



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

October 13, 2011

Mr. Gerardo Rios (R9Airpermits_sc@epa.gov)
Chief, Permits Office
US EPA, Region IX- Air 3.
75 Hawthorne Blvd.
San Francisco, CA 94105

Dear Mr. Rios:

St. Bernardine Medical Center has proposed to revise their Title V permit by modifying three existing boilers. This is a medical facility (NAICS 622110) located at 2101 N. Waterman Ave., San Bernardino, CA 92404. This proposed permit revision under application no. 527219 is considered as a "Minor permit revision" to their Title V permit. Attached for your review are the evaluation and section D of the Facility permit for the proposed revision. With your receipt of the proposed Title V permit revision today, we will note that the EPA 45-day review period will begin on October 13, 2011.

If you have any questions concerning these changes, please call the permit processing engineer Mr. Roy Olivares at (909) 396-2208.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Brian L. Yeh', is written over a horizontal line.

Brian L. Yeh
Senior Manager
Mechanical, Chemical and Public Services
Engineering and Compliance

BLY:AYL:JTY:RDO
Enclosure

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT SSC DIVISION APPLICATION PROCESSING AND CALCULATIONS	TOTAL PAGES:	PAGE NO.:
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PERMIT TO CONSTRUCT

APPLICANT	ST. BERNARDINE MEDICAL CENTER
MAILING ADDRESS	2101 N. WATERMAN AVE. SAN BERNARDINO CA
EQUIPMENT LOCATION	SAME

EQUIPMENT DESCRIPTION:

Proposed new permit description language is shown in **bold underline**, items removed is shown in ~~strikeout~~

APPLICATION NO. 519835

MODIFICATION OF:

BOILER, NO. 1, ~~WATER TUBE, FLOW CONTROLLED~~ **FLO KONTROL**, SERIAL NO. MODEL 15012, NATURAL GAS ~~AND WITH FUEL OIL~~ **STANDBY FUEL, WITH ONE INDUSTRIAL COMBUSTION LOW NOX BURNER, ST JOHNSON, MODEL LND-105P NOXMATIC 250**, RATED AT 10,500,000 BTU PER, A 10 H.P. COMBUSTION AIR BLOWER AND AN INDUCED FLUE GAS RECIRCULATION SYSTEM.

APPLICATION NO. 519836

MODIFICATION OF:

BOILER, NO. 2, ~~WATER TUBE, FLOW CONTROLLED~~ **FLO KONTROL**, SERIAL NO. MODEL 15012, NATURAL GAS ~~AND WITH FUEL OIL~~ **STANDBY FUEL, WITH ONE INDUSTRIAL COMBUSTION LOW NOX BURNER, ST JOHNSON, MODEL LND-105P NOXMATIC 250**, RATED AT 10,500,000 BTU PER, A 10 H.P. COMBUSTION AIR BLOWER AND AN INDUCED FLUE GAS RECIRCULATION SYSTEM.

APPLICATION NO. 519834

MODIFICATION OF:

BOILER, ~~WATER TUBE~~, INTERNATIONAL BOILERS WORKS, MODEL TJW-C-15, NATURAL GAS ~~OR WITH FUEL OIL~~ **STANDBY FUEL, WITH ONE INDUSTRIAL COMBUSTION LOW NOX BURNER, ST JOHNSON, MODEL NOXMATIC 300 LNDLG14S5S**, RATED AT 12,440,000 BTU PER **AN INDUCED FLUE GAS RECIRCULATION SYSTEM** WITH A 15 H.P. FLUE GAS RECIRCULATION SYSTEM.

PERMIT CONDITIONS

Proposed new condition language is shown in **bold underline**, conditions removed is shown in ~~strikeout~~

A/N 519835 AND 519836, 10.5 MMBTU/HR BOILERS

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1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. THIS EQUIPMENT SHALL COMPLY WITH RULE 1146.
4. THE OPERATOR OF THIS EQUIPMENT SHALL COMPLY WITH SOURCE TESTING REQUIREMENTS IN SUBDIVISION (d)(6)--COMPLIANCE DETERMINATION OF RULE 1146.
5. THE OPERATOR OF THIS EQUIPMENT SHALL COMPLY WITH PERIODIC MONITORING REQUIREMENTS OF RULE 1146 (c)(8).
6. THIS BOILER SHALL EMIT NO MORE THAN 30 PPM FOR OXIDES OF NITROGEN (NOX) MEASURED BY VOLUME ON A DRY BASIS AT 3% OXYGEN AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHEN FIRING ON NATURAL GAS.
7. EFFECTIVE 1/1/2013 THIS BOILER SHALL EMIT NO MORE THAN 9 PPM FOR OXIDES OF NITROGEN (NOX) MEASURED BY VOLUME ON A DRY BASIS AT 3% OXYGEN AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHEN FIRING ON NATURAL GAS.
8. EMISSIONS OF NOX SHALL NOT EXCEED 40 PPM REFERENCED AT 3% O2 ON A DRY BASIS, AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHENEVER THIS EQUIPMENT IS FIRED WITH OIL.
9. EMISSIONS OF CO SHALL NOT EXCEED 400 PPM REFERENCED AT 3% O2 ON A DRY BASIS, AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES.
10. THE BOILER SHALL BE FIRED ON NATURAL GAS ONLY, EXCEPT DURING PERIODS OF NATURAL GAS CURTAILMENT OR MAINTENANCE TESTING.
11. THE BURNER SHALL NOT FIRE ON LESS THAN 2500 SCF/HR OF NATURAL GAS DURING NORMAL OPERATION, NOT INCLUDING START-UPS AND SHUTDOWNS.
12. FUEL OIL SUPPLIED TO THE BURNER SHALL BE NO. 2 OR A LIGHTER GRADE AS DESCRIBED BY THE LATEST ASTM SPECIFICATIONS AND SHALL CONTAIN LESS THAN 15 PPM SULFUR BY WEIGHT.
[RULE 431.2]
13. THIS BOILER SHALL BE EQUIPPED WITH A NON-RESETTABLE, TOTALIZING FLOW METER FOR EACH FUEL TO BE BURNED.
[RULE 1146]
- 14) THE OPERATOR SHALL INSTALL A FLOW METER TO ACCURATELY INDICATE THE FLOW RATE OF THE GAS AND SHALL RECORD THE HOURLY GAS BEING FIRED IN THE BOILER. THE MEASURING DEVICE SHALL CONTINUOUSLY MEASURE THE FLOW RATE AND SHALL BE ACCURATE TO WITHIN PLUS OR MINUS 5 PERCENT AND SHALL BE

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CALIBRATED ONCE EVERY 12 MONTHS. CALIBRATION RECORDS AND HOURLY FLOW RECORDS SHALL BE KEPT ON SITE AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

- 15) **THE BURNER SHALL NOT FIRE ON LESS THAN 19 GAL/HR OF FUEL OIL DURING NORMAL OPERATION, NOT INCLUDING START-UPS AND SHUTDOWNS.**
[RULE 1146]
- 16) **THE OPERATOR SHALL INSTALL A FLOW METER TO ACCURATELY INDICATE THE FLOW RATE OF THE FUEL OIL AND SHALL RECORD THE HOURLY FUEL OIL BEING FIRED IN THE BOILER. THE MEASURING DEVICE SHALL CONTINUOUSLY MEASURE THE FLOW RATE AND SHALL BE ACCURATE TO WITHIN PLUS OR MINUS 5 PERCENT AND SHALL BE CALIBRATED ONCE EVERY 12 MONTHS. CALIBRATION RECORDS AND HOURLY FLOW RECORDS SHALL BE KEPT ON SITE AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.**
[RULE 1146]
- 17) **RETAIN ALL RECORDS REQUIRED BY PERMIT FOR A PERIOD OF FIVE YEARS AND MAKE ALL RECORDS AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.**
- 18) **THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT A SOURCE TEST UNDER THE FOLLOWING CONDITIONS:**
- A. **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.**
- B. **THE SOURCE TEST SHALL BE DONE TO VERIFY COMPLIANCE PERMIT CONDITION NO. SEVEN AND NINE.**
- C. **THE SOURCE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH SCAQMD METHOD 100.1.**
- D. **THE TEST SHALL BE CONDUCTED FOR 15 MINUTES FOR EACH LOAD, WHILE FIRING AT MAXIMUM, MINIMUM AND LOW FIRING RATES.**
- E. **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: ROY OLIVARES, P.O. BOX 4941, DIAMOND BAR, CA 91765). THE RESULTS IN WRITING SHALL BE SUBMITTED WITHIN 45 DAYS AFTER THE SOURCE TEST IS COMPLETED. IT SHALL INCLUDE, BUT NOT LIMITED TO EMISSIONS RATE IN POUNDS PER HOUR AND CONCENTRATION IN PPMV AT THE OUTLET OF THE BOILER.**
- F. **A TESTING LABORATORY CERTIFIED BY THE CALIFORNIA AIR RESOURCES BOARD IN THE REQUIRED TEST METHODS FOR CRITERIA POLLUTANT TO BE MEASURED, AND IN COMPLIANCE WITH DISTRICT RULE 304 (NO CONFLICT OF INTEREST) SHALL CONDUCT THE TEST**

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G. SAMPLING FACILITIES SHALL COMPLY WITH THE AQMD "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES", PURSUANT TO RULE 217.

Periodic Monitoring:

19. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSION FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THIS EQUIPMENT HAS COMBUSTED ONE MILLION GALLONS OF DIESEL FUEL, TO BE COUNTED CUMULATIVELY OVER A FIVE YEAR PERIOD. THE INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE HOUR, THE OPERATOR SHALL EITHER:
- A. TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN THE SAME FASHION AS DEVIATIONS ARE REQUIRED TO BE REPORTED IN SECTION K OF THIS PERMIT; OR
 - B. HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND REPORT ANY DEVIATIONS TO AQMD.

IN ADDITION, THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- I. STACK OR EMISSION POINT IDENTIFICATION;
 - II. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;
 - III. DATE AND TIME VISIBLE EMISSION WAS ABATED; AND
 - IV. VISIBLE EMISSION OBSERVATION RECORDED BY A CERTIFIED SMOKE READER.
- [RULE 3004 (a)(4)]

20. IF ANNUAL FUEL OIL USAGE EXCEEDS 2,000,000 GALLONS IN ANY ONE YEAR, THEN THE OPERATOR SHALL DETERMINE COMPLIANCE WITH THE PARTICULATE MATTER (PM) EMISSION LIMIT(S) BY CONDUCTING A SOURCE TEST AT LEAST ONCE EVERY FIVE YEARS USING AQMD METHOD 5.2. THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS TO DEMONSTRATE COMPLIANCE WITH RULE 409 LIMIT. THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.

FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH RULE 409 LIMIT, THE EMISSIONS SHALL BE MEASURED AND AVERAGED OVER A 60 MINUTE TIME PERIOD.

THE OPERATOR SHALL CONDUCT AN ANNUAL MAINTENANCE INSPECTION CHECK OF THE OPERATING PRESSURE, TEMPERATURE, AIR SUPPLY, VENT, SMOKE SPOT, BURNER CONDITION, HEAT-TRANSFER SURFACE CONDITION, WATER TREATMENT, BLOWDOWN AND LEAKAGE.

