs is given in Attachment 4.

TOTAL RISK

Based on operation of 38 hours per year per generator and 8,760 hours per year per boiler, maximum cancer risk and hazard quotients for this project are as follows:

TABLE 4 - ISCST3/ISCPRIME RISK MODELING RESULTS

	RURAL TERRAIN OPTION NO RAINCAPS			URBAN TERRAIN OPTION NO RAINCAPS		
TOTAL RISK	Max Cancer Risk (per million)	Max Chronic Non-cancer Hazard Quotient	Max Acute Non-Cancer Hazard Quotient	Max Cancer Risk (per million)	Max Chronic Non-cancer Hazard Quotient	Max Acute Non-Cancer Hazard Quotient
RESIDENTIAL	9.084	6.98E-03	N/A	9.931	6.98E-03	N/A
WORKER	0.331	2.70E-04	N/A	0.300	2.40E-04	N/A
STUDENT	0.087	2.40E-04	N/A	0.079	2.10E-04	N/A

	MAX CANCER RISK	MAX CHRONIC NON-CAN RISK	MAX ACUTE NON-CAN RISK
RESIDENTIAL	9.931	6.98E-03	N/A
WORKER	0.331	2.70E-04	N/A
STUDENT	0.087	2.40E-04	N/A

Cancer risks are driven almost exclusively by generator emissions (see Attachment 5 for a summary of toxic risk breakdowns). Noncancer risks are slightly more affected by boiler emissions than cancer risks, but still predominantly driven by generator emissions.

Because the maximum annual cancer risk from this project is less than 10 in a million and the maximum annual chronic hazard quotient is less than 1.0, the project is acceptable under Regulation 2, Rule 5, Section 302.

BACT/TBACT REVIEW

Under Regulation 2, Rule 2, any new source which results in an increase of 10 lbs/day or more of any criteria pollutant must be evaluated for adherence to BACT and TBACT control technologies. Based on Table 1 above, all of the generators and boilers covered by this application emit more than 10 lbs/day of one or more criteria pollutants.

For compression ignition I.C. engines with firing rates greater than 50 BHP, BACT/TBACT requires that the engine be fired on ultra-low sulfur diesel fuel (fuel oil with less than 0.0015% by weight sulfur content). BACT/TBACT also requires that the engine meet current tier standards for POC and NOx emissions, meet the more stringent of either 0.15 g/bhp-hr or the current tier standard for PM10 emissions, and meet the more stringent of 2.75 g/bhp-hr or the current tier standard for CO emissions. For these engines, the current tier standard is Tier 2. The proposed engines meet BACT and TBACT requirements.

For small boilers (less than 100 MM BTU/hr), BACT requires that the boilers meet emissions limitations of 25 ppmv at 3% oxygen, dry, for NOx, and 100 ppmv at 3% oxygen, dry, for CO, when firing natural gas. The boilers proposed in this application meet the limitations for NOx, but not for CO. District practice is to accept "good combustion practice" for CO emission limitations up to 400 ppmv, as long as the boilers meet the final NOx and CO emission limitations set out in Regulation 9-7-307 (see Attachment 6).

COMPLIANCE DETERMINATION

Generators

The generator engines in this application are covered under ministerial exemption, Chapter 2.3.1 of the BAAQMD Permit Handbook. CEQA is not triggered for emergency stand-by generators under this provision.

The generators are governed by and comply with the California Air Resources Board's Air Toxic Control Measure for Stationary Compression Ignition Engines, CCR Title 17, Section 93115. The explicit annual equipment usage limitation of 38 hours per year per generator except for operations under emergency conditions (Reg 9-8-330) will be included as part of the permit conditions.

The generators will be required to be abated by diesel oxidation catalysts at all times.

The generators are governed by and comply with the provisions of Regulation 2, Rule 5, "New Source Review for Toxic Air Contaminants."

The generators are exempt from emission limitations of District Regulation 9, Rule 8-305, 8-501, and 8-503, since they meet the provisions of Regulation 9, Rule 8-110.5, "Exemptions: Emergency Standby Engines."

The generators are required to meet NSPS requirements as set out in 40 CFR Part 60, Subpart IIIIG, Standards of Performance for Stationary Compression-Ignition Internal Combustion Engines, Set G, 2007 and Later Model Non-Fire Pump Emergency Less than 10L per Cylinder, since the rated engine power is greater than 25 BHP. Under 40 CFR 60.4211(c), the applicant may show compliance by buying and operating engines certified to the emission standards for new non-road CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 (PM10 emissions less than 0.2 g/kW-hr, NMHC+NOx emissions less than 6.4 g/kW-hr, and CO emissions less than 3.5 g/kW-hr). The generators proposed in this application are certified to these emission levels.

