

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT <i>ENGINEERING & COMPLIANCE</i> APPLICATION PROCESSING AND CALCULATIONS	PAGES 11	PAGE NO. 1
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ENGINEERING EVALUATION

COMPANY NAME AND ADDRESS

Martin Luther King Jr./Multi-Service Ambulatory Care Center
12021 S. Wilmington Ave.
Los Angeles, CA 90059

CONTACT: John E. Thompson, Manager 1 Facilities Operations & Crafts, (310) 668-3851

EQUIPMENT LOCATION

AQMD ID 2619
12021 S. Wilmington Ave.
Los Angeles, CA 90059

EQUIPMENT DESCRIPTION

A/N 544012
Title V Significant Permit Revision

A/N 541183 (Master File)
PROCESS THERMAL FLUID HEATER, HOT OIL HEATING MEDIUM, NO. 1, FULTON BOILER WORKS, MODEL NO. FT-1400C, WITH ONE LOW NOX BURNER, MAXON, MODEL NO. OPTIMA SLS ULTRA, NATURAL GAS FIRED, RATED AT 17.5 MMBTU/HR, WITH A 50 H.P. COMBUSTION AIR BLOWER.

A/N 541184
PROCESS THERMAL FLUID HEATER, HOT OIL HEATING MEDIUM, NO. 2, FULTON BOILER WORKS, MODEL NO. FT-1400C, WITH ONE LOW NOX BURNER, MAXON, MODEL NO. OPTIMA SLS ULTRA, NATURAL GAS FIRED, RATED AT 17.5 MMBTU/HR, WITH A 50 H.P. COMBUSTION AIR BLOWER.

A/N 541185
PROCESS THERMAL FLUID HEATER, HOT OIL HEATING MEDIUM, NO. 3, FULTON BOILER WORKS, MODEL NO. FT-1400C, WITH ONE LOW NOX BURNER, MAXON, MODEL NO. OPTIMA SLS ULTRA, NATURAL GAS FIRED, RATED AT 17.5 MMBTU/HR, WITH A 50 H.P. COMBUSTION AIR BLOWER.

A/N 541186
PROCESS THERMAL FLUID HEATER, HOT OIL HEATING MEDIUM, NO. 4, FULTON BOILER WORKS, MODEL NO. FT-1400C, WITH ONE LOW NOX BURNER, MAXON, MODEL NO. OPTIMA SLS ULTRA, NATURAL GAS FIRED, RATED AT 17.5 MMBTU/HR, WITH A 50 H.P. COMBUSTION AIR BLOWER.

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BACKGROUND/SUMMARY

Martin Luther King Jr./ MACC submitted four applications for four identical thermal fluid heaters as a part of a renovation and improvement project at the hospital. The new units will replace the existing boilers at the site (Permit Nos. G9657, G9658, and G9659). The facility also submitted a Title V application to revise their Title V permit. The project will be processed as a significant revision per Rule 3000(B)(31)(I).

The installation of the new units will result in an increase in emissions thus triggering a Rule 212 school notice based on its proximity to a nearby school; King Drew Magnet School within 1000 feet. In addition, the NOx emissions will trigger a public notice per Rule 212(g).

COMPLIANCE REVIEW

A review of the compliance database reveals that the most recent inspection was conducted on 5/31/12 and the District Inspector determined that the facility was operating in compliance. Since this facility has a Title V permit, enforcement staff conducts annual inspections to determine continued compliance.

EMISSION CALCULATIONS

All four units are identical; therefore, the emissions for each unit are the same and are shown in the tables below.

