SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGES	PAGE
	1	13
ENGINEERING & COMPLIANCE DIV.	APPL. NO.	DATE
	515682, 515685	5/12/11
APPLICATION PROCESSING AND CALCULATIONS	PROCESSED BY	CHECKED BY
	V. Lee	

SAN ANTONIO COMMUNITY HOSPITAL
999 SAN BERNARDINO RD
UPLAND, CA 91786-4992

Facility ID 14437

Equipment Location: Same

ADMINISTRATIVE CHANGE TO P/Os

A/N 515682—Admin Change to Cogeneration System No. 1, F85020 (A/N 457741)

COGENERATION SYSTEM NO. 1 CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE, WAUKESHA, SPARK IGNITION, FOUR STROKE, TURBO CHARGED INTERCOOLED, V-12 TYPE, MODEL NO. ~~VHP5900GSI~~ **L5790GSI**, 1269 H.P., NATURAL GAS FIRED, DRIVING A 900 KW GENERATOR.

2. CATALYTIC CONVERTER, JOHNSON MATTHEY, DeNOX MODEL NO. ES-SSA, THREE-WAY CATALYTIC REDUCTION.

3. AIR FUEL RATIO CONTROL, WAUKESHA, MODEL TM.

4. LOW PRESSURE STEAM SEPARATOR FOR ENGINE WATER JACKET SYSTEM, MAXIM, MODEL NO. HSS-40, 2915 LB/HR AT 15 PSIG.

5. EXHAUST HEAT RECOVERY SILENCERS, MAXIM, MODEL NO. MFT1070-14, 1426 LB/HR AT 125 PSIG.

6. HIGH PRESSURE STEAM SEPARATOR, MAXIM, MODEL NO. HSS-40, 2852 LB/HR AT 125 PSIG, COMMON TO COGENERATION SYSTEM NO. 2.

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 COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 1110.2.
[RULE 1110.2]

~~3.~~ **4.** AN ENGINE OPERATING LOG LISTING THE DATE OF OPERATION, THE ELAPSED TIME, IN HOURS, AND THE REASON FOR OPERATION SHALL BE KEPT AND MAINTAINED ON FILE FOR A MINIMUM OF FIVE YEARS AND BE MADE AVAILABLE TO THE SCAQMD PERSONNEL UPON REQUEST.
[RULE 1303 (b)(2), RULE 1110.2]

~~4.~~ **5.** THE CATALYST SHALL BE CLEANED OR REPLACED WHEN THE REDUCTION EFFICIENCY OF THE FOLLOWING GASEOUS EMISSIONS ARE NOT MET

A. LESS THAN 90% FOR OXIDES OF NITROGEN AFTER INSTALLATION OR REPLACEMENT, AND BY AT LEAST 80% THEREAFTER.

B. LESS THAN 70% FOR CARBON MONOXIDE.

C. LESS THAN 50% FOR TOTAL HYDROCARBONS.
[RULE 1303(a)(1)-BACT, RULE 1110.2]

~~5.~~ **6.** THE 0_2 SENSOR ASSOCIATED WITH THE AIR/FUEL RATIO CONTROLLER SHALL BE INSPECTED AND CLEANED OR REPLACED EVERY 125 DAYS OF OPERATION. RECORDS OF MAINTENANCE SHALL BE MAINTAINED AND KEPT ON FILE.
[RULE 1303(a)(1)-BACT, RULE 1110.2]

~~6.~~ **7.** THE EMISSIONS FROM THE INTERNAL COMBUSTION ENGINE SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	NATURAL GAS FUEL
TOTAL HYDROCARBONS (AS CH4)	67 LB/DAY
NITROGEN OXIDES (AS N02)	47
SULFUR DIOXIDE	1
PARTICULATE MATTER	1
CARBON MONOXIDE	134

[RULE 1303(b)(2)-OFFSET]