Visible emissions will be required to meet Ringelmann 1.0 limitations per Regulation 6-1-301.

Sulfur emissions will be controlled by the requirement that any fuel used in the generators meet California Clean Air fuel content of 0.0015% bw sulfur, as required by the California Air Resources Board's Air Toxic Control Measure for Stationary Compression Ignition Engines, CCR Title 17, Section 93115.

Boilers

The boilers in this application are covered under ministerial exemption, Chapter 2.1 of the BAAQMD Permit Handbook. CEQA is not triggered for small boilers (less than 100 MM BTU/hour maximum firing rate).

The boilers are governed by and comply with Regulation 9, Rule 7, "Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters." Currently, the operator will have to satisfy the requirements of Regulation 9-7-304, which requires the operator to either: (304.1) Operate in a manner than maintains stack-gas oxygen concentrations at less than or equal to 3% by volume on a dry basis; or (304.2) Tune at least once every twelve months by a technician in accordance with the procedure specified in Section 9-7-604; or (304.3) Meet the emission limitations specified in Sections 9-7-301. During natural gas firing, the boilers will meet the following emission limits: 15 ppmv of NOx and 400 ppmv of CO in exhaust gases corrected to 3% O2, dry basis. These boiler emission limits comply with the current Regulation 9-7-301.1 and 9-7-301.4 emission limits of 30 ppmv of NOx and 400 ppmv of CO, respectively, and satisfy the requirements in Regulation 9-7-304.3. Thus, the boilers are expected to comply with the currently effective NOx and CO emission limitations of Regulation 9, Rule 7.

In the future, these boilers (which have a maximum firing capacity between 2 MM BTU/hr and 10 MM BTU/hour) will also be required to meet Regulation 9-7-307.2, which limits exhaust emissions (corrected to 3% O2, dry basis) to: 15 ppmv of NOx and 400 ppmv of CO during natural gas firing. These limits will either become effective 1/1/2012 or, if the boiler manufacture date is prior to 1/1/2012, the effective date will be 10 years after the original manufacture date. In addition, Regulation 9-7-113 exempts boilers from the limits in 9-7-307 during diesel oil firing that occurs as a result of natural gas curtailment events (no more than 168 hours/year per boiler) or that is necessary to test a boiler for for oil-firing readiness (no more than 48 hours/yr per boiler). Regulation 9-7-113 will also limit NOx emissions during such oil firing events to 150 ppmv at 3% O2, dry basis. The boilers in this application will be limited to 15 ppmv of NOx and 400 ppmv of CO during natual gas firing, which will comply with Regualtion 9-7-307.2. These boilers will only burn diesel oil for readiness testing or during natural gas curtailment events, will comply with the operating restrictions in 9-7-113, and will meet an emission limit of 60 ppmv of NOx at 3% O2, dry basis during any time that oil is fired in the boilers. Therefore, the boilers are expected to comply with Regulation 9-7-113.

The boilers are not required to meet NSPS requirements as set out in 40 CFR Part 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, since the rated heat input is less than 10 MM BTU/hour (see Attachment 7). The boilers will be required to meet reporting and recordkeeping requirements which are identical to the District Requirements.

CONDITIONS

Conditions #22850 and #24354, setting out the operating conditions and recordkeeping requirements for operations at Sources S-14 and S-15, and Condition #24549, setting out the operating conditions and recordkeeping requirements for operations at Sources S-16 and S-17 shall be made part of the sources' Authority to Construct/Permits to Operate.

RECOMMENDATION

As discussed above, the proposed project is expeted to comply with all applicable requirements of District, state, and federal air quality related regulations. The preliminary recommendation is to issue an Authority to Construct for the equipment listed below. However, the proposed sources will be located within 1000 feet of a school, which triggers the public notification requirements of Regulation 2-1-412. The District will conduct this public notice and consider any comments recived before taking final action on this project.

S-14 EMERGENCY STANDBY DIESEL GENERATOR, CUMMINS MODEL QSK60-G6 NR2, 2,922 BHP
abated by

A-14 DIESEL OXIDATION CATALYST (MANUFACTURER TBD)

S-15 EMERGENCY STANDBY DIESEL GENERATOR, CUMMINS MODEL QSK60-G6 NR2, 2,922 BHP
abated by
A-15 DIESEL OXIDATION CATALYST (MANUFACTURER TBD)

S-14, A-14, S-15, and A-15 will be subject to Conditions #22838 and #23787.