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

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A. DATE WHEN ANNUAL MAINTENANCE INSPECTION WAS CONDUCTED.
[RULE 3004 (a) (4)]

21. FOR UNITS WITH A HEAT INPUT GREATER THAN 10 MMBTU/HR AND ANNUAL OIL USAGE GREATER THAN 1,000,000 GALLONS OR GREATER THAN 336 HOURS OF OPERATION, BUT DO NOT EXCEED 2,000,000 GALLONS IN ANY ONE YEAR. THE OPERATOR SHALL CONDUCT AN ANNUAL MAINTENANCE INSPECTION CHECK OF THE OPERATING PRESSURE, TEMPERATURE, AIR SUPPLY, VENT, SMOKE SPOT, BURNER CONDITION, HEAT-TRANSFER SURFACE CONDITION, WATER TREATMENT, BLOWDOWN AND LEAKAGE

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

A. DATE WHEN ANNUAL MAINTENANCE INSPECTION WAS CONDUCTED.
[RULE 3004 (a) (4)]

Emissions And Requirements:

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

CO: 2000 PPMV, RULE 407
 SOX: 500 PPMV **FUEL OIL**, RULE 409
 PM: 0.1 GR/SCF, RULE 409
 CO: 400 PPMV, RULE 1146
 NOX: 30 PPMV, RULE 1146 **UNTIL DECEMBER 31, 2012**
 NOX: 9 PPMV, **NATURAL GAS**, RULE 1146 ON OR AFTER JANUARY 1, 2013
 NOX: 40 PPMV **FUEL OIL**, RULE 1146 (~~FUEL OIL~~)

A/N 519834, 12.5 MMBTU/HR BOILER

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
- ~~3) THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL USE WITHIN ONE MINUTE AFTER THE MAIN FLAME IS ESTABLISHED AND THE OXIDES OF NITROGEN (NO_x) FROM NATURAL GAS NATURAL GAS FIRING SHALL NOT EXCEED 30 PPM CALCULATED AS NO₂, MEASURED BY VOLUME ON A DRY BASIS AT 3% O₂, AND AVERAGED OVER A MINIMUM OF 15 CONSECUTIVE MINUTES.~~
- ~~4) THE OWNER OF OPERATOR OF THIS EQUIPMENT SHALL MAINTAIN DISTRICT APPROVED RECORDS WHICH DEMONSTRATE COMPLIANCE WITH CONDITON NO. 4 AND RULE 1146, AND THESE RECORDS SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.~~

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3. THIS EQUIPMENT SHALL COMPLY WITH RULE 1146.
4. THE OPERATOR OF THIS EQUIPMENT SHALL COMPLY WITH SOURCE TESTING REQUIREMENTS IN SUBDIVISION (d)(6)--COMPLIANCE DETERMINATION OF RULE 1146.
5. THE OPERATOR OF THIS EQUIPMENT SHALL COMPLY WITH PERIODIC MONITORING REQUIREMENTS OF RULE 1146 (c)(8).
6. THIS BOILER SHALL EMIT NO MORE THAN 30 PPM FOR OXIDES OF NITROGEN (NOX) MEASURED BY VOLUME ON A DRY BASIS AT 3% OXYGEN AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHEN FIRING ON NATURAL GAS.
7. EFFECTIVE 1/1/2013 THIS BOILER SHALL EMIT NO MORE THAN 9 PPM FOR OXIDES OF NITROGEN (NOX) MEASURED BY VOLUME ON A DRY BASIS AT 3% OXYGEN AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHEN FIRING ON NATURAL GAS.
8. EMISSIONS OF NOX SHALL NOT EXCEED 40 PPM REFERENCED AT 3% O2 ON A DRY BASIS, AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHENEVER THIS EQUIPMENT IS FIRED WITH OIL.
9. EMISSIONS OF CO SHALL NOT EXCEED 400 PPM REFERENCED AT 3% O2 ON A DRY BASIS, AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES.
10. THE BOILER SHALL BE FIRED ON NATURAL GAS ONLY, EXCEPT DURING PERIODS OF NATURAL GAS CURTAILMENT OR MAINTENANCE TESTING.
11. THE BURNER SHALL NOT FIRE ON LESS THAN 2962 SCF/HR OF NATURAL GAS DURING NORMAL OPERATION, NOT INCLUDING START-UPS AND SHUTDOWNS.
12. FUEL OIL SUPPLIED TO THE BURNER SHALL BE NO. 2 OR A LIGHTER GRADE AS DESCRIBED BY THE LATEST ASTM SPECIFICATIONS AND SHALL CONTAIN LESS THAN 15 PPM SULFUR BY WEIGHT.
[RULE 431.2]
13. THIS BOILER SHALL BE EQUIPPED WITH A NON-RESETTABLE, TOTALIZING FLOW METER FOR EACH FUEL TO BE BURNED.
[RULE 1146]
14. THE OPERATOR SHALL INSTALL A FLOW METER TO ACCURATELY INDICATE THE FLOW RATE OF THE GAS AND SHALL RECORD THE HOURLY GAS BEING FIRED IN THE BOILER. THE MEASURING DEVICE SHALL CONTINUOUSLY MEASURE THE FLOW RATE AND SHALL BE ACCURATE TO WITHIN PLUS OR MINUS 5 PERCENT AND SHALL BE CALIBRATED ONCE EVERY 12 MONTHS. CALIBRATION RECORDS AND HOURLY FLOW RECORDS SHALL BE KEPT ON SITE AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
15. THE BURNER SHALL NOT FIRE ON LESS THAN 23 GAL/HR OF FUEL OIL DURING NORMAL OPERATION, NOT INCLUDING START-UPS AND SHUTDOWNS.
[RULE 1146]

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16. THE OPERATOR SHALL INSTALL A FLOW METER TO ACCURATELY INDICATE THE FLOW RATE OF THE FUEL OIL AND SHALL RECORD THE HOURLY FUEL OIL BEING FIRED IN THE BOILER. THE MEASURING DEVICE SHALL CONTINUOUSLY MEASURE THE FLOW RATE AND SHALL BE ACCURATE TO WITHIN PLUS OR MINUS 5 PERCENT AND SHALL BE CALIBRATED ONCE EVERY 12 MONTHS. CALIBRATION RECORDS AND HOURLY FLOW RECORDS SHALL BE KEPT ON SITE AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1146]
17. RETAIN ALL RECORDS REQUIRED BY PERMIT FOR A PERIOD OF FIVE YEARS AND MAKE ALL RECORDS AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
18. THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT A SOURCE TEST UNDER THE FOLLOWING CONDITIONS:
- A. 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.
- B. THE SOURCE TEST SHALL BE DONE TO VERIFY COMPLIANCE PERMIT CONDITION NO. SEVEN AND NINE.
- C. THE SOURCE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH SCAQMD METHOD 100.1.
- D. THE TEST SHALL BE CONDUCTED FOR 15 MINUTES FOR EACH LOAD, WHILE FIRING AT MAXIMUM, MINIMUM AND LOW FIRING RATES.
- E. 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: ROY OLIVARES, P.O. BOX 4941, DIAMOND BAR, CA 91765). THE RESULTS IN WRITING SHALL BE SUBMITTED WITHIN 45 DAYS AFTER THE SOURCE TEST IS COMPLETED. IT SHALL INCLUDE, BUT NOT LIMITED TO EMISSIONS RATE IN POUNDS PER HOUR AND CONCENTRATION IN PPMV AT THE OUTLET OF THE BOILER.
- F. A TESTING LABORATORY CERTIFIED BY THE CALIFORNIA AIR RESOURCES BOARD IN THE REQUIRED TEST METHODS FOR CRITERIA POLLUTANT TO BE MEASURED, AND IN COMPLIANCE WITH DISTRICT RULE 304 (NO CONFLICT OF INTEREST) SHALL CONDUCT THE TEST
- G. SAMPLING FACILITIES SHALL COMPLY WITH THE AQMD "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES", PURSUANT TO RULE 217.

Periodic Monitoring:

19. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSION FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THIS EQUIPMENT

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HAS COMBUSTED ONE MILLION GALLONS OF DIESEL FUEL, TO BE COUNTED CUMULATIVELY OVER A FIVE YEAR PERIOD. THE INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE HOUR, THE OPERATOR SHALL EITHER:

- A. TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN THE SAME FASHION AS DEVIATIONS ARE REQUIRED TO BE REPORTED IN SECTION K OF THIS PERMIT; OR
- B. HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND REPORT ANY DEVIATIONS TO AQMD.

IN ADDITION, THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- V. STACK OR EMISSION POINT IDENTIFICATION;
- VI. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;
- VII. DATE AND TIME VISIBLE EMISSION WAS ABATED; AND
- VIII. VISIBLE EMISSION OBSERVATION RECORDED BY A CERTIFIED SMOKE READER.

[RULE 3004 (a)(4)]

20. IF ANNUAL FUEL OIL USAGE EXCEEDS 2,000,000 GALLONS IN ANY ONE YEAR, THEN THE OPERATOR SHALL DETERMINE COMPLIANCE WITH THE PARTICULATE MATTER (PM) EMISSION LIMIT(S) BY CONDUCTING A SOURCE TEST AT LEAST ONCE EVERY FIVE YEARS USING AQMD METHOD 5.2 . THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS TO DEMONSTRATE COMPLIANCE WITH RULE 409 LIMIT. THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.

FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH RULE 409 LIMIT, THE EMISSIONS SHALL BE MEASURED AND AVERAGED OVER A 60 MINUTE TIME PERIOD.

THE OPERATOR SHALL CONDUCT AN ANNUAL MAINTENANCE INSPECTION CHECK OF THE OPERATING PRESSURE, TEMPERATURE, AIR SUPPLY, VENT, SMOKE SPOT, BURNER CONDITION, HEAT-TRANSFER SURFACE CONDITION, WATER TREATMENT, BLOWDOWN AND LEAKAGE.

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- A. DATE WHEN ANNUAL MAINTENANCE INSPECTION WAS CONDUCTED.
- [RULE 3004 (a) (4)]

21. FOR UNITS WITH A HEAT INPUT GREATER THAN 10 MMBTU/HR AND ANNUAL OIL USAGE GREATER THAN 1,000,000 GALLONS OR GREATER THAN 336 HOURS OF OPERATION, BUT

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DO NOT EXCEED 2,000,000 GALLONS IN ANY ONE YEAR. THE OPERATOR SHALL CONDUCT AN ANNUAL MAINTENANCE INSPECTION CHECK OF THE OPERATING PRESSURE, TEMPERATURE, AIR SUPPLY, VENT, SMOKE SPOT, BURNER CONDITION, HEAT-TRANSFER SURFACE CONDITION, WATER TREATMENT, BLOWDOWN AND LEAKAGE

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- A. DATE WHEN ANNUAL MAINTENANCE INSPECTION WAS CONDUCTED.
[RULE 3004 (a) (4)]

Emissions And Requirements:

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

CO: 2000 PPMV, RULE 407
 SOX: 500 PPMV FUEL OIL, RULE 409
 PM: 0.1 GR/SCF, RULE 409
 CO: 400 PPMV, RULE 1146
 NOX: 30 PPMV, RULE 1146 UNTIL DECEMBER 31, 2012
 NOX: 9 PPMV, NATURAL GAS, RULE 1146 ON OR AFTER JANUARY 1, 2013
 NOX: 40 PPMV FUEL OIL, RULE 1146 ~~(FUEL OIL)~~

BACKGROUND:

The above applications were filed on 3/15/2011 as modification (the Title V application no. 527219 was assigned on 9/20/2011). The applicant operates three existing boilers, one rated at 12.4 million btu per hour and two at 10.5 million btu per hour. The applicant proposes to comply with the new Rule 1146 NOx emissions limits by replacing the existing burners and installing new burners that will comply with the 1/1/2013 NOx emission limits.

In the Facility Permit ID#6324, additions are requested to section D by the modification of three existing boilers. Attached is a draft of Section D in the Facility Permit affected by this addition.

Per 3000 (b)(15)(A)(vi) as referenced by 3005 (c)(1) this Title V modification is considered as a "minor permit revision" to the Title V permit because there is no increase of pollutant emissions or HAP emissions. There is a net decrease in NOx emission, thus not subject to Rule 3000 (b)(11).

The applicant proposes to replace the current burner and keep FGR system. When firing on oil there will be no change in the NOx emissions limit of 40 ppmv (FGR system will operate while firing on fuel oil). The burner manufacturer JT Johnson has provided emissions guarantees of no more than 9 ppmv of NOx emissions corrected to 3% O2 while firing on natural gas. There will be no change in the current CO emissions limit of 400 ppmv.

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The boilers were modified to comply with Rule 1146 in the 1990's. They are currently operating under the permits issued at that time. The following table summarizes the current application and permit numbers.

Equipment	Current A/N	Current P/O
Boiler	207594	D67724
Boiler	223178	D58313
Boiler	223810	D58312

COMPLIANCE HISTORY

No NOV or NC has been issued during the past two years for this facility during the following time period: 09/30/2009-09/30/2011

Permitting since the Title V permit was renewed since 12/03/2009

There has been no permitting activities since the title v permit was last renewed.

PROCESS DISCRIPTION

The boilers are used to generate hot water for hospital use, such as sterilization, heating, humidification, heating, and hot water. For this evaluation assume all the boilers operate 24 hr/dy, 7 dy/wk, 52 wk/yr.