Table 1 Data

Parameter	Value	Units	Source
Heat Input	17.5	MMBtu/hr	Manufacturer
Gas HHV	1050	MMBtu/MMscf	AQMD default
Operating Schedule	24	hrs/day	Worst-case
	8760	hrs/yr	
Fd	8710	dscf/MMBtu	Fd for natural gas at 68°F
SMV	385.44	scf/lb-mole	$v = RT/P$ at 68°F and 14.7 psia
NOx MW	46	lb/lb-mole	calculated as NO2
CO MW	28	lb/lb-mole	

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Table 2 Emission Factors

Pollutant	Emission Factor (ppmvd @ 3% O2)	Emission Factor (lb/MMBtu) ^(a)	Source
NOx	20	0.0243	Manufacturer
SOx	-	0.00064	0.25 gr-H2S/100scf gas
PM10	-	0.00724	AP-42 1.4-2
CO	100	0.074	Manufacturer
ROG	-	0.00524	AP-42 1.4-2

^(a) EF (lb/MMBtu) = ppmvd x 1E-6 x MW (lb/lb-mole) ÷ SMV (scf/lb-mole) x Fd (dscf/MMBtu) x 20.9/ (20.9-3)

Table 3 Emission Rates

Pollutant	lb/hr ^(a)	lb/day ^(b)	lb/yr ^(c)	30-DA ^(d)
NOx	0.43	10.22	3,730	10.36
SOx	0.01	0.27	98	0.27
PM10	0.13	3.04	1,110	3.08
CO	1.30	31.08	11,344	31.51
ROG	0.09	2.20	803	2.23

^(a) EF (lb/MMBtu) x Heat Input (MMBtu/hr)

^(b) Rate (lb/hr) x Schedule (hrs/day)

^(c) Rate (lb/hr) x Schedule (hrs/yr)

^(d) Rate (lb/yr) / 12 / 30

RULES EVALUATION

RULE 212-STANDARDS FOR APPROVING PERMITS AND ISSUING PUBLIC NOTICES

Rule 212 requires that a person shall not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. Rule 212(c) states that a project requires written notification if there is an emission increase for ANY criteria pollutant in excess of the daily maximums specified in Rule 212(g), if the equipment is located within 1,000 feet of the outer boundary of a school, or if the MICR is equal to or greater than one in a million (1×10^6) during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million (10×10^6) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or, ten in a million (10×10^6) during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX.

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FACILITY / EQUIPMENT AND SCHOOL LOCATIONS

The facility is located within 1,000 feet of a K-12 school, a public notice is required per section (c)(1).

DAILY EMISSIONS

The daily NOx emissions of 40.88 lbs/day (all four units operating simultaneously at maximum capacity) from this project exceed the daily thresholds of Rule 212(g) for any of the pollutants; therefore, a public notice is required for section (g).

MAXIMUM INDIVIDUAL CANCER RISK (MICR)

The MICR determined using the District Rule 1401 calculator shows it to be less than 1 in a million; therefore, a public notice is not required for section (c)(3).

RULE 401 - VISIBLE EMISSIONS

This rule limits visible emissions to an opacity of less than 20 percent (Ringlemann No.1), as published by the United States Bureau of Mines. It is unlikely, with the proper operation of the equipment in accordance with the manufacturer's guidelines that there will be visible emissions. However, in the unlikely event that visible emissions do occur, anything greater than 20 percent opacity is not expected to last for greater than 3 minutes. During normal operation, no visible emissions are expected. Therefore, compliance with this rule is expected.

RULE 402 - NUISANCE

This rule requires that a person not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which cause, or have a natural tendency to cause injury or damage to business or property. No nuisance is expected with well maintained and properly operated equipment.

RULE 404 – PARTICULATE MATTER - CONCENTRATION

The purpose of the rule is to prohibit the discharge into the atmosphere of particulate matter in excess of the concentrations shown in Table 404(a). The results below demonstrate that the heaters will comply with the concentration limits of this rule.

$$\begin{aligned} \text{Stack flow (scf/hr)} &= Fd \times 20.9 / (20.9 - O_2\%) \times TFD \\ Fd &= 8710 \text{ dscf/MMBtu} \\ O_2 &= 3\% \\ TFD &= 17.5 \text{ MMBtu/hr} \end{aligned}$$

Therefore,

$$\text{Stack Flow (scf/hr)} = 8710 \times 20.9 / (20.9 - 3) \times 17.5 = 177,971 \text{ scf/hr}$$

$$\begin{aligned} \text{Combustion Particulate (gr/scf)} &= \text{PM}_{10} \text{ (lb/hr)} \div \text{Stack Flow (scf/hr)} \times 7000 \text{ (gr/lb)} \\ &= 0.13 \div 177,971 \times 7000 \\ &= \mathbf{0.005 \text{ gr/scf}} \end{aligned}$$

The estimated particulate concentration of 0.005 gr/scf complies with table 404(a). Therefore, compliance is expected.