~~7.~~ **8.** A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) APPROVED BY THE DISTRICT PER RULE 218, 218.1 AND 1110.2 SHALL BE INSTALLED, MAINTAINED AND OPERATED. THE CEMS SHALL UNDERGO A SERIES OF CERTIFICATION TESTS WITHIN 90 DAYS OF ITS INSTALLATION IN ACCORDANCE WITH RULE 218(C)(1)(A).THE CONTINUOUS EMISSIONS MONITORING SYSTEM SHALL MEASURE AND RECORD OVER A FIFTEEN-MINUTE AVERAGE TIME PERIOD, THE NOX AND O2 CONCENTRATIONS, ON A DRY BASIS, OF THE INTERNAL COMBUSTION EXHAUST, MEASURED AT THE OUTLET OF THE CONTROL SYSTEM. THE SYSTEM SHALL ALSO CONVERT THE ACTUAL NOX CONCENTRATIONS TO A CORRECTED CONCENTRATION AT 15% OXYGEN, ON A DRY BASIS, AND CONTINUOUSLY RECORD THE CORRECTED STACK NOX CONCENTRATIONS. THIS MONITORING SYSTEM SHALL BE CERTIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF RULES 218 AND 218.1.
[RULE 1110.2]

~~8.~~ **9.** A DATA GATHERING AND RETRIEVAL SYSTEM SHALL BE INSTALLED AND MAINTAINED AS PER RULE 1110.2 ~~(I)(1)(B).~~

[RULE 1110.2]

~~9.~~ **10.** THE CEMS SHALL BE EQUIPPED WITH A WARNING DEVICE THAT IS ACTIVATED WHEN THE NOX CONCENTRATION, AVERAGED OVER FIFTEEN MINUTES, EXCEEDS THE EMISSION LIMIT SPECIFIED IN RULE 1110.2.
[RULE 1110.2]

~~10.~~ **11.** THIS EQUIPMENT SHALL COMPLY WITH MONITORING AND RECORD KEEPING REQUIREMENTS OF RULE 1110.2 ~~(f)(1)~~ AS OUTLINED BELOW:

A. THE ENGINE SHALL HAVE AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER (DISPLAY READING SHALL BE READILY AVAILABLE) TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.

B. **EFFECTIVE AUGUST 1, 2008,** ~~PROVIDE~~ **CONDUCT** SOURCE TEST**ING** ~~INFORMATION REGARDING THE EXHAUST GAS, SPECIFICALLY~~ FOR NOx, VOC REPORTED AS ~~METHANE~~ **CARBON**, AND CO CONC**ENTRATIONS** (CONCENTRATIONS IN PPM BY VOLUME, CORRECTED TO 15 PERCENT OXYGEN ON DRY BASIS) AT LEAST ONCE EVERY ~~THREE~~ **TWO** YEARS**, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. RELATIVE ACCURACY TESTS REQUIRED BY RULE 218.1 WILL SATISFY THIS REQUIREMENT FOR THOSE POLLUTANTS MONITORED BY A CEMS. 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.** IF THE ENGINE HAS NOT BEEN OPERATED WITHIN THREE MONTHS OF THE DATE A SOURCE TEST IS REQUIRED, THE SOURCE TEST SHALL BE CONDUCTED WHEN THE ENGINE RESUMES OPERATION FOR A PERIOD LONGER THAN EITHER ~~7~~ **SEVEN** CONSECUTIVE DAYS OR 15 CUMULATIVE DAYS OF OPERATION. THE ~~OWNER /~~ OPERATOR OF ENGINE SHALL KEEP SUFFICIENT OPERATING RECORDS TO DEMONSTRATE THAT IT MEETS THE REQUIREMENTS FOR EXTENSION OF THE SOURCE TESTING DEADLINES.

C. MAINTAIN A MONTHLY OPERATING ENGINE LOG THAT INCLUDES:

(i) TOTAL HOURS OF OPERATION.
(ii) TYPE OF LIQUID AND/OR TYPE OF GASEOUS FUEL,
(iii) FUEL CONSUMPTION (CUBIC FEET OF GAS OR GALLONS OF LIQUID), AND
(iv) CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST REQUIRED IN SUBPARAGRAPH (f)(1)~~(D)~~ **(C)** OF RULE 1110.2.