Two of the three boilers are identical units. Following are the specifications:

a/n 519836 and 519835

Specification	
Boiler Manufacturer	Flo Kontrol
Model	15012
Fuel Type	Natural gas primary, with fuel oil standby
Maximum Fuel Consumption	1,000 ft ³ /hr natural gas
Maximum Exhaust Flow SCFM	1,780 ft ³ /min natural gas
Maximum Heat Input	10.5 mmbtu/hr
NOx Combustion Control	Induced FGR (oil fired only), Low NOx Burner
Post combustion control NOx limit natural gas	9 ppmv
Post combustion control NOx limit fuel oil	40 ppmv
Turn down ratio natural gas	4 to 1
Turn down ratio fuel oil	4 to 1
Post Combustion Control	none

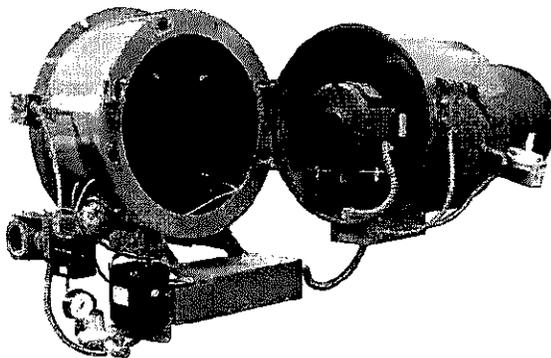
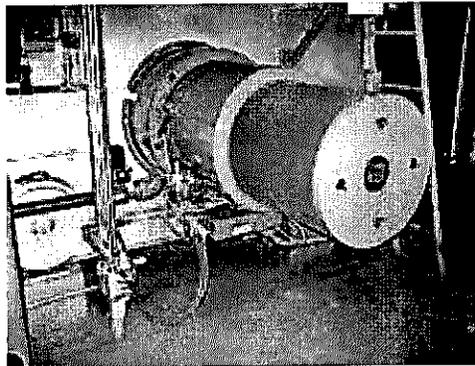
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a/n 519834

Specification	
Boiler Manufacturer	International Boiler Works
Model	TJW-C-15
Fuel Type	Natural gas primary, with fuel oil standby
Maximum Fuel Consumption	1,000 ft ³ /hr natural gas
Maximum Exhaust Flow SCFM	2,103 ft ³ /min natural gas
Maximum Heat Input	12.44 mmbtu/hr
NOx Combustion Control	Induced FGR (oil fired only), Low NOx Burner
Post combustion control NOx limit natural gas	9 ppmv
Post combustion control NOx limit fuel oil	40 ppmv
Turn down ratio	4 to 1
Post Combustion Control	none



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The NOXmatic® combines our proven high performance axial airflow burner design with ultra low NOx technology to create a very compact, quiet, and energy efficient unit. The premix design uses a metal fiber mat firing head and requires no FGR to deliver single digit NOx emissions, making it a simple and cost effective solution for almost any firetube, firebox or watertube boiler. Efficiency and performance is further enhanced by a Variable Speed Blower (VSB) package, supplied as standard equipment with all A-type packages. VSBs provide cost savings with a 20 to 40% reduction in electrical consumption compared to single-speed blowers.

The innovative design also features S.T. Johnson's trademark swing-open housing that allows easy access to all burner components without removing the burner from the boiler. The firing head, igniter, flame detector and blower motor can all be accessed and removed for service in just minutes to minimize down time and service costs

CALCULATIONS

1. Permit processing Emissions calculation methodology

A. Emissions calculations ROG, SOx and PM

$$R1(LB / HR) = \frac{EF \times GAS\ USAGE}{1 \times 10^6}$$

Note R1 = R2

Where E.F per AP-42, table 1.4-1

Note, NOx and CO ref the same table for default values

B. Emissions calculations NOx and CO, by EPA method 19

Using the ideal gas law (lbmole/dscf@68 F)

$$PV = nRT$$

$$n/V = P / RT$$

Given

Pressure = 1 atm

Temp = 68 F

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APPLICATION PROCESSING AND CALCULATIONS

Ideal gas constant R = 0.73 ft³-atm/lb-mole-R
 R = 460 F + 68 F

$$\begin{aligned}
 \text{lb NOx/btu} &= \text{dscf / mmbtu} \times 1^{-06} \text{ mmbtu / btu} \times \\
 &= (20.9 / (20.9 - 3\%O_2)) \times \text{ppm} \times \\
 &= (\text{VolNOxppm}) \times (\text{MW}) \times \text{lbmol/dscf}
 \end{aligned}$$

Given

- Dscf/mmbtu = 8710
- Mw = 46 NOx
- Mw = 28 CO
- Lbmole/dscf = 0.00259
- Ppm = 9 NOx
- Pppm = 400 CO
- Vol NOx/pmm = 0.000001

Repeat formula for CO

2. EMISSIONS CALCULATIONS

A. A/N 519834, 12.44 mmbtu/hr

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.0652	1.56	1.56	570
NOx	0.14	3.26	3.26	1186.64
SO2	0.0071	0.1706	0.17	62.113
CO	3.68	88.23	88.23	32114.83
PM=PM10=PM2.5	0.090	2.16	2.16	786

The boiler was previously modified (a/n 207594) to comply with Rule 1146 NOx limit of 40 ppmv limits, the previous NSR 30 day ave was not correctly done for NOx and CO. The emissions should be based on a NOx and CO limit of 30 ppmv and 400 ppmv respectfully. The correct 30 day ave will be calculated using the previous Rule 1146 emissions limits and default emissions factors.

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.0652	1.56	1.56	570

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NOx	0.45	10.87	10.87	3956.68
SO2	0.0071	0.1706	0.17	62.113
CO	3.68	88.23	88.23	32114.83
PM=PM10=PM2.5	0.090	2.16	2.16	786

B. A/N 519835 and 519836, 10.5 mmbtu/hr

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.0550	1.32	1.32	480
NOx	0.11	2.75	2.75	1001.00
SO2	0.0060	0.1440	0.14	52.416
CO	3.10	74.47	74.47	27106.57
PM=PM10=PM2.5	0.076	1.82	1.82	664

The boilers were previously modified (a/n 223178 and 223810) to comply with Rule 1146 NOx limit of 40 ppmv limits, the previous NSR 30 day ave was not correctly done for NOx and CO. The emissions should be based on a NOx and CO limit of 30 ppmv and 400 ppmv respectfully. The correct 30 day ave will calculated using the previous Rule 1146 emissions limits and default emissions factors.

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.0550	1.32	1.32	480
NOx	0.38	9.18	9.18	3341.52
SO2	0.0060	0.1440	0.14	52.416
CO	3.10	74.47	74.47	27106.57
PM=PM10=PM2.5	0.076	1.82	1.82	664

Revise the previous NOx and CO emissions based on Rule 1146 emissions limits, for ROG, SOx and PM10 use default emissions factors.

RULES EVALUATION:

Rule 212 The equipment is being modified to comply with Rule 1146 NOx emissions limits, there will be a net reduction in NOx emissions, thus Rule does not apply.

Item	Equipment located beyond 1000 feet of a school	Public notice required
Boilers	n/a	no

Section (c)(3)(A)(i)

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Pollutant	MICR	Threshold	Public Notice required
Boiler	n/a	1.0e-06	No

Section (c)(2)

Pollutant	Net increase in emissions lb/dy	Allowed limit-lb/dy	Trigger Public Notice
NOx	-20.47	40	No
ROG	+0	30	No
CO	+0	220	No
PM10	+0	30	No
SOx	+0	60	NO

Rule 401 – Visible Emissions

Visible emissions are not expected under normal operation firing gaseous fuel. However, fuel oil combustion has the potential to result in visible emissions. Fuel oil is only fired in the unit during a natural gas curtailment, or during maintenance testing.

Rule 402 – Nuisance

The equipment primary uses natural gas, expected not to cause a odor.

Rule 404 Exempt per section (c).

Rule 407 – Liquid and Gaseous Air Contaminants

This rule limits the CO emissions to 2000 ppm, and also limits the SO2 emissions to 500 ppm when firing fuel oil. The Rule 1146 CO limit of 400 ppm is more stringent. One of the boilers was tested in early 2000's and showed CO emissions below 250 ppm. The units have not been tested for SO2 emissions, however, since 15 ppm sulfur fuel oil is required by Rule 431.2, the equipment should theoretically be able to comply with the 500 ppm SO2 limit.

Rule 409 – Combustion Contaminants

Expected to comply while firing on natural gas or fuel oil.

Rule 431.1. - Sulfur Content of Gaseous Fuels

This rule limits the sulfur content of natural gas sold in the district to 16 ppm sulfur.

Rule 431.2 – Sulfur Content of Liquid Fuels

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Any fuel oil combusted in the boilers must comply with the rule limit of 15 ppm sulfur. The boilers are required to use a low sulfur oil in the units which complies with the sulfur limits of this rule.

Rule 1146 This Rule was amended last September 2008 and is subject to the following emissions limits. The boiler is expected to comply with the future NOx limits (verify by source test).

Table 1146-1 per section (c)(1)(A) requires 30 ppmv limit for NOx when burning gaseous fuel. Section (c)(1)(4) requires 400 ppmv limit for CO.

The boilers are listed as a Group III type unit and will be subject to the following emissions limits

The boilers are subject to Table 1146-1 (c)(1)(I) requires 9 ppmv limit for NOx when burning gaseous fuel effective on 1/1/2013. The applicant proposes to install LOx burners, thus compliance with this section is met.

Per section (c)(4) the CO concentration limit is 400 ppmv (no change)

Per section (d)(6)(A) source testing is required once every five years for this size boiler

Per section (d)(8) the applicant shall check the NOx and CO emissions from the boiler using a portable analyzer effective 7/1/2009.

The Rule also requires submittal of a compliance plan specifying when the facility will come into compliance with the limits. The applicant submitted their plan under A/N 519833, the plan was not submitted within the required timeframe (filed after 1/1/11), and was approved by AQMD on September 2011. The plan specified a 9 ppm NOx compliance level to be achieved by January 1, 2013. The facility also has submitted their modification applications within the required timeframe (before 1/1/12).

Reg. XIII Compliance with the following sections is anticipated.

1303 (a)-BACT- There is no increase in BTU rating or emissions, BACT does not apply.

1303 (b)(1)- Does not apply no increase in emissions

1303 (b)(2)- Offsets, see table

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Item	A/n	30 day ave-lb/dy				
		NOx	ROG	CO	SOx	PM10
Boiler	519834	+3.26	+1.56	+88.23	+0.71	+2.16
Boiler	519835	+2.75	+1.32	+74.47	+0.14	+1.82
Boiler	517676	+2.75	+1.32	+74.47	+0.14	+1.82
Boiler	207594	-10.87	-1.56	-88.23	-0.71	-2.16
Boiler	223178	-9.18	-1.32	-74.47	-0.14	-1.82
Boiler	223818	-9.18	-1.32	-74.47	-0.14	-1.82
Change in emissions		-20.47	+0	+0	+0	+0

RULE 1401- Exempt per section (g)(1)(F), no increase in Rule 1401 emissions. There is no increase in btu rating or emissions.

Regulation XXX

This facility (id# 6324) is included in Phase One of the Title V universe. Therefore the proposed equipment is expected to comply with the following sections:

Rule 3005 (c)(1): The Title V expected permit revision caused by this equipment addition satisfies all the applicable conditions listed in this rule, it constitutes Minor Permit revision (no net emissions increase less than required by Rule 3000 (b)(15)(A)(vi)), see facility emissions summary table in Rule 1303.

Rule 3003 The anticipated Minor permit revision is expected to comply with all the applicable requirements in this rule, of special note are the sections listed below

Section (i)(4) A permit revision may be issued after the permit revision applications meets all conditions in this rule.

Section (j)(1)(A) The EPA Administrator will timely receive the Minor revision upon completion of District evaluation.

Section (j)(1)(C) The EPA Administrator will timely receive the draft of the Minor revision upon completion of District evaluation.

Section (j)(1)(D) The EPA Administrator will timely receive the final Title V permit upon issuance by the District

Section (j)(4)(A) The applicant will be timely notified of any refusal to accept all recommendations for the draft permit

Rule 3006 (a) Exempt per section (b).

California Environmental Quality Act (CEQA)

The boiler modification to reduce the NOx emissions does not trigger CEQA.

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FINAL AIR TOXICS STANDARDS FOR INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AT AREA SOURCE FACILITIES (40 CFR Part 63)

The final ruling was released on 3/21/2011 and applies to boilers using non-gaseous fuels. For this project the boilers are using natural gas with fuel oil only used as a stand-by fuel. The rule is silent for a boiler firing on natural gas with stand-by oil. The boilers are existing, per Table 2 to Subpart JJJJJ of Part 63, item 3 for oil fired, there are no emissions requirement, but the operator is required to perform tune-ups and a onetime energy assessment on the boilers.

40 CFR PART 60, Subpart Dc-Standards of Performance for Small Industrial-Commercial-Institutional steam generating Units

Section 60.42(c)(d) requires fuel oil to be less than 0.5 ppmw Sulfur content. Rule 431.2 requires fuel oil purchased to be less than 15 ppmw Sulfur content.

RECOMMENDATIONS

Based on the analysis in this report, the equipment is expected to comply with the applicable Rules and Regulations of the SCAQMD and the applicable BACT requirements.

For this reason, the following disposition is recommended; issue a revised Title V Facility Permit reflecting the modification of three boilers under section D.

Updates in Section D of the Title V facility Permit resulting from this addition are listed in Equipment and Condition sections of the attached draft permit.

After the end of the 45 day EPA review period, issue a Permit to Construct subject to the conditions listed below.