S-16 SPACE HEAT BOILER, CLEAVER BROOKS MODEL FLX-700, 7.0 MM BTU/HR

S-17 SPACE HEAT BOILER, CLEAVER BROOKS MODEL FLX-700, 7.0 MM BTU/HR

S-16 and S-17 will be subject to Condition #24549.

By _____ **Date** **4/29/10**
Catherine Fortney

COND# 22838 ----------

1. The owner/operator shall not exceed 38 hours per year per engine for reliability-related testing.
[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(A)(3) or (e)(2)(B)(3)]

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 (e)(2)(A)(3) or (e)(2)(B)(3)]

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(e)(4)(G)(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 (e)(4)(I), (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 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 (e)(2)(A)(1)] or (e)(2)(B)(2)]

COND# 23787 ----------

1. The owner/operator shall abate the particulate emissions from the emergency diesel engine by the Diesel Oxidation Catalyst at all times the engine is in operation. [Basis: Toxics]

COND# 24549 ----------

1. Sources S-16 and S-17 shall burn only natural gas except during short test periods of up to 48 hours per year per boiler maximum, and during periods of natural gas curtailment. [Basis: Regulation 9-7-113]

2. The total fuel used at Sources S-16 and S-17 shall not exceed 1,226,400 therms in any successive 12-month period. [Basis: Cumulative Increase]

3. Maximum firing rate shall not exceed 7 MM BTU/hour per boiler (based on HHV of the fuel) when firing natural gas. [Basis: NSPS]

4. NOx emissions from any boiler shall not exceed 15 ppmv at 3% oxygen, dry, at any firing rate when firing natural gas. [Basis: BACT; good combustion practice; 5/13/98]

5. CO emissions from any boiler shall not exceed 400 ppmv at 3% oxygen, dry, at any firing rate when firing natural gas. [Basis: BACT; good combustion practice; 5/13/98]

6. NOx emissions from any boiler shall not exceed 60 ppmv at 3% oxygen, dry, at any firing rate when firing backup fuel. [Basis: BACT; 5/13/98]

7. CO emissions from any boiler shall not exceed 100 ppmv at 3% oxygen, dry, at any firing rate when firing backup fuel. [Basis: BACT; 5/13/98]

8. To demonstrate compliance with the above, the permit holder shall install and maintain a non-resettable totalizing fuel meter, unless the permit holder applies for and receives written approval from the District to use an alternative method for measuring the cumulative annual fuel usage.

9. On or before the later of January 1, 2012, or ten years after the boiler's original date of manufacture if such date was before January 1, 2012, NOx emission from any boiler shall not exceed 15 ppmv at 3% oxygen, dry, at any firing rate. [Basis: Regulation 9-7-307]

10. Permit holder shall not operate any boiler

unless one of the following conditions is satisfied:

a. The boiler is operated at less than 10% of the boiler's annual maximum rated heat capacity during the calendar year; or
b. An inspection and tune-up on the boiler is performed at least once per calendar year by a technician in accordance with the procedure specified in Regulation 9-7-604.

[Basis: Regulation 9-7-313]

11. Within 90 days of start-up, the applicant shall conduct an initial demonstration of compliance with the above emissions limitations. All source testing shall be done in compliance with the District's Manual of Procedures. The applicant shall obtain approval from the Manager of the District's Source Test Section for the installation of test ports and source test procedures. The source test results shall be submitted to the District's Director of Compliance and Enforcement no later than 60 days from the date of the source test. [Basis: Regulation 9-7-403]

12. On or before the later of January 1, 2012, or ten years after the boiler's original date of manufacture if such date was prior to January 1, 2012, the permit holder must initiate periodic emissions testing of each boiler at least once every two years. Such testing may be conducted either by source testing performed in accordance with the District's Manual of Procedures, or by use of a portable analyzer that meets the specifications and testing protocols set out in Regulation 9, Rule 7, Attachment 1. [Basis: Regulation 9-7-506]

13. The permit holder shall maintain records of the following:

a. Total monthly natural gas usage, and dates and times of such usage for each boiler;
b. Documentation verifying tune-ups performed in accordance with paragraph 8(b) above;
c. The results of any testing required under paragraphs 11 and 12 above.

Such records shall be retained for at least two years from date of entry and shall be made available to District staff upon request. [Basis: Regulation 9-7-503; Regulation 1-1-441, Cumulative Increase]