THE LOG SHALL BE MADE AVAILABLE FOR INSPECTION ANY TIME.
[RULE 1110.2]

~~11.~~ **12.** ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR 5 YEARS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.
[RULE 1110.2]

~~12.~~ **13.** THIS EQUIPMENT SHALL BE TUNED UP AND MAINTAINED ACCORDING TO THE MANUFACTURER'S RECOMMENDED PROCEDURES. RECORDS OF SUCH TUNE-UPS AND MAINTENANCE SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND MADE

AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1110.2]

Periodic Monitoring:

~~13.~~ **14.** 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 3004 (a)(4)]

Emissions and Requirements:

~~14.~~ **15.** THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NOX: ~~36~~ **11** PPM, [RULE 1110.2]
VOC: ~~250~~ **30** PPM, [RULE 1110.2]
CO: ~~2000~~ **250** PPM, [RULE 1110.2]

A/N 515685—Admin Change to Cogeneration System No. 3, F85022 (A/N 457743)

COGENERATION SYSTEM NO. 3 CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE, WAUKESHA, MODEL NO. L5790GSI~~U~~, NATURAL GAS FIRED, TURBOCHARGED, AFTERCOOLED, 1200 BHP, DRIVING A 900 KW ELECTRIC GENERATOR.

2. NON-SELECTIVE CATALYTIC CONVERTER, JOHNSON MATTHEY DENOX MODEL.

3. A WASTE HEAT BOILER.

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 AFTER CONTROL EMISSIONS FROM THIS ENGINE SHALL NOT EXCEED THE FOLLOWING LIMITS:

POLLUTANT	GRAMS/BHP
CO	0.6
NOX	0.15
ROG	0.15

[RULE 1303(b)(2)-OFFSET]

4. THIS ENGINE SHALL NOT BE OPERATED UNLESS IT IS VENTED ONLY TO AN AIR POLLUTION CONTROL DEVICE.
[RULE 1303(a)(1)-BACT, RULE 1110.2]

5. THIS ENGINE SHALL COMPLY WITH ALL THE APPLICABLE REQUIREMENTS OF RULE 1110.2.
[RULE 1110.2]

6. A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) APPROVED BY THE DISTRICT PER RULE 218, 218.1 AND 1110.2 SHALL BE INSTALLED, MAINTAINED AND OPERATED. THE CEMS SHALL UNDERGO A SERIES OF CERTIFICATION TESTS WITHIN 90 DAYS OF ITS INSTALLATION IN ACCORDANCE WITH RULE 218(C)(1)(A).THE CONTINUOUS EMISSIONS MONITORING SYSTEM SHALL MEASURE AND RECORD OVER A FIFTEEN-MINUTE AVERAGE TIME PERIOD, THE NOX AND O2 CONCENTRATIONS, ON A DRY BASIS, OF THE INTERNAL COMBUSTION EXHAUST, MEASURED AT THE OUTLET OF THE CONTROL SYSTEM. THE SYSTEM SHALL ALSO CONVERT THE ACTUAL NOX CONCENTRATIONS TO A CORRECTED CONCENTRATION AT 15% OXYGEN, ON A DRY BASIS, AND CONTINUOUSLY RECORD THE CORRECTED STACK NOX CONCENTRATIONS. THIS MONITORING SYSTEM SHALL BE CERTIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF RULES 218 AND 218.1.
[RULE 1110.2]

7. A DATA GATHERING AND RETRIEVAL SYSTEM SHALL BE INSTALLED AND MAINTAINED AS PER RULE 1110.2 ~~(f)(1)(B)~~.
[RULE 1110.2]

8. THE CEMS SHALL BE EQUIPPED WITH A WARNING DEVICE THAT IS ACTIVATED WHEN THE NOX CONCENTRATION, AVERAGED OVER FIFTEEN MINUTES, EXCEEDS THE EMISSION LIMIT SPECIFIED IN RULE 1110.2.
[RULE 1110.2]

9. THIS EQUIPMENT SHALL COMPLY WITH MONITORING AND RECORD KEEPING REQUIREMENTS OF RULE 1110.2 ~~(f)(1)~~ AS OUTLINED BELOW:

   A. THE ENGINE SHALL HAVE AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER (DISPLAY READING SHALL BE READILY AVAILABLE) TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.

   B. **EFFECTIVE AUGUST 1, 2008,** ~~PROVIDE~~ **CONDUCT** SOURCE TEST**ING** ~~INFORMATION REGARDING THE EXHAUST GAS, SPECIFICALLY~~ FOR NOx, VOC REPORTED AS ~~METHANE~~ **CARBON**, AND CO CONC**ENTRATIONS** (CONCENTRATIONS IN PPM BY VOLUME, CORRECTED TO 15 PERCENT OXYGEN ON DRY BASIS) AT LEAST ONCE EVERY ~~THREE~~ **TWO** YEARS**, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. RELATIVE ACCURACY TESTS REQUIRED BY RULE 218.1 WILL SATISFY THIS REQUIREMENT FOR THOSE POLLUTANTS MONITORED BY A CEMS. 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.** IF THE ENGINE HAS NOT BEEN OPERATED WITHIN THREE MONTHS OF THE DATE A SOURCE TEST IS REQUIRED, THE SOURCE TEST SHALL BE CONDUCTED WHEN THE ENGINE RESUMES OPERATION FOR A PERIOD

LONGER THAN EITHER ~~7~~ **SEVEN** CONSECUTIVE DAYS OR 15 CUMULATIVE DAYS OF OPERATION. THE ~~OWNER /~~ OPERATOR OF ENGINE SHALL KEEP SUFFICIENT OPERATING RECORDS TO DEMONSTRATE THAT IT MEETS THE REQUIREMENTS FOR EXTENSION OF THE SOURCE TESTING DEADLINES.

C. MAINTAIN A MONTHLY OPERATING ENGINE LOG THAT INCLUDES:

(i) TOTAL HOURS OF OPERATION.
(ii) TYPE OF LIQUID AND/OR TYPE OF GASEOUS FUEL,
(iii) FUEL CONSUMPTION (CUBIC FEET OF GAS OR GALLONS OF LIQUID), AND
(iv) CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST REQUIRED IN SUBPARAGRAPH (f)(1)~~(D)~~ **(C)** OF RULE 1110.2.

THE LOG SHALL BE MADE AVAILABLE FOR INSPECTION ANY TIME.
[RULE 1110.2]

10. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR 5 YEARS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.
[RULE 1110.2]

11. THIS EQUIPMENT SHALL BE TUNED UP AND MAINTAINED ACCORDING TO THE MANUFACTURER'S RECOMMENDED PROCEDURES. RECORDS OF SUCH TUNE-UPS AND MAINTENANCE SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1110.2]

Periodic Monitoring:

12. 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 3004 (a)(4)]

Emissions and Requirements:

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

NOX: ~~36~~ **11** PPM, [RULE 1110.2]
VOC: ~~250~~ **30** PPM, [RULE 1110.2]
CO: ~~2000~~ **250** PPM, [RULE 1110.2]

BACKGROUND

San Antonio Community Hospital ("SACH") (ID 14437) is a premier acute health care facility that provides a comprehensive range of medical services. The facility is a Title V facility, with the initial Title V facility permit expiring on 10/31/11. The Title V renewal application, A/N 521403, was submitted on 4/14/11.

SACH operates four emergency diesel-fired internal combustion engines (P/O Nos. E1868B, E1867B, E03670, and F15352), three cogeneration systems (P/O Nos. F85020, F85021, and F85022), one spray booth (P/O No. F54693), and two boilers (P/O Nos. F58535, F58537). The three cogeneration systems generate steam for the entire facility. In the event that one of the systems is taken down or additional steam is required, the Trane Murray boiler (F58535) is put into operation. The Cleaver Brooks boiler (F58537) is permitted as a stand-by unit limited to no more than 90,000 therms in a continuous 12-month period.

On 10/26/10, Inspector John Eckert issued Notice to Comply E00016 to require the submittal of administrative change applications to correct equipment description discrepancies, as well as other requirements. Details were provided by Inspector Eckert in an e-mail, dated 10/6/10.

The applications were submitted by Advanced Environmental Controls ("AEC") on behalf of SACH and are summarized in the table below.

Date Submitted	A/N	Prior Permit (A/N)	Equipment
10/26/10	515682	F85020 (A/N 457741)	Cogeneration System No. 1
10/26/10	515685	F85022 (A/N 457743)	Cogeneration System No. 2
10/26/10	515684	F15352 (A/N 341088)	ICE, Detroit Diesel, 947 bhp, for Emergency Generator
11/9/10	516182	F58535 (A/N 406908)	Boiler, Trane-Murray
11/9/10	516183	F58537 (A/N 406909)	Boiler, Cleaver-Brooks
3/25/11	520246		Administrative Title V Revision—Converted to minor on 5/11/11.

This evaluation is for A/N 515682 and 515685. See separate evaluations for other applications.

ADMINISTRATIVE CHANGES

1. A/N 515682—Cogeneration System No. 1, F85020
   a. Inspector Eckert's Comments re Permit Corrections in e-mail, dated 10/6/10
   "Cogeneration unit # 1 has wrong model number which should be L5790GSI or T. This needs correction."

b. Actual Corrections to Permit

The model no. for the ICE will be changed from VHP5900GSI to L5790GSI. Since the Form 400-E-13b in the application file for F85022 listed the model no. as L5790GSI, it is unclear why F85022 shows the model no. as VHP5900GSI.

In addition, the permit conditions will be updated to comply with the 7/9/10 version of Rule 1110.2.

2. A/N 515685—Cogeneration System No. 3, F85022

a. Inspector Eckert's Comments re Permit Corrections in e-mail, dated 10/6/10

"Cogeneration unit # 3 has extra number on model # , which should be L5790GSI or T. This needs correction."

b. Actual Corrections to Permit

The model no. will be changed from L5790GSIU to L5790GSI.

In addition, the permit conditions will be updated to comply with the 7/9/10 version of Rule 1110.2.

3. Cogeneration System No. 2, Permit No. F85021 (A/N 457742)

Although there is no open application for No. 2, the permit conditions will be updated to comply with the 7/9/10 version of Rule 1110.2. System No. 2 is identical to System No. 1 (except for engine model no. pursuant to engine plates).

EMISSIONS CALCULATIONS

1. A/N 515682—Cogeneration System No. 1, F85020

a. Prior Emissions, F85020

The corrected emissions are as follows. For explanation of the corrected emissions, see memo to John Yee, dated 4/28/11. Sr. Engineer John Yee performed the emissions update in the NSR system on 4/29/11.

Operating schedule: 52 wk/yr, 7 days/wk, 24 hr/day

Uncontrolled emissions reference an engine not tuned for NSCR. Tuned for NSCR will reduce NOx and increase CO.

CO: R1 = R2 = 5.60 lb/hr = 134.29 lb/day 30 DA = 134 lb/day

Note: Emissions calculations state R1 = 67.14 lb/day and R2 = 134.29 lb/day, but NSR system will not allow controlled emissions to be greater than uncontrolled emissions.

NOx: R1 = 50.36 lb/hr = 1208.57 lb/day
R2 = 1.96 lb/hr = 47 lb/day 30 DA = 47 lb/day

PM_{10}: R1 = R2 = 0 lb/hr = 0 lb/day 30 DA = 0 lb/day

ROG: R1 = R2 = 0.56 lb/hr = 13.43 lb/day 30 DA = 13 lb/day

SOx: R1 = R2 = 0 lb/hr = 0 lb/day 30 DA = 0 lb/day

b. A/N 515682 for Administrative Change
Emissions will remain unchanged.

2. A/N 515685—Cogeneration System No. 3, F85022

a. Prior Emissions, F85022
The corrected emissions are as follows. For explanation of the corrected emissions, see memo to John Yee, dated 4/28/11. Sr. Engineer John Yee performed the emissions update in the NSR system on 4/29/11.

Operating schedule: 52 wk/yr, 7 days/wk, 24 hr/day

CO: R1 = 21.16 lb/hr = 508 lb/day
R2 = 1.59 lb/hr = 38 lb/day 30 DA = 38 lb/day

NOx: R1 = 29.1 lb/hr = 698 lb/day
R2 = 0.4 lb/hr = 10 lb/day 30 DA = 10 lb/day

PM_{10}: R1 = R2 = 0.07 lb/hr = 2 lb/day 30 DA = 2 lb/day

ROG: R1 = 0.66 lb/hr = 16 lb/day
R2 = 0.38 lb/hr = 10 lb/day 30 DA = 10 lb/day

SOx: R1 = R2 = 0.01 lb/hr = 0.14 lb/day 30 DA = 0 lb/day

b. A/N 515685—Administrative Change
Emissions will remain the same.

3. Cogeneration System No. 2, Permit No. F85021 (A/N 457742)
Although there is no open application for No. 2, the NSR emissions will be examined and corrected.

The corrected emissions are as follows. For explanation of the corrected emissions, see memo to John Yee, dated 4/28/11. Sr. Engineer John Yee performed the emissions update in the NSR system on 4/29/11.

Operating schedule: 52 wk/yr, 7 days/wk, 24 hr/day

Uncontrolled emissions reference an engine not tuned for NSCR. Tuned for NSCR will reduce NOx and increase CO.

CO: R1 = R2 = 5.60 lb/hr = 134.29 lb/day 30 DA = 134 lb/day
Note: Emissions calculations state R1 = 67.14 lb/day and R2 = 134.29 lb/day, but NSR system will not allow controlled emissions to be greater than uncontrolled emissions.

NOx: R1 = 50.36 lb/hr = 1208.57 lb/day
R2 = 1.96 lb/hr = 47 lb/day 30 DA = 47 lb/day

PM_{10}: R1 = R2 = 0 lb/hr = 0 lb/day 30 DA = 0 lb/day

ROG: R1 = R2 = 0.56 lb/hr = 13.43 lb/day 30 DA = 13 lb/day

SOx: R1 = R2 = 0 lb/hr = 0 lb/day 30 DA = 0 lb/day

EVALUATION OF COMPLIANCE WITH MAJOR RULES

The operation of the cogeneration systems, with the administrative corrections, is expected to comply with all applicable SCAQMD rules and regulations as follows:

Rule 1110.2—Emissions from Gaseous- and Liquid-Fueled Engines

Since the 2/1/08 and 7/9/10 versions of this rule imposed more rigorous requirements, the permit conditions will be updated accordingly, including for Cogeneration System No. 2 for which there is no pending application. Cogeneration No. 2 is identical to No. 1 (except for engine model no. pursuant to engine plates).

(b)—All stationary engines over 50 rated bhp are subject to this rule. A condition will be added to Cogeneration System Nos. 1 and 2 to comply with all applicable requirements of Rule 1110.2 (already on permit for Cogeneration System No. 3).

(d)(1)(B)(ii)— The operator of any stationary engine subject to this rule shall not operate the engine in a manner that exceeds the emission concentration limits listed in Table II. Pursuant to Table II, effective July 1, 2010, for bhp ≥ 500, the NOx limit is 11 ppmvd, the VOC limit is 30 ppmvd, and the CO limit is 250 ppmvd.

The most recent source tests reports were requested from the facility to verify the cogeneration systems are capable of complying with the new limits. The tests were performed by Delta Air Quality Services, which is LAP-approved for Methods 100.1, 25.1 and 25.3.

1. A/N 515682—Cogeneration System No. 1, F85020
   The test results, corrected to 15% O2, are summarized below.

Description of Test	NOx: Test Results	NOx: **Current** Rule 1110.2 Limit	NOx: Comply?	CO: Test Results	CO: **Current** Rule 1110.2 Limit	CO: Comply?	VOC: Test Results	VOC: **Current** Rule 1110.2 Limit	VOC: Comply?
RATA Test & VOC for 3/26/08	17.88	11	No	46.25	250	Yes	3.07	30	Yes
Compliance Emission Test Report for 3/30/09	3.28	11	Yes	62.67	250	Yes		30	
RATA Test for 3/25 & 3/26/10	3.43	11	Yes	22.19	250	Yes		30	
Compliance Emission Test Report for 3/25/10	3.36	11	Yes	21.51	250	Yes		30	

The source test results sufficiently indicate the system may meet the current Rule 1110.2 emission limits. Further, a complete upgrade of the control system for start-up, shut-down, and load control was started at the end of February 2011 and should be completed within the next few weeks by Collicutt Energy Services. The permit condition setting forth the emission limits will be updated.

2. A/N 515685—Cogeneration System No. 3, F85022
   The test results, corrected to 15% O2, are summarized below.

Description of Test	NOx: Test Results	NOx: **Current** Rule 1110.2 Limit	NOx: Comply?	CO: Test Results	CO: **Current** Rule 1110.2 Limit	CO: Comply?	VOC: Test Results	VOC: **Current** Rule 1110.2 Limit	VOC: Comply?
RATA Test & VOC for 3/25-27/08	13.76	11	No	29.39	250	Yes	4.74	30	Yes
Compliance Emission Test Report for 4/4/09	15.19	11	No	50.83	250	Yes		30	
RATA Test for 3/25 & 3/26/10	19.25	11	No	957.51	250	No		30	
Compliance Emission Test Report for 3/24/10	19.17	11	No	990.89	250	No		30	
Data acquisition print-out averaged over 15 minutes for 3/14/11 – 3/22/11			Yes, except for spike of 12.7 & 40.4			Yes, except for spikes.			

After the 3/24/10 source test, the catalyst was refurbished by Valley Power Systems on 4/1/10. The source test results sufficiently indicate the system may meet the current Rule 1110.2 emission limits. Further, a complete upgrade of the control system for start-up, shut-down, and load control was started at the end of February 2011 and should be

completed within the next few weeks by Collicutt Energy Services. The permit condition setting forth the emissions limits will be updated.

3. Cogeneration System No. 2, Permit No. F85021 (A/N 457742)
   Although there is no open application for Cogeneration System No. 2, the permit conditions for this system will be updated as well as it is identical to Cogeneration System No. 1 (except for model no).

   The test results, corrected to 15% O2, are summarized below. The source test reports are included for future reference in A/N 515682 for Cogeneration System No. 1.

Description of Test	NOx: Test Results	NOx: **Current** Rule 1110.2 Limit	NOx: Comply?	CO: Test Results	CO: **Current** Rule 1110.2 Limit	CO: Comply?	VOC: Test Results	VOC: **Current** Rule 1110.2 Limit	VOC: Comply?
RATA Test & VOC for 3/24-27/08	7.0	11	Yes	26.02	250	Yes	3.82	30	Yes
Compliance Emission Test Report for 3/31/09	5.02	11	Yes	34.61	250	Yes		30	
RATA Test for 3/25 & 3/26/10	5.42	11	Yes	5.13	250	Yes		30	
Compliance Emission Test Report for 3/26/10	5.05	11	Yes	5.51	250	Yes		30	

The source test results sufficiently indicate the system may meet the current Rule 1110.2 emission limits. Further, a complete upgrade of the control system for start-up, shut-down, and load control was started at the end of February 2011 and should be completed within the next few weeks by Collicutt Energy Services. The permit condition setting forth the emission limits will be updated.

(f)(1)(C)(i)—"Effective August 1, 2008, conduct source testing for NO_x, VOC reported as carbon, and CO concentrations (concentrations in ppm by volume, corrected to 15 percent oxygen on dry basis) at least once every two years, or every 8,760 operating hours, whichever occurs first. Relative accuracy tests required by Rule 218.1 or 40 CFR Part 75 Subpart E *[Optional NOx Emissions Estimation Protocol for Gas-Fired Peaking Units and Oil-Fired Peaking Units]* will satisfy this requirement for those pollutants monitored by a CEMS. 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. If the engine has not been operated within three months of the date a source test is required, the source test shall be conducted when the engine resumes operation for a period longer than either seven consecutive days or 15 cumulative days of operation. The operator of the engine shall keep sufficient operating records to demonstrate that it meets the requirements for extension of the source testing deadlines."

The source testing permit condition for the three cogen systems will be updated to reflect the above requirements.

Regulation XIII—New Source Review

- Rule 1303(a)—BACT
- Rule 1303(b)(1)—Modeling
- Rule 1303(b)(2)--Offsets

  BACT, modeling, and offset requirements are not triggered because the administrative changes will not result in an increase in emissions from either cogeneration system.

  The facility PTEs prior and subsequent to the emissions update for the three Cogeneration Systems performed by Sr. Engineer John Yee on 4/29/11 are summarized in the table below.

	CO, lb/day	NOx, lb/day	PM_{10}, lb/day	ROG, lb/day	SOx, lb/day
Prior to Emissions Update	98	49	7	14	3
Subsequent to Emissions Update	366	143	7	40	3

Regulation XXX—Title V Permits

- Rule 3003—Applications

  As noted above, this facility is not in the RECLAIM program. The proposed project is considered as a "minor permit revision" to the Title V permit for this facility.

  Rule 3000(b)(12)(vi) defines a "minor permit revision" as any Title V permit revision that does not result in an increase in emissions of a pollutant subject to Regulation XIII—New Source Review (non-RECLAIM pollutants) or a hazardous air pollutant (HAP).

  The proposed project is not expected to result in an increase in emissions of a pollutant subject to Regulation XIII – New Source Review (non-RECLAIM pollutants) or a hazardous air pollutant (HAP), and therefore is considered as a "minor permit revision" pursuant to Rule 3000(b)(12)(A)(vi).

  This proposed project will be issued as Revision No. 5 of the Title V facility permit.

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "minor permit revision," it is exempt from the public participation requirements under Rule 3006(b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V permit will be issued to this facility.