A. A/N 519836 and 519535, the following condition changes are recommended for the boilers:

- Remove previous condition no. 3-external FGR not used
- Addition condition no. 3 to comply with Rule 1146
- Remove condition no. 4- see updated recording keeping condition no. 14.
- Add condition no. 4- source testing condition for Rule 1146
- Add condition no. 5- standard periodic monitoring condition for Rule 1146
- Add condition no. 6- list current Rule 1146 NOx 30 ppmv limit while operating on natural gas
- Add condition no. 7 list future Rule 1146 NOx limit of 9 ppmv while operating on natural gas effective 1/1/2013
- Add condition no. 8- list Rule 1146 NOx limit of 40 ppmv while the boiler operates on fuel oil.
- Add condition no. 9- list Rule 1146 CO limit of 400 ppmv

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- Add condition no. 10- Boiler operates on natural gas only except during natural gas curtailments
- Add condition no. 11- limit the min. natural gas fuel rate, except during start-up and shutdown.
- Add condition no. 12, fuel oil to comply with the 15 ppmv Sulfur limit of Rule 431.2
- Add condition no. 13, install fuel meters for each type of fuel used.
- Add condition no. 14, install natural gas fuel meter and recorder
- Add condition no. 15- limit the min. fuel oil rate, except during start-up and shutdown.
- Add condition no. 16, install fuel oil meter and recorder
- Add condition no. 17- Record keeping condition.
- Add condition no. 18- Source test condition
- Remove previous periodic monitoring condition no. 5-

All other existing conditions will remain the same.

B. A/N 519834, the following condition changes are recommended for the boiler:

- Remove previous condition no. 3-external FGR removed
- Add condition no.3-comply with Rule 1146
- Remove condition no. 4- see updated recording keeping condition no. 14.
- Add condition no. 4- source testing condition for Rule 1146
- Add condition no. 5- standard periodic monitoring condition for Rule 1146
- Add condition no. 6- list current Rule 1146 NOx 30 ppmv limit while operating on natural gas
- Add condition no. 7 list future Rule 1146 NOx limit of 9 ppmv while operating on natural gas effective 1/1/2013
- Add condition no. 8- list Rule 1146 NOx limit of 40 ppmv while the boiler operates on fuel oil.
- Add condition no. 9- list Rule 1146 CO limit of 400 ppmv
- Add condition no. 10- Boiler operates on natural gas only except during natural gas curtailments
- Add condition no. 11- limit the min. natural gas fuel rate, except during start-up and shutdown.
- Add condition no. 12, fuel oil to comply with the 15 ppmv Sulfur limit of Rule 431.2
- Add condition no. 13, install fuel meters for each type of fuel used.
- Add condition no. 14, install natural gas fuel meter and recorder
- Add condition no. 15- limit the min. fuel oil rate, except during start-up and shutdown.
- Add condition no. 16, install fuel oil meter and recorder
- Add condition no. 17- Record keeping condition.
- Add condition no. 18- Source test condition
- Remove previous periodic monitoring condition no. 5-

All other existing conditions will remain the same.

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RECOMMENDATIONS

Based on the analysis in this report, the equipment is expected to comply with the applicable Rules and Regulations of the SCAQMD and the applicable Rule 1146 requirements.

FOR THIS APPLICATION THE FOLLOWING DISPOSITION IS RECOMMENDED:

Issue PC for the boilers

BOILER EMISSIONS FOR FIRING ON NATURAL GAS ONLY

1. DATA

Max burner rating	10,500,000	BTU/hr
Max hr/dy	24	hr/day
day per week	7	dy/wk
wk/yr	52	wk/yr
Use default NOx E.F.	no	yes/no
Use default CO E.F.	NO	
Max NOx rate	9	ppm
Max CO rate	400	ppm
30-day ave	30	days
Ave load-Rule 1401	100.0%	
Max load-Reg 13	100.0%	
Fuel HHV	1050	btu/ft3
Fuel rate	10000	ft3/hr
fuel/mon	7200000	
turn down ratio	25.00%	
min fuel rate	2500.0000	ft3/hr
min fuel rate-oil	19.44	gal/hr

Emissions factor

Item	value	units	Ref
ROG	5.5	lb/mmcf	AP-42, table 1.4-1
SOx	0.6	lb/mmcf	AP-42, table 1.4-1
PM	7.6	lb/mmcf	AP-42, table 1.4-1
NOx-default	100	lb/mmcf	AP-42, table 1.4-1
CO-default	85	lb/mmcf	AP-42, table 1.4-1
MMCF/hr	0.01	MMCF/hr	
therm/hr	105	therm/hr	

ROG, SOX and PM10 Emissions = lb/mmcf * MMCF/hr * load

2. Combustion Emissions

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.0550	1.32	1.32	480
NOx	0.11	2.75	2.75	1001.00
SO2	0.0060	0.1440	0.14	52.416
CO	3.10	74.47	74.47	27106.57
PM=PM10=PN	0.076	1.82	1.82	664

By EPA Method 19

By the Ideal Gas Law

$$= [PV = nRT]$$

$$= [n/V = P/RT]$$

$$= [\text{lbmol}/\text{dscf}@68\text{F.}]$$

$$= [1 \text{ atm}/(0.73 \text{ ft}^3\text{-atm}/\text{lb-mole-R}*(460 \text{ F}+68\text{F}))]$$

$$= [0.00259 \text{ lbmol}/\text{dscf}]$$

BOILER EMISSIONS FOR FIRING ON NATURAL GAS ONLY

1. DATA

Max burner rating	10,500,000	BTU/hr
Max hr/dy	24	hr/day
day per week	7	dy/wk
wk/yr	52	wk/yr
Use default NOx E.F.	no	yes/no
Use default CO E.F.	NO	
Max NOx rate	30	ppm
Max CO rate	400	ppm
30-day ave	30	days
Ave load-Rule 1401	100.0%	
Max load-Reg 13	100.0%	
Fuel HHV	1050	btu/ft3
Fuel rate	10000	ft3/hr
fuel/mon	7200000	
turn down ratio	25.00%	
min fuel rate	2500.0000	ft3/hr

PREVIOUS EMISSION

Emissions factor

Item	value	units	Ref
ROG	5.5	lb/mmcf	AP-42, table 1.4-1
SOx	0.6	lb/mmcf	AP-42, table 1.4-1
PM	7.6	lb/mmcf	AP-42, table 1.4-1
NOx-default	100	lb/mmcf	AP-42, table 1.4-1
CO-default	85	lb/mmcf	AP-42, table 1.4-1
MMCF/hr	0.01	MMCF/hr	
therm/hr	105	therm/hr	

ROG, SOX and PM10 Emissions = lb/mmcf * MMCF/hr * load

2. Combustion Emissions

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.0550	1.32	1.32	480
NOx	0.38	9.18	9.18	3341.52
SO2	0.0060	0.1440	0.14	52.416
CO	3.10	74.47	74.47	27106.57
PM=PM10=PN	0.076	1.82	1.82	664

By EPA Method 19

By the Ideal Gas Law

= $[PV = nRT]$

= $[n/V = P/RT]$

= $[lbmol/dscf@68F.]$

= $[1 atm / (0.73 ft^3-atm/lb-mole-R*(460 F+68F))]$

= $[0.00259 lbmol/dscf]$

BOILER EMISSIONS FOR FIRING ON NATURAL GAS ONLY

1. DATA

Max burner rating	12,440,000	BTU/hr
Max hr/day	24	hr/day
day per week	7	dy/wk
wk/yr	52	wk/yr
Use default NOx E.F.	no	yes/no
Use default CO E.F.	NO	
Max NOx rate	9	ppm
Max CO rate	400	ppm
30-day ave	30	days
Ave load-Rule 1401	100.0%	
Max load-Reg 13	100.0%	
Fuel HHV	1050	btu/ft3
Fuel rate	11848	ft3/hr
fuel/mon	8530286	
turn down ratio	25.00%	
min fuel rate	2961.9048	ft3/hr
min fuel rate-oil	23.04	gal/hr

Emissions factor

Item	value	units	Ref
ROG	5.5	lb/mmcf	AP-42, table 1.4-1
SOx	0.6	lb/mmcf	AP-42, table 1.4-1
PM	7.6	lb/mmcf	AP-42, table 1.4-1
NOx-default	100	lb/mmcf	AP-42, table 1.4-1
CO-default	85	lb/mmcf	AP-42, table 1.4-1
MMCF/hr	0.011847619	MMCF/hr	
therm/hr	124.4	therm/hr	

ROG, SOX and PM10 Emissions = lb/mmcf * MMCF/hr * load

2. Combustion Emissions

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.0652	1.56	1.56	570
NOx	0.14	3.26	3.26	1186.64
SO2	0.0071	0.1706	0.17	62.113
CO	3.68	88.23	88.23	32114.83
PM=PM10=PN	0.090	2.16	2.16	786

By EPA Method 19

By the Ideal Gas Law

$$= [PV = nRT]$$

$$= [n/V = P/RT]$$

$$= [\text{lbmol/dscf}@68F.]$$

$$= [1 \text{ atm}/(0.73 \text{ ft}^3\text{-atm/lb-mole-R}*(460 \text{ F}+68\text{F}))]$$

$$= [0.00259 \text{ lbmol/dscf}]$$

BOILER EMISSIONS FOR FIRING ON NATURAL GAS ONLY

1. DATA

Max burner rating	12,440,000	BTU/hr
Max hr/dy	24	hr/day
day per week	7	dy/wk
wk/yr	52	wk/yr
Use default NOx E.F.	no	yes/no
Use default CO E.F.	NO	
Max NOx rate	30	ppm
Max CO rate	400	ppm
30-day ave	30	days
Ave load-Rule 1401	100.0%	
Max load-Reg 13	100.0%	
Fuel HHV	1050	btu/ft3
Fuel rate	11848	ft3/hr
fuel/mon	8530286	
turn down ratio	25.00%	
min fuel rate	2961.9048	ft3/hr

PREVIOUS EMISSIONS

Emissions factor

Item	value	units	Ref
ROG	5.5	lb/mmcf	AP-42, table 1.4-1
SOx	0.6	lb/mmcf	AP-42, table 1.4-1
PM	7.6	lb/mmcf	AP-42, table 1.4-1
NOx-default	100	lb/mmcf	AP-42, table 1.4-1
CO-default	85	lb/mmcf	AP-42, table 1.4-1
MMCF/hr	0.011847619	MMCF/hr	
therm/hr	124.4	therm/hr	

ROG, SOX and PM10 Emissions = lb/mmcf * MMCF/hr * load

2. Combustion Emissions

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.0652	1.56	1.56	570
NOx	0.45	10.87	10.87	3956.68
SO2	0.0071	0.1706	0.17	62.113
CO	3.68	88.23	88.23	32114.83
PM=PM10=PM	0.090	2.16	2.16	786

By EPA Method 19

By the Ideal Gas Law

$$= [PV = nRT]$$

$$= [n/V = P/RT]$$

$$= [\text{lbmol/dscf}@68F.]$$

$$= [1 \text{ atm}/(0.73 \text{ ft}^3\text{-atm/lb-mole-R}*(460 \text{ F}+68F))]]$$

$$= [0.00259 \text{ lbmol/dscf}]$$

**FACILITY PERMIT TO OPERATE
ST. BERNARDINE MEDICAL CENTER**

**Facility Equipment and Requirements
(Section D)**

This section consists of a table listing all permitted equipment at the facility, facility wide requirements, all individual Permits to Construct and Permits to Operate issued to various equipment at the facility, and Rule 219-exempt equipment subject to source-specific requirements. Each permit and Rule 219-exempt equipment will list operating conditions including periodic monitoring requirements, and applicable emission limits and requirements that the equipment is subject to. Also included is the rule origin and authority of each emission limit and permit condition.

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PERMITTED EQUIPMENT LIST

THE FOLLOWING IS A LIST OF ALL PERMITS TO CONSTRUCT AND PERMITS TO OPERATE AT THIS FACILITY:

Application number	Permit to Operate number	Equipment description
137296	M57243	I C E (>500 HP) EM ELEC GEN DIESEL
519834		BOILER (5-20 MMBTU/HR) COMB GAS-DISTILL
519835		BOILER (5-20 MMBTU/HR) COMB GAS-DISTILL
519836		BOILER (5-20 MMBTU/HR) COMB GAS-DISTILL
333723	F11259	I C E (>500 HP) EM ELEC GEN DIESEL
333724	F11257	I C E (>500 HP) EM ELEC GEN DIESEL
416768	G1862	I C E (>500 HP) COGEN NAT GAS
416769	G1865	I C E (>500 HP) COGEN NAT GAS

NOTE: EQUIPMENT LISTED ABOVE THAT HAVE NO CORRESPONDING PERMITS TO OPERATE NUMBER ARE ISSUED PERMITS TO CONSTRUCT. THE ISSUANCE OR DENIAL OF THEIR PERMITS TO OPERATE IS SUBJECT TO ENGINEERING FINAL REVIEW. ANY OTHER APPLICATIONS THAT ARE STILL BEING PROCESSED AND HAVE NOT BEEN ISSUED PERMITS TO CONSTRUCT OR PERMITS TO OPERATE WILL NOT BE FOUND IN THIS TITLE V PERMIT.