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RULE 407 – LIQUID AND GASEOUS AIR CONTAMINANTS

This rule limits CO emissions to 2,000 ppmvd and SO₂ emissions to 500 ppmvd, averaged over 15 minutes. For natural gas combustion, the CO emissions are expected to be less than 100 ppmvd @ 3% O₂. For SO₂, equipment which complies with Rule 431.1 is exempt from the SO₂ limit in Rule 407. The applicant will be required to comply with Rule 431.1 and thus the SO₂ limit in Rule 407 will not apply. Compliance with this rule is expected.

RULE 409 – COMBUSTION CONTAMINANTS

This rule restricts the discharge of contaminants from the combustion of fuel to 0.1 grain per cubic foot of gas, calculated to 12% CO₂, averaged over 15 minutes. The heaters will exclusively fire natural gas and compliance with this rule is expected.

RULE 431.1 – SULFUR CONTENT OF GASEOUS FUELS

The boiler will use pipeline quality natural gas which will comply with the 16 ppm sulfur limit, calculated as H₂S, specified in this rule. Natural gas will be supplied by the Southern California Gas Company which has a H₂S content of less 0.25 gr/100scf, which is equivalent to a concentration of about 4 ppm. Compliance is expected.

RULE 1146 – EMISSIONS OF OXIDES OF NITROGEN FROM INDUSTRIAL, INSTITUTIONAL, AND COMMERCIAL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

This rule applies to boilers, steam generators, and process heaters that are equal to and greater than 5 million Btu per hour rated heat input capacity used in any industrial, institutional, or commercial operation. The thermal fluid heaters are subject to the requirements of this rule.

The thermal fluid heaters are process heaters as defined by (b)(17); however, thermal fluid heaters are not considered Group I, II, or III units per sections (b)(6), (b)(7), and (b)(8).

(c)(1)(A) The thermal fluid heaters are fired on natural gas and are required to 30 ppmvd-NO_x. The burner manufacturer guaranteed 20 ppmvd-NO_x. The units will be source tested to verify compliance. Compliance is expected.

(c)(4) The units are required to meet 400 ppmvd-CO. The manufacturer guaranteed a CO emission limit of 100 ppmvd-CO.

(d)(6)(A) The boiler will need to be source tested once every three years.

(d)(8)(A) Periodic monitoring with a portable analyzer will be required at least monthly or every 750 unit operating hours, whichever occurs later. If the unit is in compliance for three consecutive emission checks then the unit may be checked quarterly or every 2000 operating hours, whichever occurs later.

NEW SOURCE REVIEW (NSR)

RULE 1303(a) – BACT

MLK/MACC is proposing to install thermal fluid heaters that will result in an increase in emissions which will trigger BACT. The District BACT guidelines identify a process heater of having to meet 20 ppmvd-NO_x and 100 ppmvd-CO emission limits. Since, the facility is a Major Source, it subject to LAER and further review of other agencies' guidelines. A review of BACT/LAER guidelines from San

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Joaquin Valley Unified APCD, Bay Area AQMD, California Air Resources Board, Texas Commission on Environmental Quality, and the EPA's BACT/LAER database revealed no information on thermal fluid heaters. Therefore, BACT will be 20 ppmvd-NOx and 100 ppmvd-CO emission limits.

RULE 1303(b)(1) – MODELING

Table A-1 of Rule 1303 lists the allowable limits that do not necessitate detailed air quality analyses for sources based on the range of heat input – modeling is not required for ROG. Table 4 below compares the actual limits of each proposed unit with the allowable limits of the rule.

Table 4 Detailed Modeling Applicability

Heat Input Capacity	Pollutant	Actual Rate (lb/hr)	Allowable Rate (lb/hr)	Further Analysis?
>10 MMBtu/hr and <20 MMBtu/hr	NOx	0.43	0.86	No
	CO	1.30	47.3	No
	PM10	3.04	5.2	No

As shown in table 4, the emissions from this equipment do not justify more detailed modeling analysis; therefore, compliance with this rule is expected.