FACILITY PERMIT TO OPERATE ST. BERNARDINE MEDICAL CENTER

FACILITY WIDE CONDITION(S)

Condition(s):

1. EXCEPT FOR OPEN ABRASIVE BLASTING OPERATIONS, THE OPERATOR SHALL NOT DISCHARGE INTO THE ATMOSPHERE FROM ANY SINGLE SOURCE OF EMISSIONS WHATSOEVER ANY AIR CONTAMINANT FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR WHICH IS:
 - A. AS DARK OR DARKER IN SHADE AS THAT DESIGNATED NO. 1 ON THE RINGLEMANN CHART, AS PUBLISHED BY THE UNITED STATES BUREAU OF MINES; OR
 - B. OF SUCH OPACITY AS TO OBSCURE AN OBSERVER'S VIEW TO A DEGREE EQUAL TO OR GREATER THAN DOES SMOKE DESCRIBED IN SUBPARAGRAPH (A) OF THIS CONDITION.
[RULE 401]
2. THE OPERATOR SHALL NOT USE FUEL CONTAINING SULFUR COMPOUNDS IN EXCESS OF 15 PPM BY WEIGHT.
[RULES: 431.2 AND 1470]
3. THE OPERATOR SHALL NOT USE FUEL CONTAINING SULFUR COMPOUNDS IN EXCESS OF 16 PPM BY WEIGHT.
[RULES: 431.1]

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PERMIT TO OPERATE

Permit No. M57243
A/N 137296

Equipment Description:

INTERNAL COMBUSTION ENGINE, DETROIT DIESEL, MODEL NO. 8123-7305, SERIAL NO. 12VF001612, 750 H.P., DRIVING AN ELECTRIC GENERATOR, LIMA, MODEL 3150-0819, SERIAL NO. AC92492, AT 500 K.W. FOR EMERGENCY POWER GENERATION.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS ENGINE SHALL NOT BE OPERATED MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 30 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING.
[RULES: 1470 AND 1304]
4. THE OPERATION OF THIS ENGINE BEYOND 30 HOURS PER YEAR FOR MAINTENANCE AND PERFORMANCE TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE.
[RULES: 1470 AND 1304]
5. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO SO BY THE UTILITY OR THE GRID OPERATOR.
[RULES: 1470 AND 1304]

Periodic Monitoring:

6. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THIS EQUIPMENT.
[RULE 3004(a)(4)]

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7. THE OPERATOR SHALL KEEP A MONTHLY LOG OF USAGE THAT SHALL LIST AND DOCUMENT THE NATURE OF USE IN EACH OF THE FOLLOWING AREAS:
- A. EMERGENCY USE HOURS OF OPERATION;
 - B. MAINTENANCE AND TESTING HOURS OF OPERATION;
 - C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION).

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION.

THE OPERATOR SHALL RECORD THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

LOG ENTRIES SHALL BE KEPT FOR A MINIMUM OF FIVE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST.
[RULE 3004(a)(4)]

Emissions And Requirements:

8. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
- PM: RULE 404, SEE APPENDIX B FOR THE EMISSION LIMITS

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PERMIT TO OPERATE

Permit No.
A/N 519834

Equipment Description:

BOILER, WATER TUBE, INTERNATIONAL BOILER WORKS, MODEL NO. TJW-C-15, NATURAL GAS WITH FUEL OIL STANDBY FUEL, WITH ONE LOW NOX COMBUSTION BURNER, ST JOHNSON, MODEL NO. NOXMATIC 300, RATED AT 12,440,000 BTU PER HOUR WITH AN INDUCED. FLUE GAS RECIRCULATION SYSTEM.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL 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 SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL COMPLY WITH RULE 1146.
[RULE 1146]
4. THE OPERATOR OF THIS EQUIPMENT SHALL COMPLY WITH SOURCE TESTING REQUIREMENTS IN SUBDIVISION (d)(6)—COMPLIANCE DETERMINATION OF RULE 1146.
[RULE 1146]
5. THE OPERATOR OF THIS EQUIPMENT SHALL COMPLY WITH PERIODIC MONITORING REQUIREMENTS OF RULE 1146 (c)(8)
[RULE 1146].
6. THIS BOILER SHALL EMIT NO MORE THAN 30 PPM FOR OXIDES OF NITROGEN (NOX) MEASURED BY VOLUME ON A DRY BASIS AT 3% OXYGEN AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHEN FIRING ON NATURAL GAS.
[RULE 1146]
7. EFFECTIVE 1/1/2013 THIS BOILER SHALL EMIT NO MORE THAN 9 PPM FOR OXIDES OF NITROGEN (NOX) MEASURED BY VOLUME ON A DRY BASIS AT 3% OXYGEN AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHEN FIRING ON NATURAL GAS.
[RULE 1146]
8. EMISSIONS OF NOX SHALL NOT EXCEED 40 PPM REFERENCED AT 3% O₂ ON A DRY BASIS, AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHENEVER THIS EQUIPMENT IS FIRED WITH OIL.
[RULE 1146]

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9. EMISSIONS OF CO SHALL NOT EXCEED 400 PPM REFERENCED AT 3% O2 ON A DRY BASIS, AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES.
[RULE 1146]
10. THE BOILER SHALL BE FIRED ON NATURAL GAS ONLY, EXCEPT DURING PERIODS OF NATURAL GAS CURTAILMENT OR MAINTENANCE TESTING.
[RULE 1146]
11. THE BURNER SHALL NOT FIRE ON LESS THAN 2962 SCF/HR OF NATURAL GAS DURING NORMAL OPERATION, NOT INCLUDING START-UPS AND SHUTDOWNS.
[RULE 1146]
12. FUEL OIL SUPPLIED TO THE BURNER SHALL BE NO. 2 OR A LIGHTER GRADE AS DESCRIBED BY THE LATEST ASTM SPECIFICATIONS AND SHALL CONTAIN LESS THAN 15 PPM SULFUR BY WEIGHT.
[RULE 431.2]
13. THIS BOILER SHALL BE EQUIPPED WITH A NON-RESETTABLE, TOTALIZING FLOW METER FOR EACH FUEL TO BE BURNED.
[RULE 1146]
14. THE OPERATOR SHALL INSTALL A FLOW METER TO ACCURATELY INDICATE THE FLOW RATE OF THE GAS AND SHALL RECORD THE HOURLY GAS BEING FIRED IN THE BOILER. THE MEASURING DEVICE SHALL CONTINUOUSLY MEASURE THE FLOW RATE AND SHALL BE ACCURATE TO WITHIN PLUS OR MINUS 5 PERCENT AND SHALL BE CALIBRATED ONCE EVERY 12 MONTHS. CALIBRATION RECORDS AND HOURLY FLOW RECORDS SHALL BE KEPT ON SITE AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1146]
15. THE BURNER SHALL NOT FIRE ON LESS THAN 23 GAL/HR OF FUEL OIL DURING NORMAL OPERATION, NOT INCLUDING START-UPS AND SHUTDOWNS.
[RULE 1146]
16. THE OPERATOR SHALL INSTALL A FLOW METER TO ACCURATELY INDICATE THE FLOW RATE OF THE FUEL OIL AND SHALL RECORD THE HOURLY FUEL OIL BEING FIRED IN THE BOILER. THE MEASURING DEVICE SHALL CONTINUOUSLY MEASURE THE FLOW RATE AND SHALL BE ACCURATE TO WITHIN PLUS OR MINUS 5 PERCENT AND SHALL BE CALIBRATED ONCE EVERY 12 MONTHS. CALIBRATION RECORDS AND HOURLY FLOW RECORDS SHALL BE KEPT ON SITE AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1146]
17. RETAIN ALL RECORDS REQUIRED BY PERMIT FOR A PERIOD OF FIVE YEARS AND MAKE ALL RECORDS AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1146]
18. THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT A SOURCE TEST UNDER THE FOLLOWING CONDITIONS:

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- A. 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.
- B. THE SOURCE TEST SHALL BE DONE TO VERIFY COMPLIANCE PERMIT CONDITION NO. SEVEN AND NINE.
- C. THE SOURCE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH SCAQMD METHOD 100.1.
- D. THE TEST SHALL BE CONDUCTED FOR 15 MINUTES FOR EACH LOAD, WHILE FIRING AT MAXIMUM, MINIMUM AND LOW FIRING RATES.
- E. 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: ROY OLIVARES, P.O. BOX 4941, DIAMOND BAR, CA 91765). THE RESULTS IN WRITING SHALL BE SUBMITTED WITHIN 45 DAYS AFTER THE SOURCE TEST IS COMPLETED. IT SHALL INCLUDE, BUT NOT LIMITED TO EMISSIONS RATE IN POUNDS PER HOUR AND CONCENTRATION IN PPMV AT THE OUTLET OF THE BOILER.
- F. A TESTING LABORATORY CERTIFIED BY THE CALIFORNIA AIR RESOURCES BOARD IN THE REQUIRED TEST METHODS FOR CRITERIA POLLUTANT TO BE MEASURED, AND IN COMPLIANCE WITH DISTRICT RULE 304 (NO CONFLICT OF INTEREST) SHALL CONDUCT THE TEST
- G. SAMPLING FACILITIES SHALL COMPLY WITH THE AQMD "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES", PURSUANT TO RULE 217. [RULE 1146]

Periodic Monitoring:

- 19. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSION FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THIS EQUIPMENT HAS COMBUSTED ONE MILLION GALLONS OF DIESEL FUEL, TO BE COUNTED CUMULATIVELY OVER A FIVE YEAR PERIOD. THE INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE HOUR, THE OPERATOR SHALL EITHER:
 - A. TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN THE SAME FASHION AS DEVIATIONS ARE REQUIRED TO BE REPORTED IN SECTION K OF THIS PERMIT; OR
 - B. HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND

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REPORT ANY DEVIATIONS TO AQMD.

IN ADDITION, THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- I. STACK OR EMISSION POINT IDENTIFICATION;
- II. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;
- III. DATE AND TIME VISIBLE EMISSION WAS ABATED; AND
- IV. VISIBLE EMISSION OBSERVATION RECORDED BY A CERTIFIED SMOKE READER.
[RULE 3004 (a) (4)]

20. IF ANNUAL FUEL OIL USAGE EXCEEDS 2,000,000 GALLONS IN ANY ONE YEAR, THEN THE OPERATOR SHALL DETERMINE COMPLIANCE WITH THE PARTICULATE MATTER (PM) EMISSION LIMIT(S) BY CONDUCTING A SOURCE TEST AT LEAST ONCE EVERY FIVE YEARS USING AQMD METHOD 5.2 . THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS TO DEMONSTRATE COMPLIANCE WITH RULE 409 LIMIT. THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.

FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH RULE 409 LIMIT, THE EMISSIONS SHALL BE MEASURED AND AVERAGED OVER A 60 MINUTE TIME PERIOD.

THE OPERATOR SHALL CONDUCT AN ANNUAL MAINTENANCE INSPECTION CHECK OF THE OPERATING PRESSURE, TEMPERATURE, AIR SUPPLY, VENT, SMOKE SPOT, BURNER CONDITION, HEAT-TRANSFER SURFACE CONDITION, WATER TREATMENT, BLOWDOWN AND LEAKAGE.

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- A. DATE WHEN ANNUAL MAINTENANCE INSPECTION WAS CONDUCTED.
[RULE 3004 (a) (4)]

21. FOR UNITS WITH A HEAT INPUT GREATER THAN 10 MMBTU/HR AND ANNUAL OIL USAGE GREATER THAN 1,000,000 GALLONS OR GREATER THAN 336 HOURS OF OPERATION, BUT DO NOT EXCEED 2,000,000 GALLONS IN ANY ONE YEAR. THE OPERATOR SHALL CONDUCT AN ANNUAL MAINTENANCE INSPECTION CHECK OF THE OPERATING PRESSURE, TEMPERATURE, AIR SUPPLY, VENT, SMOKE SPOT, BURNER CONDITION, HEAT-TRANSFER SURFACE CONDITION, WATER TREATMENT, BLOWDOWN AND LEAKAGE

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- A. DATE WHEN ANNUAL MAINTENANCE INSPECTION WAS CONDUCTED.
[RULE 3004 (a) (4)]

Emissions And Requirements:

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

CO: 2000 PPMV, RULE 407
SOX: 500 PPMV FUEL OIL, RULE 409
SOX: 40 PPMV NATURAL GAS, RULE 431.1
PM: 0.1 GR/SCF, RULE 409
CO: 400 PPMV, RULE 1146
NOX: 40 PPMV FUEL OIL, RULE 1146
NOX: 30 PPMV NATURAL GAS UNTIL 12/31/2012, RULE 1146
NOX: 9 PPMV NATURAL GAS ON OR AFTER JANUARY 1, 2013

FACILITY PERMIT TO OPERATE ST. BERNARDINE MEDICAL CENTER

PERMIT TO OPERATE

Permit No.
A/N 519835

Equipment Description:

BOILER, NO. 1, FIRE TUBE, FLO KONTROL, MODEL 15012, NATURAL GAS WITH FUEL OIL STANDBY FUEL, WITH ONE COMBUSTION LOW NOX BURNER, ST JOHNSON, MODEL NOXMATIC 250, RATED AT 10,500,000 BTU PER, A 10 H.P. COMBUSTION AIR BLOWER AND AN INDUCED FLUE GAS RECIRCULATION SYSTEM.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL 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 SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL COMPLY WITH RULE 1146.
4. THE OPERATOR OF THIS EQUIPMENT SHALL COMPLY WITH SOURCE TESTING REQUIREMENTS IN SUBDIVISION (d)(6)--COMPLIANCE DETERMINATION OF RULE 1146.
5. THE OPERATOR OF THIS EQUIPMENT SHALL COMPLY WITH PERIODIC MONITORING REQUIREMENTS OF RULE 1146 (c)(8).
6. THIS BOILER SHALL EMIT NO MORE THAN 30 PPM FOR OXIDES OF NITROGEN (NOX) MEASURED BY VOLUME ON A DRY BASIS AT 3% OXYGEN AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHEN FIRING ON NATURAL GAS.
7. EFFECTIVE 1/1/2013 THIS BOILER SHALL EMIT NO MORE THAN 9 PPM FOR OXIDES OF NITROGEN (NOX) MEASURED BY VOLUME ON A DRY BASIS AT 3% OXYGEN AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHEN FIRING ON NATURAL GAS.
8. EMISSIONS OF NOX SHALL NOT EXCEED 40 PPM REFERENCED AT 3% O2 ON A DRY BASIS, AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHENEVER THIS EQUIPMENT IS FIRED WITH OIL.
9. EMISSIONS OF CO SHALL NOT EXCEED 400 PPM REFERENCED AT 3% O2 ON A DRY BASIS, AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES.

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10. THE BOILER SHALL BE FIRED ON NATURAL GAS ONLY, EXCEPT DURING PERIODS OF NATURAL GAS CURTAILMENT OR MAINTENANCE TESTING.
11. THE BURNER SHALL NOT FIRE ON LESS THAN 2500 SCF/HR OF NATURAL GAS DURING NORMAL OPERATION, NOT INCLUDING START-UPS AND SHUTDOWNS.
12. FUEL OIL SUPPLIED TO THE BURNER SHALL BE NO. 2 OR A LIGHTER GRADE AS DESCRIBED BY THE LATEST ASTM SPECIFICATIONS AND SHALL CONTAIN LESS THAN 15 PPM SULFUR BY WEIGHT.
[RULE 431.2]
13. THIS BOILER SHALL BE EQUIPPED WITH A NON-RESETTABLE, TOTALIZING FLOW METER FOR EACH FUEL TO BE BURNED.
[RULE 1146]
14. THE OPERATOR SHALL INSTALL A FLOW METER TO ACCURATELY INDICATE THE FLOW RATE OF THE GAS AND SHALL RECORD THE HOURLY GAS BEING FIRED IN THE BOILER. THE MEASURING DEVICE SHALL CONTINUOUSLY MEASURE THE FLOW RATE AND SHALL BE ACCURATE TO WITHIN PLUS OR MINUS 5 PERCENT AND SHALL BE CALIBRATED ONCE EVERY 12 MONTHS. CALIBRATION RECORDS AND HOURLY FLOW RECORDS SHALL BE KEPT ON SITE AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
15. THE BURNER SHALL NOT FIRE ON LESS THAN 19 GAL/HR OF FUEL OIL DURING NORMAL OPERATION, NOT INCLUDING START-UPS AND SHUTDOWNS.
[RULE 1146]
16. THE OPERATOR SHALL INSTALL A FLOW METER TO ACCURATELY INDICATE THE FLOW RATE OF THE FUEL OIL AND SHALL RECORD THE HOURLY FUEL OIL BEING FIRED IN THE BOILER. THE MEASURING DEVICE SHALL CONTINUOUSLY MEASURE THE FLOW RATE AND SHALL BE ACCURATE TO WITHIN PLUS OR MINUS 5 PERCENT AND SHALL BE CALIBRATED ONCE EVERY 12 MONTHS. CALIBRATION RECORDS AND HOURLY FLOW RECORDS SHALL BE KEPT ON SITE AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1146]
17. RETAIN ALL RECORDS REQUIRED BY PERMIT FOR A PERIOD OF FIVE YEARS AND MAKE ALL RECORDS AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
18. THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT A SOURCE TEST UNDER THE FOLLOWING CONDITIONS:
 - A. 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.
 - B. THE SOURCE TEST SHALL BE DONE TO VERIFY COMPLIANCE PERMIT CONDITION NO. SEVEN AND NINE.
 - C. THE SOURCE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH SCAQMD METHOD 100.1.

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- D. THE TEST SHALL BE CONDUCTED FOR 15 MINUTES FOR EACH LOAD, WHILE FIRING AT MAXIMUM, MINIMUM AND LOW FIRING RATES.
- E. 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: ROY OLIVARES, P.O. BOX 4941, DIAMOND BAR, CA 91765). THE RESULTS IN WRITING SHALL BE SUBMITTED WITHIN 45 DAYS AFTER THE SOURCE TEST IS COMPLETED. IT SHALL INCLUDE, BUT NOT LIMITED TO EMISSIONS RATE IN POUNDS PER HOUR AND CONCENTRATION IN PPMV AT THE OUTLET OF THE BOILER.
- F. A TESTING LABORATORY CERTIFIED BY THE CALIFORNIA AIR RESOURCES BOARD IN THE REQUIRED TEST METHODS FOR CRITERIA POLLUTANT TO BE MEASURED, AND IN COMPLIANCE WITH DISTRICT RULE 304 (NO CONFLICT OF INTEREST) SHALL CONDUCT THE TEST
- G. SAMPLING FACILITIES SHALL COMPLY WITH THE AQMD "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES", PURSUANT TO RULE 217. [RULE 1146]

Periodic Monitoring:

- 19. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSION FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THIS EQUIPMENT HAS COMBUSTED ONE MILLION GALLONS OF DIESEL FUEL, TO BE COUNTED CUMULATIVELY OVER A FIVE YEAR PERIOD. THE INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE HOUR, THE OPERATOR SHALL EITHER:
 - A. TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN THE SAME FASHION AS DEVIATIONS ARE REQUIRED TO BE REPORTED IN SECTION K OF THIS PERMIT; OR
 - B. HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND REPORT ANY DEVIATIONS TO AQMD.

IN ADDITION, THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- I. STACK OR EMISSION POINT IDENTIFICATION;
- II. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;

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- III. DATE AND TIME VISIBLE EMISSION WAS ABATED; AND
- IV. VISIBLE EMISSION OBSERVATION RECORDED BY A CERTIFIED SMOKE READER.
[RULE 3004 (a) (4)]

20. IF ANNUAL FUEL OIL USAGE EXCEEDS 2,000,000 GALLONS IN ANY ONE YEAR, THEN THE OPERATOR SHALL DETERMINE COMPLIANCE WITH THE PARTICULATE MATTER (PM) EMISSION LIMIT(S) BY CONDUCTING A SOURCE TEST AT LEAST ONCE EVERY FIVE YEARS USING AQMD METHOD 5.2 . THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS TO DEMONSTRATE COMPLIANCE WITH RULE 409 LIMIT. THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.

FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH RULE 409 LIMIT, THE EMISSIONS SHALL BE MEASURED AND AVERAGED OVER A 60 MINUTE TIME PERIOD.

THE OPERATOR SHALL CONDUCT AN ANNUAL MAINTENANCE INSPECTION CHECK OF THE OPERATING PRESSURE, TEMPERATURE, AIR SUPPLY, VENT, SMOKE SPOT, BURNER CONDITION, HEAT-TRANSFER SURFACE CONDITION, WATER TREATMENT, BLOWDOWN AND LEAKAGE.

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- B. DATE WHEN ANNUAL MAINTENANCE INSPECTION WAS CONDUCTED.
[RULE 3004 (a) (4)]

21. FOR UNITS WITH A HEAT INPUT GREATER THAN 10 MMBTU/HR AND ANNUAL OIL USAGE GREATER THAN 1,000,000 GALLONS OR GREATER THAN 336 HOURS OF OPERATION, BUT DO NOT EXCEED 2,000,000 GALLONS IN ANY ONE YEAR. THE OPERATOR SHALL CONDUCT AN ANNUAL MAINTENANCE INSPECTION CHECK OF THE OPERATING PRESSURE, TEMPERATURE, AIR SUPPLY, VENT, SMOKE SPOT, BURNER CONDITION, HEAT-TRANSFER SURFACE CONDITION, WATER TREATMENT, BLOWDOWN AND LEAKAGE

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- A. DATE WHEN ANNUAL MAINTENANCE INSPECTION WAS CONDUCTED.
[RULE 3004 (a) (4)]

Emissions And Requirements:

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

CO: 2000 PPMV, RULE 407
SOX: 500 PPMV FUEL OIL, RULE 409
SOX: 40 PPMV NATURAL GAS, RULE 431.1
PM: 0.1 GR/SCF, RULE 409
CO: 400 PPMV, RULE 1146

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NOX: 40 PPMV FUEL OIL, RULE 1146
NOX: 30 PPMV NATURAL GAS UNTIL 12/31/2012, RULE 1146
NOX: 9 PPMV NATURAL GAS ON OR AFTER JANUARY 1, 2013

FACILITY PERMIT TO OPERATE ST. BERNARDINE MEDICAL CENTER

PERMIT TO OPERATE

Permit No.
A/N 519836

Equipment Description:

BOILER, NO. 2, WATER TUBE, FLO KONTROL, MODEL 15012, NATURAL GAS WITH FUEL OIL STANDBY FUEL, WITH ONE COMBUSTION LOW NOX BURNER, ST JOHNSON, MODEL NOXMATIC 250, RATED AT 10,500,000 BTU PER, A 10 H.P. COMBUSTION AIR BLOWER AND AN INDUCED FLUE GAS RECIRCULATION SYSTEM.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL 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 SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL COMPLY WITH RULE 1146.
4. THE OPERATOR OF THIS EQUIPMENT SHALL COMPLY WITH SOURCE TESTING REQUIREMENTS IN SUBDIVISION (d)(6)--COMPLIANCE DETERMINATION OF RULE 1146.
5. THE OPERATOR OF THIS EQUIPMENT SHALL COMPLY WITH PERIODIC MONITORING REQUIREMENTS OF RULE 1146 (c)(8).
6. THIS BOILER SHALL EMIT NO MORE THAN 30 PPM FOR OXIDES OF NITROGEN (NOX) MEASURED BY VOLUME ON A DRY BASIS AT 3% OXYGEN AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHEN FIRING ON NATURAL GAS.
7. EFFECTIVE 1/1/2013 THIS BOILER SHALL EMIT NO MORE THAN 9 PPM FOR OXIDES OF NITROGEN (NOX) MEASURED BY VOLUME ON A DRY BASIS AT 3% OXYGEN AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHEN FIRING ON NATURAL GAS.
8. EMISSIONS OF NOX SHALL NOT EXCEED 40 PPM REFERENCED AT 3% O₂ ON A DRY BASIS, AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES WHENEVER THIS EQUIPMENT IS FIRED WITH OIL.
9. EMISSIONS OF CO SHALL NOT EXCEED 400 PPM REFERENCED AT 3% O₂ ON A DRY BASIS, AVERAGED OVER A PERIOD OF 15 CONSECUTIVE MINUTES.

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10. THE BOILER SHALL BE FIRED ON NATURAL GAS ONLY, EXCEPT DURING PERIODS OF NATURAL GAS CURTAILMENT OR MAINTENANCE TESTING.
11. THE BURNER SHALL NOT FIRE ON LESS THAN 2500 SCF/HR OF NATURAL GAS DURING NORMAL OPERATION, NOT INCLUDING START-UPS AND SHUTDOWNS.
12. FUEL OIL SUPPLIED TO THE BURNER SHALL BE NO. 2 OR A LIGHTER GRADE AS DESCRIBED BY THE LATEST ASTM SPECIFICATIONS AND SHALL CONTAIN LESS THAN 15 PPM SULFUR BY WEIGHT.
[RULE 431.2]
13. THIS BOILER SHALL BE EQUIPPED WITH A NON-RESETTABLE, TOTALIZING FLOW METER FOR EACH FUEL TO BE BURNED.
[RULE 1146]
14. THE OPERATOR SHALL INSTALL A FLOW METER TO ACCURATELY INDICATE THE FLOW RATE OF THE GAS AND SHALL RECORD THE HOURLY GAS BEING FIRED IN THE BOILER. THE MEASURING DEVICE SHALL CONTINUOUSLY MEASURE THE FLOW RATE AND SHALL BE ACCURATE TO WITHIN PLUS OR MINUS 5 PERCENT AND SHALL BE CALIBRATED ONCE EVERY 12 MONTHS. CALIBRATION RECORDS AND HOURLY FLOW RECORDS SHALL BE KEPT ON SITE AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
15. THE BURNER SHALL NOT FIRE ON LESS THAN 19 GAL/HR OF FUEL OIL DURING NORMAL OPERATION, NOT INCLUDING START-UPS AND SHUTDOWNS.
[RULE 1146]
16. THE OPERATOR SHALL INSTALL A FLOW METER TO ACCURATELY INDICATE THE FLOW RATE OF THE FUEL OIL AND SHALL RECORD THE HOURLY FUEL OIL BEING FIRED IN THE BOILER. THE MEASURING DEVICE SHALL CONTINUOUSLY MEASURE THE FLOW RATE AND SHALL BE ACCURATE TO WITHIN PLUS OR MINUS 5 PERCENT AND SHALL BE CALIBRATED ONCE EVERY 12 MONTHS. CALIBRATION RECORDS AND HOURLY FLOW RECORDS SHALL BE KEPT ON SITE AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1146]
17. RETAIN ALL RECORDS REQUIRED BY PERMIT FOR A PERIOD OF FIVE YEARS AND MAKE ALL RECORDS AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
18. THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT A SOURCE TEST UNDER THE FOLLOWING CONDITIONS:
 - A. 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.
 - B. THE SOURCE TEST SHALL BE DONE TO VERIFY COMPLIANCE PERMIT CONDITION NO. SEVEN AND NINE.
 - C. THE SOURCE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH SCAQMD METHOD 100.1.

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- D. THE TEST SHALL BE CONDUCTED FOR 15 MINUTES FOR EACH LOAD, WHILE FIRING AT MAXIMUM, MINIMUM AND LOW FIRING RATES.
- E. 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: ROY OLIVARES, P.O. BOX 4941, DIAMOND BAR, CA 91765). THE RESULTS IN WRITING SHALL BE SUBMITTED WITHIN 45 DAYS AFTER THE SOURCE TEST IS COMPLETED. IT SHALL INCLUDE, BUT NOT LIMITED TO EMISSIONS RATE IN POUNDS PER HOUR AND CONCENTRATION IN PPMV AT THE OUTLET OF THE BOILER.
- F. A TESTING LABORATORY CERTIFIED BY THE CALIFORNIA AIR RESOURCES BOARD IN THE REQUIRED TEST METHODS FOR CRITERIA POLLUTANT TO BE MEASURED, AND IN COMPLIANCE WITH DISTRICT RULE 304 (NO CONFLICT OF INTEREST) SHALL CONDUCT THE TEST
- G. SAMPLING FACILITIES SHALL COMPLY WITH THE AQMD "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES", PURSUANT TO RULE 217. [RULE 1146]

Periodic Monitoring:

- 19. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSION FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THIS EQUIPMENT HAS COMBUSTED ONE MILLION GALLONS OF DIESEL FUEL, TO BE COUNTED CUMULATIVELY OVER A FIVE YEAR PERIOD. THE INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE HOUR, THE OPERATOR SHALL EITHER:
 - C. TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN THE SAME FASHION AS DEVIATIONS ARE REQUIRED TO BE REPORTED IN SECTION K OF THIS PERMIT; OR
 - D. HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND REPORT ANY DEVIATIONS TO AQMD.

IN ADDITION, THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- V. STACK OR EMISSION POINT IDENTIFICATION;
- VI. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;

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VII. DATE AND TIME VISIBLE EMISSION WAS ABATED; AND

VIII. VISIBLE EMISSION OBSERVATION RECORDED BY A CERTIFIED SMOKE READER.
[RULE 3004 (a) (4)]

20. IF ANNUAL FUEL OIL USAGE EXCEEDS 2,000,000 GALLONS IN ANY ONE YEAR, THEN THE OPERATOR SHALL DETERMINE COMPLIANCE WITH THE PARTICULATE MATTER (PM) EMISSION LIMIT(S) BY CONDUCTING A SOURCE TEST AT LEAST ONCE EVERY FIVE YEARS USING AQMD METHOD 5.2 . THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS TO DEMONSTRATE COMPLIANCE WITH RULE 409 LIMIT. THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.

FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH RULE 409 LIMIT, THE EMISSIONS SHALL BE MEASURED AND AVERAGED OVER A 60 MINUTE TIME PERIOD.

THE OPERATOR SHALL CONDUCT AN ANNUAL MAINTENANCE INSPECTION CHECK OF THE OPERATING PRESSURE, TEMPERATURE, AIR SUPPLY, VENT, SMOKE SPOT, BURNER CONDITION, HEAT-TRANSFER SURFACE CONDITION, WATER TREATMENT, BLOWDOWN AND LEAKAGE.

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

C. DATE WHEN ANNUAL MAINTENANCE INSPECTION WAS CONDUCTED.
[RULE 3004 (a) (4)]

21. FOR UNITS WITH A HEAT INPUT GREATER THAN 10 MMBTU/HR AND ANNUAL OIL USAGE GREATER THAN 1,000,000 GALLONS OR GREATER THAN 336 HOURS OF OPERATION, BUT DO NOT EXCEED 2,000,000 GALLONS IN ANY ONE YEAR. THE OPERATOR SHALL CONDUCT AN ANNUAL MAINTENANCE INSPECTION CHECK OF THE OPERATING PRESSURE, TEMPERATURE, AIR SUPPLY, VENT, SMOKE SPOT, BURNER CONDITION, HEAT-TRANSFER SURFACE CONDITION, WATER TREATMENT, BLOWDOWN AND LEAKAGE

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

A. DATE WHEN ANNUAL MAINTENANCE INSPECTION WAS CONDUCTED.
[RULE 3004 (a) (4)]

Emissions And Requirements:

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

CO: 2000 PPMV, RULE 407
SOX: 500 PPMV FUEL OIL, RULE 409
SOX: 40 PPMV NATURAL GAS, RULE 431.1
PM: 0.1 GR/SCF, RULE 409
CO: 400 PPMV, RULE 1146

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NOX: 40 PPMV FUEL OIL, RULE 1146
NOX: 30 PPMV NATURAL GAS UNTIL 12/31/2012, RULE 1146
NOX: 9 PPMV NATURAL GAS ON OR AFTER JANUARY 1, 2013

FACILITY PERMIT TO OPERATE ST. BERNARDINE MEDICAL CENTER

PERMIT TO OPERATE

Permit No. F11259
A/N 333723

Equipment Description:

INTERNAL COMBUSTION ENGINE, DETROIT DIESEL, 16 CYLINDERS, TURBOCHARGED AND AFTERCOOLED, MODEL NO. 8163-7416 (16V-92TA), SERIAL NO. 387465, 1232 BHP, DIESEL FUELED, DRIVING AN EMERGENCY ELECTRICAL GENERATOR.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THE FUEL INJECTION TIMING OF THIS ENGINE SHALL BE SET AND MAINTAINED AT 1.7 DEGREES RETARD RELATIVE TO PRODUCTION TIMING AS ESTABLISHED BY DETROIT DIESEL IN ITS PRODUCT ANNOUNCEMENT "INJECTION TIMING RETARD INSTRUCTIONS FOR CONFORMANCE WITH THE SCAQMD'S GENERAL PERMIT REGISTRATION PROGRAM 16V-92TA GENERATOR SET ENGINE MODEL 8163-7416."
[RULE 1304(a), RULE 1110.2]
4. THIS ENGINE SHALL NOT BE OPERATED MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 30 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING.
[RULES: 1470 AND 1304]
5. THE OPERATION OF THIS ENGINE BEYOND 30 HOURS PER YEAR FOR MAINTENANCE AND PERFORMANCE TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE.
[RULES: 1470 AND 1304]
6. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO SO BY THE UTILITY OR THE GRID OPERATOR.
[RULES: 1470 AND 1304]

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Periodic Monitoring:

7. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THIS EQUIPMENT.
[RULE 3004(a)(4)]

8. THE OPERATOR SHALL KEEP A MONTHLY LOG OF USAGE THAT SHALL LIST AND DOCUMENT THE NATURE OF USE IN EACH OF THE FOLLOWING AREAS:
 - A. EMERGENCY USE HOURS OF OPERATION;
 - B. MAINTENANCE AND TESTING HOURS OF OPERATION;
 - C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION).

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION.

THE OPERATOR SHALL RECORD THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

LOG ENTRIES SHALL BE KEPT FOR A MINIMUM OF FIVE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST.
[RULE 3004(a)(4)]

Emissions And Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR THE EMISSION LIMITS

FACILITY PERMIT TO OPERATE ST. BERNARDINE MEDICAL CENTER

PERMIT TO OPERATE

**Permit No. F11257
A/N 333724**

Equipment Description:

INTERNAL COMBUSTION ENGINE, DETROIT DIESEL, 16 CYLINDERS, TURBOCHARGED AND AFTERCOOLED, MODEL NO. 8163-7416 (16V-92TA), SERIAL NO. 387464, 1232 BHP, DIESEL FUELED, DRIVING AN EMERGENCY ELECTRICAL GENERATOR.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THE FUEL INJECTION TIMING OF THIS ENGINE SHALL BE SET AND MAINTAINED AT 1.7 DEGREES RETARD RELATIVE TO PRODUCTION TIMING AS ESTABLISHED BY DETROIT DIESEL IN ITS PRODUCT ANNOUNCEMENT "INJECTION TIMING RETARD INSTRUCTIONS FOR CONFORMANCE WITH THE SCAQMD'S GENERAL PERMIT REGISTRATION PROGRAM 16V-92TA GENERATOR SET ENGINE MODEL 8163-7416."
[RULE 1304(a), RULE 1110.2]
4. THIS ENGINE SHALL NOT BE OPERATED MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 30 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING.
[RULES: 1470 AND 1304]
5. THE OPERATION OF THIS ENGINE BEYOND 30 HOURS PER YEAR FOR MAINTENANCE AND PERFORMANCE TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE.
[RULES: 1470 AND 1304]
6. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO SO BY THE UTILITY OR THE GRID OPERATOR.
[RULES: 1470 AND 1304]

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Periodic Monitoring:

7. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THIS EQUIPMENT.
[RULE 3004(a)(4)]
8. THE OPERATOR SHALL KEEP A MONTHLY LOG OF USAGE THAT SHALL LIST AND DOCUMENT THE NATURE OF USE IN EACH OF THE FOLLOWING AREAS:
 - A. EMERGENCY USE HOURS OF OPERATION;
 - B. MAINTENANCE AND TESTING HOURS OF OPERATION;
 - C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION).

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION.

THE OPERATOR SHALL RECORD THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

LOG ENTRIES SHALL BE KEPT FOR A MINIMUM OF FIVE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST.
[RULE 3004(a)(4)]

Emissions And Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR THE EMISSION LIMITS

FACILITY PERMIT TO OPERATE ST. BERNARDINE MEDICAL CENTER

PERMIT TO OPERATE

Permit No. G1862
A/N 416768

Equipment Description:

INTERNAL COMBUSTION ENGINE, COGENERATION, NO. 1, WAUKESHA, MODEL NO. L7042GSI, SPARK IGNITED, FOUR CYCLE, RICH BURN, NATURAL GAS FIRED, 1478 BHP, TURBOCHARGED, AFTERCOOLED, DRIVING AN ELECTRICAL GENERATOR, WITH A 3-WAY CATALYTIC CONVERTER, NON-SELECTIVE TYPE, MIRATECH, MODEL NO. RHSS-4234-14-C2, AND AN AIR TO FUEL RATIO CONTROLLER, CONTINENTAL CONTROLS CORPORATION, MODEL NO. ECV5.

Conditions:

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
- 3) THIS ENGINE SHALL NOT BE OPERATED WITHOUT THE USE OF AN AUTOMATIC AIR TO FUEL RATIO CONTROLLER WHICH SHALL BE MAINTAINED AND KEPT IN PROPER OPERATING CONDITIONS AT ALL TIMES AS SPECIFIED BY THE MANUFACTURER.
[RULE 1303(a) (1)-BACT, RULE 1110.2]
- 4) THE CATALYTIC CONVERTER TEMPERATURE AND EXHAUST OXYGEN CONCENTRATION SHALL BE MAINTAINED WITHIN THE EFFECTIVE OPERATING RANGE OF THE CATALYTIC CONVERTER AS SPECIFIED BY THE MANUFACTURER.
[RULE 1303(a) (1)-BACT, RULE 1110.2]
- 5) THE EMISSIONS FROM THIS ENGINE SHALL NOT EXCEED THE FOLLOWING LIMITS (EXCEPT DURING COLD START-UP, NOT TO EXCEED 30 MINUTES):

	PPMV @ 15% O2 (DRY)	GM/BHP-HR
VOLATILE ORGANIC GASES (VOC)	37	0.15
NITROGEN OXIDES	13	0.15
CARBON MONOXIDE	84	0.6

[RULE 1303(a) (1)-BACT]

NOX AND CO SHALL BE AVERAGED OVER 15 MINUTES. VOC SHALL BE AVERAGED OVER THE SAMPLING TIME REQUIRED BY THE TEST METHOD.

THE OPERATOR SHALL COMPLY WITH THE FOLLOWING RULE 1110.2 EMISSION LIMITS BY JULY 1, 2011:

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PPMV @ 15% O2 (DRY)

VOLATILE ORGANIC GASES (VOC)	30
NITROGEN OXIDES	11
CARBON MONOXIDE	84

[RULE 1110.2]

- 6) RECORDS SHALL BE MAINTAINED IN ORDER TO COMPLY WITH CONDITION NO. 5. RECORDS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST..
[RULE 1110.2, 1303(a) (1)-BACT]
- 7) THE OPERATOR SHALL MAINTAIN A MONTHLY OPERATING ENGINE LOG THAT INCLUDES:
- A. TOTAL HOURS OF OPERATION;
 - B. TYPE OF GASEOUS FUEL;
 - C. FUEL CONSUMPTION (CUBIC FEET OF GAS), AND;
 - D. CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST REQUIRED IN SUBPARAGRAPH (F)(1)(C) OF RULE 1110.2 - AMENDED 2/1/2008.

THE LOG SHALL BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST.
[1110.2, RULE 1303(a) (1)-BACT]

- 8) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL THE MONITORING, TESTING, RECORDKEEPING AND REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1) - AMENDED 2/1/2008, AS OUTLINED BELOW:
- A. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER ON THE ENGINE (DISPLAY READING SHALL BE READILY AVAILABLE) TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.
 - B. CONDUCT SOURCE TESTING FOR NOX, VOC REPORTED AS CARBON, AND CO CONCENTRATIONS (CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS) AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. THE SOURCE TEST FREQUENCY MAY BE REDUCED TO ONCE EVERY THREE YEARS IF THE ENGINE HAS OPERATED LESS THAN 2,000 HOURS SINCE THE LAST SOURCE TEST.

THE SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE; NOT STEADY-STATE CONDITION, UNLESS STEADY-STATE IS THE NORMAL OPERATING CONDITION), AND A MINIMUM OF 15 MINUTES EACH AT THE MAXIMUM LOAD AND AT THE MINIMUM LOAD THAT CAN BE PRACTICALLY ACHIEVED DURING THE TEST.

THE OPERATOR SHALL USE ONLY A SOURCE TEST CONTRACTOR THAT IS APPROVED BY THE EXECUTIVE OFFICER UNDER THE DISTRICT'S LABORATORY APPROVAL PROGRAM (LAP) FOR THE NECESSARY TEST METHODS. THE OPERATOR SHALL COMPLY WITH THE PROCEDURES STATED IN RULE 1110.2 (F)(1)(C)(IV) THROUGH (VII) - AMENDED 2/1/2008, REGARDING THE SUBMITTAL OF SOURCE TEST PROTOCOL, SOURCE

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TEST REPORTS AND UTILITIES FOR SAMPLING AND TESTING EQUIPMENT.

- C. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1)(H)(I) THROUGH (III) - AMENDED 2/1/2008, PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.

[RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 3004(a)(4)-Periodic Monitoring]

- 9) A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) APPROVED BY THE DISTRICT ACCORDING TO RULE 218 SHALL BE INSTALLED, MAINTAINED AND OPERATED. IT SHALL MEASURE, RECORD, OVER A FIFTEEN MINUTE AVERAGE TIME PERIOD, NOX, CO AND O₂ CONCENTRATIONS, ON A DRY BASIS OF THE INTERNAL COMBUSTION ENGINE EXHAUST, MEASURED AT THE STACK.

THE SYSTEM SHALL ALSO CONVERT THE ACTUAL NOX AND CO CONCENTRATIONS TO A CORRECTED CONCENTRATION AT 15% OXYGEN, ON A DRY BASIS, AND CONTINUOUSLY RECORD THE CORRECTED STACK NOX AND CO CONCENTRATIONS.

IN ADDITION, THE SYSTEM SHALL MONITOR AND RECORD THE DAILY NOX AND CO EMISSIONS IN POUNDS PER DAY AT THE OUTLET OF THE CONTROL SYSTEM. THIS MONITORING SYSTEM SHALL BE CERTIFIED TO COMPLY WITH THE REQUIREMENTS OF RULE 218.

THE OWNER OR OPERATOR SHALL HAVE INSTALLED AND OBTAINED A CARBON MONOXIDE (CO) CEMS FOR FINAL CERTIFICATION BY MARCH 2010.

[RULE 1110.2]

- 10) A DATA ACQUISITION SYSTEM SHALL BE INSTALLED AND MAINTAINED AS PER RULE 1110.2 (f) (1) (B).

[RULE 1110.2]

Emissions And Requirements:

- 11) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV, RULE 407

SOX: 500 PPMV, RULE 407

PM: 0.1 GR/SCF, RULE 409

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PERMIT TO OPERATE

Permit No. G1865
A/N 416769

Equipment Description:

INTERNAL COMBUSTION ENGINE, COGENERATION, NO. 2, WAUKESHA, MODEL NO. L7042GSI, SPARK IGNITED, FOUR CYCLE, RICH BURN, NATURAL GAS FIRED, 1478 BHP, TURBOCHARGED, AFTERCOOLED, DRIVING AN ELECTRICAL GENERATOR, WITH A 3-WAY CATALYTIC CONVERTER, NON-SELECTIVE TYPE, MIRATECH, MODEL NO. RHSS-4234-14-C2, AND AN AIR TO FUEL RATIO CONTROLLER, CONTINENTAL CONTROLS CORPORATION, MODEL NO. ECV5.

Conditions:

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
- 3) THIS ENGINE SHALL NOT BE OPERATED WITHOUT THE USE OF AN AUTOMATIC AIR TO FUEL RATIO CONTROLLER WHICH SHALL BE MAINTAINED AND KEPT IN PROPER OPERATING CONDITIONS AT ALL TIMES AS SPECIFIED BY THE MANUFACTURER.
[RULE 1303(a) (1)-BACT, RULE 1110.2]
- 4) THE CATALYTIC CONVERTER TEMPERATURE AND EXHAUST OXYGEN CONCENTRATION SHALL BE MAINTAINED WITHIN THE EFFECTIVE OPERATING RANGE OF THE CATALYTIC CONVERTER AS SPECIFIED BY THE MANUFACTURER.
[RULE 1303(a) (1)-BACT, RULE 1110.2]
- 5) THE EMISSIONS FROM THIS ENGINE SHALL NOT EXCEED THE FOLLOWING LIMITS (EXCEPT DURING COLD START-UP, NOT TO EXCEED 30 MINUTES):

	PPMV @ 15% O2 (DRY)	GM/BHP-HR
VOLATILE ORGANIC GASES (VOC)	37	0.15
NITROGEN OXIDES	13	0.15
CARBON MONOXIDE	84	0.6

[RULE 1303(a) (1)-BACT]

NOX AND CO SHALL BE AVERAGED OVER 15 MINUTES. VOC SHALL BE AVERAGED OVER THE SAMPLING TIME REQUIRED BY THE TEST METHOD.

THE OPERATOR SHALL COMPLY WITH THE FOLLOWING RULE 1110.2 EMISSION LIMITS BY JULY 1, 2011:

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PPMV @ 15% O2 (DRY)

VOLATILE ORGANIC GASES (VOC)	30
NITROGEN OXIDES	11
CARBON MONOXIDE	84

[RULE 1110.2]

- 6) RECORDS SHALL BE MAINTAINED IN ORDER TO COMPLY WITH CONDITION NO. 5. RECORDS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST..
[RULE 1110.2, 1303(a) (1)-BACT]

- 7) THE OPERATOR SHALL MAINTAIN A MONTHLY OPERATING ENGINE LOG THAT INCLUDES:

- A. TOTAL HOURS OF OPERATION;
- B. TYPE OF GASEOUS FUEL;
- C. FUEL CONSUMPTION (CUBIC FEET OF GAS), AND;
- D. CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST REQUIRED IN SUBPARAGRAPH (F)(1)(C) OF RULE 1110.2 - AMENDED 2/1/2008.

THE LOG SHALL BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST.

[RULE 1110.2, 1303(a) (1)-BACT]

- 8) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL THE MONITORING, TESTING, RECORDKEEPING AND REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1) - AMENDED 2/1/2008, AS OUTLINED BELOW:

- A. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER ON THE ENGINE (DISPLAY READING SHALL BE READILY AVAILABLE) TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.
- B. CONDUCT SOURCE TESTING FOR NOX, VOC REPORTED AS CARBON, AND CO CONCENTRATIONS (CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS) AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. THE SOURCE TEST FREQUENCY MAY BE REDUCED TO ONCE EVERY THREE YEARS IF THE ENGINE HAS OPERATED LESS THAN 2,000 HOURS SINCE THE LAST SOURCE TEST.

THE SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE; NOT STEADY-STATE CONDITION, UNLESS STEADY-STATE IS THE NORMAL OPERATING CONDITION), AND A MINIMUM OF 15 MINUTES EACH AT THE MAXIMUM LOAD AND AT THE MINIMUM LOAD THAT CAN BE PRACTICALLY ACHIEVED DURING THE TEST.

THE OPERATOR SHALL USE ONLY A SOURCE TEST CONTRACTOR THAT IS APPROVED BY THE EXECUTIVE OFFICER UNDER THE DISTRICT'S LABORATORY APPROVAL PROGRAM (LAP) FOR THE NECESSARY TEST METHODS. THE OPERATOR SHALL COMPLY WITH THE PROCEDURES STATED IN RULE 1110.2 (F)(1)(C)(IV) THROUGH (VII) - AMENDED 2/1/2008, REGARDING THE SUBMITTAL OF SOURCE TEST PROTOCOL, SOURCE

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TEST REPORTS AND UTILITIES FOR SAMPLING AND TESTING EQUIPMENT.

- C. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1)(H)(I) THROUGH (III) - AMENDED 2/1/2008, PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.

[RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 3004(a)(4)-Periodic Monitoring]

- 9) A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) APPROVED BY THE DISTRICT ACCORDING TO RULE 218 SHALL BE INSTALLED, MAINTAINED AND OPERATED. IT SHALL MEASURE, RECORD, OVER A FIFTEEN MINUTE AVERAGE TIME PERIOD, NOX, CO AND O2 CONCENTRATIONS, ON A DRY BASIS OF THE INTERNAL COMBUSTION ENGINE EXHAUST, MEASURED AT THE STACK.

THE SYSTEM SHALL ALSO CONVERT THE ACTUAL NOX AND CO CONCENTRATIONS TO A CORRECTED CONCENTRATION AT 15% OXYGEN, ON A DRY BASIS, AND CONTINUOUSLY RECORD THE CORRECTED STACK NOX AND CO CONCENTRATIONS.

IN ADDITION, THE SYSTEM SHALL MONITOR AND RECORD THE DAILY NOX AND CO EMISSIONS IN POUNDS PER DAY AT THE OUTLET OF THE CONTROL SYSTEM. THIS MONITORING SYSTEM SHALL BE CERTIFIED TO COMPLY WITH THE REQUIREMENTS OF RULE 218.

THE OWNER OR OPERATOR SHALL HAVE INSTALLED AND OBTAINED A CARBON MONOXIDE (CO) CEMS FOR FINAL CERTIFICATION BY MARCH 2010.

[RULE 1110.2]

- 10) A DATA ACQUISITION SYSTEM SHALL BE INSTALLED AND MAINTAINED AS PER RULE 1110.2 (f) (1) (B).

[RULE 1110.2]

Emissions And Requirements:

- 11) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV, RULE 407

SOX: 500 PPMV, RULE 407

PM: 0.1 GR/SCF, RULE 409

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RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS.

Periodic Monitoring:

1. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

FOR ARCHITECTURAL APPLICATIONS WHERE NO THINNERS, REDUCERS, OR OTHER VOC CONTAINING MATERIALS ARE ADDED, MAINTAIN SEMI-ANNUAL RECORDS OF ALL COATINGS CONSISTING OF (a) COATING TYPE, (b) VOC CONTENT AS SUPPLIED IN GRAMS PER LITER (g/l) OF MATERIALS FOR LOW-SOLIDS COATINGS, (c) VOC CONTENT AS SUPPLIED IN g/l OF COATING, LESS WATER AND EXEMPT SOLVENT FOR OTHER COATINGS.

FOR OTHER ARCHITECTURAL APPLICATIONS WHERE THINNERS, REDUCERS, OR OTHER VOC CONTAINING MATERIALS ARE ADDED, MAINTAIN DAILY RECORDS FOR EACH COATING CONSISTING OF (a) COATING TYPE, (b) VOC CONTENT AS APPLIED IN GRAMS PER LITER (g/l) OF MATERIALS USED FOR LOW-SOLIDS COATINGS, (c) VOC CONTENT AS APPLIED IN g/l OF COATING, LESS WATER AND EXEMPT SOLVENT FOR OTHER COATINGS.
[RULE 3004 (a) (4)]

Emissions And Requirements:

2. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATION:

VOC: RULE 1113, SEE APPENDIX B FOR EMISSION LIMITS
VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS

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RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, AIR CONDITIONING UNITS

Emissions And Requirements:

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

REFRIGERANT:	RULE 1415
REFRIGERANT:	40CFR 82 SUBART F

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RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, COOLING TOWERS

Emissions And Requirements:

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

CR*6: RULE 1404

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RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, FIRE EXTINGUISHING EQUIPMENT

Emissions And Requirements:

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

HALON: RULE 1418