RULE 1303(b)(2) - OFFSETS

Table 5 shows the facility's pre-modification (PREMOD) emissions and post-modification (POSTMOD) emissions with the addition of the four thermal fluid heaters and the removal of the three boilers. As shown in Table 5, the facility NOx emissions trigger the need for offsets.

Table 5 Project Post-Modification Emissions

Pollutant	PREMOD	Sum of Heaters	Sum of Boilers	POSTMOD (PREMOD + Heaters – Boilers)	Δ Emissions (POSTMOD – PREMOD)	Offsets Triggered?
NOx	46	41	27	60	14	Yes
SOx	0	0	0	0	0	No
PM10	20.4	12	18	14.4	-6	No
CO	93	126	90	129	36	N/A
ROG	213.6	9	12	210.6	-3	No

MLK/MACC is an Essential Public Service as defined by Rule 1302(m)(6). Rule 1309.1(a)(3) allows credits from the Priority Reserve to be used for Essential Public Services provided the applicant has (A) provided all required offsets available by modifying sources to BARCT levels at the same facility; or (B) demonstrates to the satisfaction of the Executive Officer or designee that the applicant owns or operates no sources within the facility which could be modified to BARCT levels to provide offsets.

The facility has 11 emergency diesel engines, 3 boilers, and 1 spray booth. There are no BARCT rules to which the engines are subject and there are no NOx emissions from the spray booth. Since, the boilers will be removed; there are no sources within the facility which could be modified to BARCT levels to provide offsets. Therefore, the increase in emissions will be offset by the Priority Reserve.

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RULE 1401 – NEW SOURCE REVIEW OF TOXIC AIR CONTAMINANTS

This rule is applicable to applications deemed complete on or after June 1, 1990 and it imposes specific limits for maximum individual cancer risk (MICR), cancer burden, and non-cancer acute and chronic hazard indices from new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants (TAC) listed in Table I of Rule 1401. The rule establishes allowable risks for permit units requiring new permit pursuant to Rules 201 or 203. The installation of the proposed new thermal fluid heaters will result in an increase in TAC emissions, thus Rule 1401 applies to this project.

The District Rule 1401 calculator was used for the HRA and the residential and commercial MICR was determined to be 8.58E-07 and 8.89E-08, respectively for each identical permit unit. The acute and chronic hazard indices are less than one for each of the residential and commercial receptors. Therefore, compliance with this rule is expected.

REGULATION XXX – TITLE V

MLK/MACC is a Title V facility with a Title V permit.

RULE 3000 – GENERAL

(b)(31)(I) requires that the installation of new equipment subject to an NSPS or NESHAPS will be handled as a significant revision.

RULE 3003 – APPLICATIONS

The “significant permit revision” is expected to comply with all applicable requirements of this rule.

(i)(4) The significant permit revision will be issued only after the permit revision application has been found to comply with all conditions of this rule.

(j)(1) The permit revision will be forwarded to EPA for a 45 day review period.

RULE 3005 – PERMIT REVISION

(f) The proposed Title V permit revision satisfies all the applicable conditions listed in this rule. The modification constitutes a “significant permit revision”.

RULE 3006 – PUBLIC PARTICIPATION

(a) The proposed “significant permit revision” requires that the AQMD process includes public participation, as such a public notice with a 30-day comment period will be conducted.

40 CFR 60 SUBPART Dc – STANDARDS OF PERFORMANCE FOR SMALL INDUSTRIAL-COMMERCIAL-INSTITUTIONAL STEAM GENERATING UNITS

§60.40c Applicability and delegation of authority.

Each thermal fluid heater is rated at 17.5 MMBtu/hr (between 10 and 100 MMBtu/hr) that will be operated at an institution. These are new units with applications filed after 6/9/89; therefore, it is subject to the requirements of this subpart.

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§60.48c Reporting and recordkeeping requirements.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in § 60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in § 60.42C to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

The thermal fluid heaters will only combust natural gas; therefore, monthly fuel use records taken from the facility Gas Company master meter will be sufficient to meet the requirements of this subpart.

(i) – All records required under this rule shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record. A condition to ensure compliance will be added to the permit.

40 CFR 63 SUBPART JJJJJ – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR AREA SOURCE INDUSTRIAL COMMERCIAL INSTITUTIONAL BOILERS

§63.11195e Are any boilers not subject to this subpart?

Gas-fired units are not subject to the subpart. The thermal fluid heaters will be fired with natural gas only; therefore, they are not subject to the requirements of this subpart.

RECOMMENDATION(S)

Issue the Permits to Construct following the school and public notice period as well as EPA 45 day review with the permit conditions shown below.

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PERMIT CONDITIONS

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL NOT EMIT MORE THAN 20 PPM OF OXIDES OF NITROGEN (NOX), CALCULATED AS NO₂, AND NO MORE THAN 100 PPM OF CARBON MONOXIDE (CO) MEASURED BY VOLUME ON A DRY BASIS AT 3% O₂.
[RULE 1303(a)-BACT]
4. THE COMBUSTION BURNER SHALL BE INSPECTED AND MAINTAINED PER THE MANUFACTURER'S SCHEDULE AND SPECIFICATIONS. RECORDS SHALL BE KEPT ON FILE FOR INSPECTIONS AND MAINTENANCE, INCLUDING THE SCHEDULE AND INSTRUCTIONS, FOR AT LEAST THREE YEARS.
[RULE 1303(a)-BACT, RULE 1147]
6. THE OPERATOR SHALL MONITOR AND RECORD THE FACILITY CALENDAR MONTHLY NATURAL GAS USAGE AS TAKEN FROM THE FACILITY MASTER METER. ALL RECORDS SHALL BE MAINTAINED FOR A PERIOD FOR TWO (2) YEARS AND MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST.
[40 CFR 60.48c (g)(3)]
7. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT SOURCE TESTS ON THE EQUIPMENT UNDER THE FOLLOWING CONDITIONS:
 - A. A SOURCE TEST PROTOCOL SHALL BE SUBMITTED FOR THE EXECUTIVE OFFICER'S REVIEW AND APPROVAL PRIOR TO THE COMMENCEMENT OF TESTING.
 - B. SOURCE TESTING SHALL BE CONDUCTED WITHIN 30 DAYS AFTER ACHIEVING MAXIMUM PRODUCTION RATE AT WHICH THE EQUIPMENT WILL BE OPERATED, BUT NO LATER THAN 90 DAYS AFTER INITIAL START-UP.
 - C. THE SOURCE TESTS SHALL BE PERFORMED TO VERIFY COMPLIANCE WITH THE NOX AND CO EMISSION LIMITS SPECIFIED IN CONDITION NO. 3.
 - D. THE SOURCE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH SCAQMD METHOD 100.1
 - E. THE TESTS SHALL BE PERFORMED WHEN THE UNIT IS OPERATING AT NORMAL CONDITIONS. THE SAMPLING DURATION SHALL BE AT LEAST 15 AND NO MORE THAN 60 CONSECUTIVE MINUTES.
 - F. TWO COMPLETE COPIES OF SOURCE TEST REPORTS (INCLUDE THE APPLICATION NUMBER AND A COPY OF THE PERMIT IN THE REPORT) SHALL BE SUBMITTED TO THE DISTRICT (ADDRESSED TO SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, ATTN: MARCEL SAULIS, P.O. BOX 4941, DIAMOND BAR, CA 91765). THE

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RESULTS SHALL BE SUBMITTED WITHIN 45 DAYS AFTER THE SOURCE TEST IS COMPLETED. THE REPORT SHALL INCLUDE, BUT NOT BE LIMITED TO EMISSION RATES IN POUNDS PER HOUR AND CONCENTRATIONS IN PPMV AT THE OUTLET OF THE UNIT, MEASURED ON A DRY BASIS AT 3% OXYGEN. THE FOLLOWING OPERATING DATA SHALL ALSO BE INCLUDED FOR EACH FIRING RATE:

- I. THE EXHAUST FLOW RATES IN ACTURAL CUBIC FEET PER MINUTE (ACFM).
 - II. THE FIRING RATES IN BTU PER HOUR.
 - III. THE OXYGEN CONTENT OF THE EXHAUST GASES IN PERCENT.
 - IV. THE FUEL FLOW RATE.
- G. A TESTING LABORATORY CERTIFIED BY THE CALIFORNIA AIR RESOURCES BOARD IN THE REQUIRED TEST METHODS FOR CRITERIA POOLUTANTS TO BE MEASURED, AND IN COMPLIANCE WITH DISTRICT RULE 304 (NO CONFLICT OF INTEREST) SHALL CONDUCT THE TEST.
- H. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES PURSUANT TO RULE 217. [RULE 1146, RULE 1303(a)-BACT, RULE 304, RULE 217]
8. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL MAINTAIN ADEQUATE RECORDS IN ORDER TO VERIFY COMPLIANCE WITH ALL CONDITIONS SPECIFIED IN THIS PERMIT. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE PREPARED IN A FORMAT WHICH IS ACCEPTABLE TO THE DISTRICT, RETAINED AT THE FACILITY FOR FIVE YEARS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST. [RULE 1146]
9. THIS EQUIPMENT SHALL COMPLY WITH RULE 1146. [RULE 1146]

Periodic Monitoring:

10. THE OPERATOR OR CONTRACTOR IN-CHARGE OF EQUIPMENT OPERATION SHALL PERFORM THE FOLLOWING PROCEDURES:

PERIODIC TESTING OF NOX AND CO EMISSIONS USING A PORTABLE ANALYZER TAKEN IN ACCORDANCE WITH THE "PROTOCOL FOR THE PERIODIC MONITORING OF NITROGEN OXIDES, CARBON MONOXIDE, AND OXYGEN FROM UNITS SUBJECT TO SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULES 1146 AND 1146.1". EMISSION READINGS SHALL BE TAKEN AT THE EXHAUST OUTLET EVERY MINUTE FOR 15 MINUTES. THE TESTS SHALL BE CONDUCTED WHEN THE UNIT IS OPERATING AT NORMAL CONDITION AND SHALL BE DONE AT LEAST MONTHLY OR EVERY 750 OPERATING HOURS WHICHEVER OCCURS LATER. THE TESTS SHALL BE CONDUCTED BY THE OPERATOR WHO HAS COMPLETED AN AQMD TRAINING PROGRAM AND RECEIVED A CERTICATION ISSUED BY THE DISTRICT.

IF THE UNIT IS IN COMPLIANCE FOR THREE CONSECUTIVE REQUIRED EMISSION CHECKS, WITHOUT ANY ADJUSTMENTS TO THE OXYGEN SENSOR SET POINTS, THEN THE UNIT MAY BE CHECKED QUARTERLY OR EVERY 2000 UNIT OPERATING HOURS WHICHEVER OCCURS LATER, UNTIL THERE IS AN EMISSION CHECK INDICATING NONCOMPLIANCE.

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MONITORING RECORDS SHALL BE MAINTAINED FOR A ROLLING TWELVE MONTH PERIOD OF FIVE YEARS AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

[RULE 3004(a), RULE 1146]

11. THE OPERATOR SHALL CONDUCT SOURCE TESTING FOR NOX, CO AND O2 (CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 3% O2 ON A DRY BASIS) AT LEAST ONCE EVERY THREE YEARS. ALL EMISSION DETERMINATIONS SHALL BE MADE IN THE AS-FOUND OPERATING CONDITION. TESTING SHALL BE CONDUCTED AT LEAST 250 OPERATING HOURS, OR AT LEAST 30 DAYS SUBSEQUENT TO THE TUNING OR SERVICING OF ANY UNIT, UNLESS IT IS AN UNSCHEDULED REPAIR.
[RULE 3004(a), RULE 1146]

Emissions And Requirements:

12. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NOX: 30 PPMV, RULE 1146

NOX: 20 PPMV, RULE 1303(a)-BACT

CO: 2000 PPMV, RULE 407

CO: 400 PPMV, RULE 1146

CO: 100 PPMV, RULE 1303(a)-BACT

SOX: 500 PPMV, RULE 407

PM: 0.1 GR/SCF RULE 473

PM: 0.1 GR/SCF, RULE 409

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS