



South Coast Air Quality Management District

AQMD

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October 23, 2009

Mr. Gerardo C. Rios
Chief, Permits Office
U.S. EPA Region IX AIR-3
75 Hawthorne Street
San Francisco, CA 94105-3901
Dear Mr. Rios:

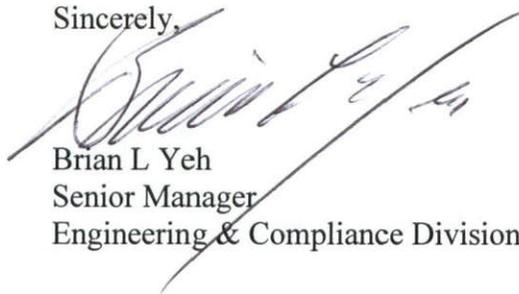
Subject: Advanced Cardiovascular Systems (ID 45489) – Title V Permit Revision

Advanced Cardiovascular System has proposed to revise its Title V permit by adding two caustic scrubbers (ANs 487422 and 497147) in its facility located at 26351 Ynez Road, Temecula, CA 92591.

The proposed permit revision is considered as a “de minimis significant permit revision” to the company’s Title V permit. Attached for your review are the evaluation and the proposed revision. With your anticipated receipt of this submittal of October 30, 2009, we will note that EPA’s 45-day review period will begin December 15, 2009.

If you have any questions or need additional information regarding the revision, please call Linda T. Basilio at 909/396-3156.

Sincerely,



Brian L Yeh
Senior Manager
Engineering & Compliance Division

BLY:LTB
Enclosures



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

APPLICATION PROCESSING AND CALCULATIONS

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COPANY NAME: ADVANCED CARDIOVASCULAR SYSTEMS

COMPANY ADDRESS: 26531 YNEZ RD
TEMECULA, CA 92591

EQUIPMENT LOCATION: SAME AS ABOVE

EQUIPMENT DESCRIPTION

APPL. NO.	EQUIPMENT DESCRIPTION
487418	TITLE V PERMIT MODIFICATION.
487422	AIR POLLUTION CONTROL SYSTEM CONSISTING OF: 1. SCRUBBER, HARRINGTON, MODEL ECH 44-5 LB, 5' 8" W. X 11' -8". L. X 6' -11". H, WITH SPRAY NOZZLES. 2. EXHAUST SYSTEM WITH TWO 20 H.P. BLOWERS, VENTING 10 BENCH-TYPE POLISHING BAYS.
497147	AIR POLLUTION CONTROL SYSTEM, LOCATED IN BUILDING A, CONSISTING OF: 1. SCRUBBER, HARRINGTON, MODEL ECH 4, 4' -0" W. X 12' -0" L. X 7' -3". H, WITH SPRAY NOZZLES. 2. MIST ELIMINATOR 3. EXHAUST SYSTEM WITH TWO 5.36 H.P. BLOWERS, VENTING 10 BENCH-TYPE POLISHING BAYS.
497148	TITLE V PERMIT MODIFICATION.

BACKGROUND

AN 487422

Advanced Cardiovascular System submitted the above application for a new scrubber at its facility located at 26531 Ynez Road in Temecula. The company is proposing to install a caustic scrubber to control acid emissions coming from new surface preparation operation using laboratory-size glass beakers (*pls refer to figure B of the attachment*). This application was submitted on September 9, 2008, together with AN 487418 for Title V permit revision. A 50% additional fee was included for express permitting under Rule 301(u). During permit processing, however, applicant suggested to hold processing while the company is preparing for the application package for the

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package for the existing scrubber.

AN 497147

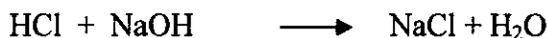
The company submitted this application for a wet scrubber in Bldg A of its facility located at 26531 Ynez Road in Temecula. This scrubber was issued a permit to operate, F771622, which was inactivated on April 24, 2008. The unit had not been operated since January 2007 when production was transferred to its Puerto Rico facility. The company is now planning to start a new line of product at its Ynez facility with the same surface treatment process as the rest of its production lines. AN 497147 was submitted on March 31, 2009, for a scrubber together with AN 497148 for Title V permit revision. A 50% additional fee was added to the processing fee for express permitting under Rule 301(u).

PROCESS DESCRIPTION

Advanced Cardiovascular Systems manufactures therapeutic medical devices for the treatment of atherosclerotic disease of the coronary and peripheral arteries. These devices include angioplasty balloon catheters, guidewires, wire-mesh stents, and accessories.

In the manufacture of wire-mesh stents, an acid solution is generally used to clean and polish the stent surface. First step is washing the parts with distilled water, followed by 37% HCl wash and electrogo consisting of sulfuric acid, corrosion inhibitors, carboxylic acid and other acids including phosphoric acid. This is followed by polishing with either an electro polishing solution containing ethylene glycol, glycol sulfa ester or the a solution consisting of 75% sulfuric acid, 12.5% HCl and 12.5% phosphoric acid. The solution is placed in laboratory-size glass beakers in which the stents are immersed. This process is conducted in a bench-type work station over which a hood is installed to capture any acid vapors escaping from the solution and directed to the scrubber.

The scrubber utilizes caustic solution to neutralize the acid vapors from the polishing station according to the following complete reactions:





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The makeup water and caustic are introduced into the scrubber to neutralize the acids in the gas stream. The neutralization reaction occurs in the scrubber and any unreacted acids (or base) will go to the scrubber sump. The scrubber sludge is maintained in a scrubber sump until the sludge overflows into a container. For complete reaction, the pH of the sludge is 7.0. To assure complete neutralization, the pH of the effluent is maintained on a basic side, or above 7.0. The products of reactions are water soluble, nontoxic salts, which remain in the sludge, manifested and ready for proper toxic disposal.

EMISSION CALCULATIONS

Estimated chemical usages provided for this scrubber, AN 487422, are less than the usages submitted for the other scrubber under AN 497147. As a factor of safety and with the concurrence of the consultant, Weyman Kam, the higher usages for AN 497147 will also be used for this scrubber.

Table 3 (Emission Calculations) of the attachment, shows maximum amounts and typical concentrations of chemicals to be used in this scrubber. As indicated above, the same usage values will be used in the Risk Analysis for AN 487422.

$$\text{HCl (37\% by weight)} = 5.0 \text{ gal/day}$$

$$\text{Density of water} = 8.33 \text{ lb/gal}$$

$$\text{Density of solution} = 0.37 \times 9.86 + 0.63 \times 8.33$$

$$= 8.9 \text{ lb/gal}$$

$$\text{Wt of HCl} = 5 \text{ gal/day} \times 8.9 \text{ lb/gal} \times 0.37$$

$$= 16.465 \text{ lb/day}$$

$$\text{Density, HNO}_3, 75\% = 0.75 \times 12.74 \text{ lb/gal} + 0.25 \times 8.33 \text{ lb/gal}$$

$$= 11.64 \text{ lb/gal}$$



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$$\begin{aligned} \text{Wt of HNO}_3 &= 5 \text{ gal/day} \times 11.64 \text{ lb/gal} \times 0.75 \\ &= 43.64 \text{ lb/day} \\ 611 \quad (75\% \text{ H}_2\text{SO}_4, 12.5\% \text{ HCl} \ \& \ 12.5\% \text{ H}_3\text{PO}_4) & \quad 9.0 \text{ gals/day} \end{aligned}$$

$$\begin{aligned} \text{Density of 611} &= 0.75 \times 15.335 + 0.125 \times 9.86 + 0.125 \times 14.06 \\ &= 14.491 \text{ lb/gal} \end{aligned}$$

$$\begin{aligned} \text{Wt. of H}_2\text{SO}_4 &= 9 \text{ gal} \times 14.49 \text{ lb/gal} \times 0.75 \\ &= 97.92 \text{ lb/day} \end{aligned}$$

$$\begin{aligned} \text{Wt of H}_3\text{PO}_4 &= 9 \text{ gal} \times 14.49 \text{ lb/gal} \times 0.125 \\ &= 16.30 \text{ lb/day} \end{aligned}$$

$$\begin{aligned} \text{Wt of HCl} &= 9 \text{ gal} \times 14.49 \text{ lb/gal} \times 0.125 \\ &= 16.30 \text{ lb/day} \end{aligned}$$

Electro-glo 300 (15% sulfuric & 85% Phosphoric acids) = 5.0 gal/day
Applicant submitted two compositions of Electro-glo 300 as 15/85 and 25/75 sulfuric/ phosphoric acids, but consultant suggested using 15/85.

$$\begin{aligned} \text{Density of Electroglo 300} &= 0.15 \times 15.35 + 0.85 \times 14.06 \\ &= 14.25 \text{ lb/gal} \end{aligned}$$

$$\begin{aligned} \text{Wt of sulfuric acid in electroglo} &= 5 \text{ gal/day} \times 14.25 \text{ lb/gal} \times 0.15 \\ &= 10.69 \text{ lb/day} \end{aligned}$$

$$\begin{aligned} \text{Wt of phosphoric acid} &= 5 \text{ gal/day} \times 14.25 \text{ lb/gal} \times 0.85 \\ &= 60.56 \text{ lb/day} \end{aligned}$$

$$\begin{aligned} \text{Ethylene glycol emissions} &= 2.315 \text{ lb/day} \times 365 \text{ days/yr} \\ &= 845 \text{ lb/year} \end{aligned}$$

The acid solution is placed in regular beakers into which the parts are cleaned. After each batch, the remaining solution in the beaker is dumped into storage for proper disposal.



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There could be traces of caustic (NaOH) that could escape to the atmosphere, but for calculation purposes, we can assume that emissions are negligible, considering that the NaOH is water soluble and the concentration is low and any residual NaOH will remain in solution, because it is relatively heavy, having a specific gravity of 2.13.

Chemical Usages for and Associated Emissions

Materials	Maximum gal/day AN 487422	Maximum gal/day AN 497147	Wt. %	Density, lb/gal	Initial material, lb/day	Initial material, lb/hr	Mat'l going to scrubber, lb/hr
HCl	5.0	5.0	37	9.86	16.465	0.686	0.0343
Nitric Acid	5.0	5.0	75	12.74	43.64	1.818	0.0909
Electroglu 300 - Sulfuric Acid	2.3	5.0	15	15.335	10.69	0.445	0.0223
Phosphoric Acid			85	14.06	53.93	2.523	0.1262
E272 - Ethylene Glycol	2.9	5.0	100	9.26	46.3	1.93	0.0965
611 - Sulfuric Acid			75	15.335	97.92	4.08	0.204
Hydrochloric Acid	7.2	9.0	12.5	9.86	16.30	0.679	0.0339
Phosphoric Acid			12.5	14.06	16.30	0.679	0.0339

¹ This emission calculation uses an assumption that acids left in the liquid waste are 95% (or 5% utilization) based on the email dated July 15, 2009, from Michael Valpone, which he indicated that the acid left in the waste 95-96%. Control efficiency of the scrubber is reported by the manufacturer to be 99% but for calculation purposes a conservative assumption of 95% is used.

RISK ASSESSMENT

The acids used in surface treatment are non-carcinogenic according to Table 8A of Rule 1401, therefore, MICR calculation is not necessary. Tier II analysis shows that the acid solutions affect the eyes and human respiratory system but pass the Chronic and Acute hazard indices, as follows:

Material		<u>Lb/hr</u>	
<u>To Scrubber</u>			
HCl	=	0.0683	(0.0343 + 0.0339)
HNO ₃	=	0.0909	
H ₂ SO ₄	=	0.2263	(0.0223 + 0.204)
H ₃ PO ₄	=	0.16	(0.126 + 0.0339)
Ethylene glycol	=	0.097	
MICR	=	NA	



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For residential

HIA eye = 4.02E-05 pass
 HIA respiratory = 3.69E-03 pass
 HIC Development = 1.72E-05 pass
 HIC for Kidney = 1.72E-05 pass
 HIC respiratory = 1.82E-02 pass

For commercial:

HIA for eye = 4.78E-04 pass
 HIA respiratory = 4.39E-02 pass
 HIC Development = 2.28E-04 pass
 HIC kidney = 2.28E-04 pass
 HIC respiratory = 2.42E-01 pass

The values for AN 487422 are expected to be lower than the ones above because of lower usage.

RULE REVIEW

Rule 212 (c)(1): This section requires a public notice for all new or modified permit units that emit air contaminants located within 1000 feet from the outer boundary of a school.

The nearest school is over 3000 ft from the boundary of the facility, therefore, public notice is not required.

(c)(2): This section requires a public notice for all new or modified facilities having onsite emission increases exceeding any of the daily maximums specified in Rule 212(g).

Acid emissions are not included in the list of criteria pollutants and are not included in the daily maximums of Rule 212. No criteria pollutant emissions are involved in the cleaning process with acids. The scrubber controls acid emissions to the atmosphere.

(c)(3): This section requires a public notice for all new or modified permit unit with increases in emissions of toxic air contaminants listed in Table I of Rule 1401 resulting in MICR greater than 1E-6 per permit

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permit unit or greater than 10E-6 per facility.

The proposed project is not expected to result in a generation of toxic air contaminants. MICR is not needed.

(g): Project emissions result in reduction from existing values.

Rule 219 Surface preparation is exempted under Rule 219(p)(4)(B) for phosphoric acid and sulfuric acids and Rule 219(p)(4)(H) for nitric and hydrochloric acids provided that the open surface area is one square foot or less. Total surface area of the beakers is 0.2 sq. ft, therefore, is exempt.

Rule 401 No visible acid fumes were observed during my visit to the company. No visible emissions are expected from the surface preparation

REG XIII

OFFSET: Not applicable. No VOC emissions are generated from the cleaning process with inorganic acids.

BACT: The acid fumes from cleaning stations are vented to the caustic scrubber to reduce emissions by 99%. Manufacturer guarantees a 99% control efficiency.

Rule 1401 Risk analyses (attached) show compliance with Chronic and Acute Hazard Indices after scrubbers are installed and operated.

REG XXX Title V Diminimis significant permit revision. EPA's 45-day review is required.

DISCUSSION AND CONCLUSION

I visited the plant on December 10, 2008, with the consultant, Weyman Kam, to observe the company's surface treatment operation. The work station is about 6 ft. wide with up to 5 small laboratory-type beakers used for surface treatment operation. The station is covered with glass in the front and at the top to prevent workers from exposure. The fumes are vented to the scrubber through the blower. The company is required by OSHA to control acid emissions to prevent workers from exposure. Also, control of acid fumes would prevent the infrastructure from corrosion.

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RECOMMENDATION

It is therefore recommended that applications number 487422 and 497147 shall be issued a permit to operate and reflect the proposed changes in the company's Title V permit. A copy of the proposed permit shall be submitted to EPA for review and comment.

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

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.

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

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
261655	D66325	BOILER (5-20 MMBTU/HR) NAT GAS ONLY
261656	D66310	BOILER (5-20 MMBTU/HR) NAT GAS ONLY
261657	D66311	BOILER (5-20 MMBTU/HR) NAT GAS ONLY
279359	D71648	OVEN, BAKING
286476	D88226	SPRAY BOOTH OTHER
309075	D96520	OVEN, BAKING
317616	F4131	I C E (>500 HP) EM ELEC GEN DIESEL
338638	F13090	I C E (50-500 HP) EM ELEC GEN-DIESEL
358501	F22021	I C E (>500 HP) EM ELEC GEN-DIESEL
393357	F49550	SCRUBBER
393358	F49549	SCRUBBER
419503	F71623	AIR POLLUTION CONTROL SYSTEM
423571	F71621	SCRUBBER
429270	F71663	LASER CUTTING MACHINE
443789	F83293	I C E (>500 HP) EM ELEC GEN-DIESEL
447835	F83295	ETHYLENE OXIDE STERILIZER, HOSPITAL
447836	F83294	ETHYLENE OXIDE STERILIZER, HOSPITAL
447837	F83299	AIR POLLUTION CONTROL SYSTEM
487422		AIR POLLUTION CONTROL SYSTEM
497147		AIR POLLUTION CONTROL SYSTEM

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 ADVANCED CARDIOVASCULAR SYSTEMS

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 OIL CONTAINING SULFUR COMPOUNDS IN EXCESS OF 15 PPM BY WEIGHT. [RULE 431.2]
3. THE OPERATOR SHALL NOT USE GASEOUS FUEL CONTAINING SULFUR COMPOUNDS IN EXCESS OF 40 PPMV CALCULATED AS HYDROGEN SULFIDE AVERAGED OVER FOUR HOURS. [RULE 431.1].
4. THE OPERATOR SHALL LIMIT THE PLANTWIDE NITROGEN OXIDES (NO_x) EMISSIONS TO LESS THAN FOUR (4) TONS IN ANY ONE YEAR. [RULE 1303(b)(2)-OFFSET]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. D66325
A/N 261655

Equipment Description:

BOILER NO. 1, CLEAVER-BROOKS, FIRETUBE TYPE, MODEL M4W-6000, 6,000,000 BTU PER HOUR, NATURAL GAS FIRED, WITH A 5 H.P. COMBUSTION AIR BLOWER, A FLUE GAS RECIRCULATION SYSTEM AND A 7-1/2 H.P. FLUE GAS RECIRCULATION BLOWER.

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. WHENEVER THE BOILER STACK TEMPERATURE EXCEEDS 250 DEGREES FAHRENHEIT, THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL USE AND THE OXIDES OF NITROGEN EMISSIONS FROM THE BOILER SHALL NOT EXCEED 30 PPMV NOR SHALL THE CARBON MONOXIDE EMISSIONS EXCEED 400 PPMV, EACH ON A DRY BASIS CORRECTED TO 3 PERCENT OXYGEN AND AVERAGED OVER 15 OR MORE CONSECUTIVE MINUTES.
[RULE 1146, 1303(a)(1)-BACT]
4. THE OPERATOR SHALL DETERMINE COMPLIANCE WITH THE NOX AND CO EMISSION LIMITS BY CONDUCTING A TEST AT LEAST ONCE EVERY YEAR USING A PORTABLE ANALYZER AND AQMD-APPROVED TEST METHOD. THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS TO DEMONSTRATE COMPLIANCE WITH RULE 1146 CONCENTRATION LIMITS. THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.
[RULE 1303(a)(1)-BACT]
5. THE NUMBER OF SCHEDULED START-UPS/ SHUTDOWNS FOR THIS BOILER SHALL NOT EXCEED 10 PER MONTH, NOR SHALL THE TIME INTERVAL DURING START-UP OR DURING SHUTDOWN EXCEED 4 HOURS.
[RULE 1146]
6. THIS BOILER SHALL BE TUNED, WITHIN 60 DAYS AFTER COMMENCING OPERATION AND THEREAFTER AT LEAST TWICE A YEAR (5 TO 7 MONTHS APART), TO MINIMIZE NO_x AND CO EMISSIONS AS PER THE MANUFACTURER'S RECOMMENDED PROCEDURES OR IN ACCORDANCE WITH THE PROCEDURE DESCRIBED IN ATTACHMENT 1, OF RULE 1146.
[RULE 1146]

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS**

6. SAMPLING FACILITIES SHALL BE INSTALLED IN THE BOILER STACK AND SHALL COMPLY WITH THE ATTACHED DISTRICT "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES", PURSUANT TO RULE 217.
[RULE 217]

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS****PERMIT TO OPERATE****Permit No. D66310
A/N 261656****Equipment Description:**

BOILER NO. 2, CLEAVER-BROOKS, FIRETUBE TYPE, MODEL M4W-6000, 6,000,000 BTU PER HOUR, NATURAL GAS FIRED, WITH A 5 H.P. COMBUSTION AIR BLOWER, A FLUE GAS RECIRCULATION SYSTEM AND A 7-1/2 H.P. FLUE GAS RECIRCULATION BLOWER.

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. WHENEVER THE BOILER STACK TEMPERATURE EXCEEDS 250 DEGREES FAHRENHEIT, THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL USE AND THE OXIDES OF NITROGEN EMISSIONS FROM THE BOILER SHALL NOT EXCEED 30 PPMV NOR SHALL THE CARBON MONOXIDE EMISSIONS EXCEED 400 PPMV, EACH ON A DRY BASIS CORRECTED TO 3 PERCENT OXYGEN AND AVERAGED OVER 15 OR MORE CONSECUTIVE MINUTES.
[RULE 1146, 1303(a)(1)-BACT]
4. THE OPERATOR SHALL DETERMINE COMPLIANCE WITH THE NOX AND CO EMISSION LIMITS BY CONDUCTING A TEST AT LEAST ONCE EVERY YEAR USING A PORTABLE ANALYZER AND AQMD-APPROVED TEST METHOD. THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS TO DEMONSTRATE COMPLIANCE WITH RULE 1146 CONCENTRATION LIMITS. THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.
[RULE 1303(a)(1)-BACT]
5. THE NUMBER OF SCHEDULED START-UPS/ SHUTDOWNS FOR THIS BOILER SHALL NOT EXCEED 10 PER MONTH, NOR SHALL THE TIME INTERVAL DURING START-UP OR DURING SHUTDOWN EXCEED 4 HOURS.
[RULE 1146]
6. THIS BOILER SHALL BE TUNED, WITHIN 60 DAYS AFTER COMMENCING OPERATION AND THEREAFTER AT LEAST TWICE A YEAR (5 TO 7 MONTHS APART), TO MINIMIZE NO_x AND CO EMISSIONS AS PER THE MANUFACTURER'S RECOMMENDED PROCEDURES OR IN ACCORDANCE WITH THE PROCEDURE DESCRIBED IN ATTACHMENT 1, OF RULE 1146.
[RULE 1146]

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS**

7. SAMPLING FACILITIES SHALL BE INSTALLED IN THE BOILER STACK AND SHALL COMPLY WITH THE ATTACHED DISTRICT "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES", PURSUANT TO RULE 217.
[RULE 217]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. D66311
A/N 261657**Equipment Description:**

BOILER NO. 3, CLEAVER-BROOKS, FIRETUBE TYPE, MODEL M4W-6000, 6,000,000 BTU PER HOUR, NATURAL GAS FIRED, WITH A 5 H.P. COMBUSTION AIR BLOWER, A FLUE GAS RECIRCULATION SYSTEM AND A 7-1/2 H.P. FLUE GAS RECIRCULATION BLOWER.

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. WHENEVER THE BOILER STACK TEMPERATURE EXCEEDS 250 DEGREES FAHRENHEIT, THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL USE AND THE OXIDES OF NITROGEN EMISSIONS FROM THE BOILER SHALL NOT EXCEED 30 PPMV NOR SHALL THE CARBON MONOXIDE EMISSIONS EXCEED 400 PPMV, EACH ON A DRY BASIS CORRECTED TO 3 PERCENT OXYGEN AND AVERAGED OVER 15 OR MORE CONSECUTIVE MINUTES.
[RULE 1146, 1303(a)(1)-BACT]
4. THE OPERATOR SHALL DETERMINE COMPLIANCE WITH THE NOX AND CO EMISSION LIMITS BY CONDUCTING A TEST AT LEAST ONCE EVERY YEAR USING A PORTABLE ANALYZER AND AQMD-APPROVED TEST METHOD. THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS TO DEMONSTRATE COMPLIANCE WITH RULE 1146 CONCENTRATION LIMITS. THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.
[RULE 1303(a)(1)-BACT]
5. THE NUMBER OF SCHEDULED START-UPS/ SHUTDOWNS FOR THIS BOILER SHALL NOT EXCEED 10 PER MONTH, NOR SHALL THE TIME INTERVAL DURING START-UP OR DURING SHUTDOWN EXCEED 4 HOURS.
[RULE 1146]
6. THIS BOILER SHALL BE TUNED, WITHIN 60 DAYS AFTER COMMENCING OPERATION AND THEREAFTER AT LEAST TWICE A YEAR (5 TO 7 MONTHS APART), TO MINIMIZE NO_x AND CO EMISSIONS AS PER THE MANUFACTURER'S RECOMMENDED PROCEDURES OR IN ACCORDANCE WITH THE PROCEDURE DESCRIBED IN ATTACHMENT 1, OF RULE 1146.1.
[RULE 1146]

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS**

7. SAMPLING FACILITIES SHALL BE INSTALLED IN THE BOILER STACK AND SHALL COMPLY WITH THE ATTACHED DISTRICT "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES", PURSUANT TO RULE 217.
[RULE 217]

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS**

PERMIT TO OPERATE

**Permit No. D71648
A/N 279359**

Equipment Description:

BAKE OVEN, GRUENBERG, 4'-0" W. X 6'-0" L. X 11'-0" H., NATURAL GAS FIRED, WITH ONE 788,000 BTU/HR BURNER, ONE 1/3-H.P. COMBUSTION AIR FAN, TWO 10-H.P. CIRCULATING FANS, AND ONE 3/4-H.P. EXHAUST FAN.

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. THE TOTAL QUANTITY OF COATINGS USED IN THE COATING OF ARTICLES PROCESSED IN THIS EQUIPMENT SHALL NOT EXCEED 1 GALLON IN ANY ONE DAY.
[RULE 1303(b)(2)-OFFSET]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. D88226
A/N 286476**Equipment Description:**

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. SPRAY BOOTH, FLOOR TYPE, TSI MODEL 3133, 4' W. X 10'-6" L., WITH TEN 20" X 20" EXHAUST FILTERS, AND A 1.5 H.P. EXHAUST FAN.
2. SCRUBBER, PACKED TOWER TYPE, DUALL, MODEL FW303, 11'-4" H. X 3'-9" DIA. OVERALL DIMENSIONS, WITH A 2 H.P. RECIRCULATION PUMP, AND A 5 H.P. BLOWER.

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 SPRAY BOOTH SHALL NOT BE OPERATED UNLESS ALL EXHAUST AIR PASSES THROUGH FILTER MEDIA AT LEAST 2 INCHES THICK.
[RULE 1303(a)(1)-BACT]
4. A GAUGE SHALL BE INSTALLED TO INDICATE, IN INCHES OF WATER, THE STATIC PRESSURE DIFFERENTIAL ACROSS THE SPRAY BOOTH EXHAUST FILTERS. IN OPERATION, THE PRESSURE DIFFERENTIAL SHALL NOT EXCEED 0.25 INCH OF WATER.
[RULE 1303(a)(1)-BACT]
5. A FLOWMETER, INDICATING GALLONS PER MINUTE, SHALL BE INSTALLED IN THE SCRUBBER RECIRCULATION LINE.
[RULE 1303(a)(1)-BACT]
6. NOT LESS THAN 40 GALLONS PER MINUTE OF WATER SHALL BE SUPPLIED TO THE SCRUBBER SPRAY NOZZLES WHEN THE EQUIPMENT IT SERVES IS IN OPERATION.
[RULE 1303(a)(1)-BACT]
7. THERE SHALL BE A CONTINUOUS OVERFLOW OF WATER FROM THE SCRUBBER SUMP.
[RULE 1303(a)(1)-BACT]

Periodic Monitoring:

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS**

8. THE OPERATOR SHALL DETERMINE AND RECORD THE FLOW RATE OF THE SCRUBBING SOLUTION ONCE EVERY DAY.
[RULE 3004 (a)(4)]

Emissions And Requirements:

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

VOC: RULE 109
VOC: RULE 1107, SEE APPENDIX B FOR EMISSION LIMITS
VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS
PM: RULE 481
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
[RULES 109, 404, 481, 1107, 1171]

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS****PERMIT TO OPERATE****Permit No. D96520
A/N 309075****Equipment Description:**

OVEN, GRIEVE, MODEL NO. TB-500, SERIAL NO. 640910, 5'-4" W. X 6'-3" L. X 5'-10" H., WITH ONE 24 KW ELECTRIC HEATER, ONE 1 HP CIRCULATING FAN AND ONE 1/3 HP EXHAUST FAN.

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. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY COMPOUNDS IDENTIFIED AS CARCINOGENIC AIR CONTAMINANTS IN RULE 1401 AS AMENDED DECEMBER 7, 1990.
[RULE 1401]
4. THE TOTAL QUANTITY OF COATINGS USED IN THIS EQUIPMENT SHALL NOT EXCEED 25 POUNDS IN ANY ONE DAY.
[RULE 1303(b)(2)-OFFSET]
5. IN ADDITION TO THE RECORD KEEPING REQUIREMENTS IN RULE 109, THE OPERATOR SHALL KEEP ADEQUATE RECORDS FOR THIS EQUIPMENT TO VERIFY DAILY COATING USAGE IN POUNDS. ALL RECORDS SHALL BE PREPARED IN A FORMAT WHICH IS ACCEPTABLE TO THE DISTRICT, SHALL BE RETAINED ON THE PREMISES FOR AT LEAST FIVE YEARS, AND SHALL BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE.
[RULE 109, 1303(b)(2)-OFFSET]
6. THIS OVEN SHALL NOT BE OPERATED AT TEMPERATURES ABOVE 220 DEGREES FAHRENHEIT.
[RULE 401]

Emissions And Requirements:

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

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS**

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
[RULE 404]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. F4131
A/N 317616

Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, MODEL 3512 TA, TWELVE CYLINDER, DIESEL FUELED, 1568 B.H.P., TURBOCHARGED/AFTERCOOLED, 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 OPERATING TIME OF THIS ENGINE SHALL NOT EXCEED 199 HOURS IN ANY ONE YEAR.
[RULE 1110.2, 1304(a)(4)-OFFSET AND MODELING EXEMPTION]
4. A NON-RESETTABLE TIMER SHALL BE MAINTAINED TO INDICATE THE ENGINES ELAPSED OPERATING TIME.
[RULE 1110.2, 1304(a)(4)-OFFSET AND MODELING EXEMPTION]
5. AN ENGINE OPERATING LOG LISTING THE DATE OF OPERATION, THE ELAPSED OPERATING TIME, IN HOURS, AND THE REASON FOR OPERATION SHALL BE KEPT AND MAINTAINED ON FILE FOR A MINIMUM OF FIVE YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1110.2, 1304(a)(4)-OFFSET AND MODELING EXEMPTION]
6. THIS ENGINE SHALL HAVE THE FUEL INJECTION TIMING RETARDED BY FOUR DEGREES WITH RESPECT TO STANDARD TIMING.
[RULE 1303(a)(1)-BACT]

Emissions And Requirements:

7. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES

AND REGULATION:

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS****PERMIT TO OPERATE****Permit No. F13090
A/N 338638****Equipment Description:**

INTERNAL COMBUSTION ENGINE, CATERPILLAR, 6 CYLINDERS, TURBOCHARGED/AFTERCOOLED DIESEL FUELED, MODEL NO 3406 DITA (300 KW), DIESEL-FUELED, DRIVING AN EMERGENCY ELECTRIC 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. A TIMER SHALL BE MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2, 1304(a)(4)-OFFSET AND MODELING EXEMPTION]
4. THE OPERATING TIME OF THIS ENGINE SHALL NOT EXCEED 199 HOURS IN ANY ONE YEAR.
[RULE 1110.2, 1304(a)(4)-OFFSET AND MODELING EXEMPTION]
5. AN ENGINE OPERATING LOG LISTING THE DATE OF OPERATION, THE ELAPSED OPERATING TIME, IN HOURS, AND THE REASON FOR OPERATION SHALL BE KEPT AND MAINTAINED ON FILE FOR A MINIMUM OF FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1110.2, 1304(a)(4)-OFFSET AND MODELING EXEMPTION]

Emissions And Requirements:

6. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES
AND REGULATION:
PM: RULE 404. SEE APPENDIX B FOR EMISSION LIMITS

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS**

PERMIT TO OPERATE

**Permit No. F13090
A/N 338638**

Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, 6 CYLINDERS, TURBOCHARGED/AFTERCOOLED DIESEL FUELED, MODEL NO 3406 DITA (300 KW), DIESEL-FUELED, DRIVING AN EMERGENCY ELECTRIC 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. A TIMER SHALL BE MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2, 1304(a)(4)-OFFSET AND MODELING EXEMPTION]
4. THE OPERATING TIME OF THIS ENGINE SHALL NOT EXCEED 199 HOURS IN ANY ONE YEAR.
[RULE 1110.2, 1304(a)(4)-OFFSET AND MODELING EXEMPTION]
5. AN ENGINE OPERATING LOG LISTING THE DATE OF OPERATION, THE ELAPSED OPERATING TIME, IN HOURS, AND THE REASON FOR OPERATION SHALL BE KEPT AND MAINTAINED ON FILE FOR A MINIMUM OF FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1110.2, 1304(a)(4)-OFFSET AND MODELING EXEMPTION]

Emissions And Requirements:

6. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES
AND REGULATION:
PM: RULE 404. SEE APPENDIX B FOR EMISSION LIMITS

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. F22021
A/N 358501

Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, 16 CYLINDERS, TURBOCHARGED, AFTERCOOLED, MODEL NO. 3516 DITA (1750 KW), 2518 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) A TIMER SHALL BE MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1303(a)(1)-BACT]
- 4) THE OPERATING TIME OF THIS ENGINE SHALL NOT EXCEED 72 HOURS IN ANY ONE YEAR.
[RULE 1303(a)(1)-BACT]
- 5) 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 TWO YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1303(a)(1)-BACT]
- 6) THE FUEL INJECTION TIMING OF THIS ENGINE SHALL BE SET AND MAINTAINED AT 4 DEGREES RETARDED RELATIVE TO PRODUCTION TIMING AS ESTABLISHED BY CATERPILLAR IN PRODUCT NEWS BULLETIN 'REQUIREMENTS TO COMPLY WITH SCAQMD CERTIFIED EQUIPMENT.
[RULE 1303(a)(1)-BACT]

Emissions And Requirements:

7. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES

AND REGULATION:

PM: RULE 404. SEE APPENDIX B FOR EMISSION LIMITS

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS****PERMIT TO OPERATE****Permit No. F49550
A/N 393357****Equipment Description**

AIR POLLUTION CONTROL SYSTEM NO. 2 CONSISTING OF:

1. SCRUBBER NO. 2, HARRINGTON, MODEL ECH 4, 4' -0" W. x 12' -0" L x 7' -3" H, WITH LANPAC POLYPROPYLENE PACKING MEDIA, SPRAY NOZZLES, AND MIST ELIMINATOR.
2. EXHAUST SYSTEM WITH TWO 5.36-HP BLOWERS, VENTING UP TO EIGHT (8) HOODS.

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. [TO COMPLY WITH COND. 3, THE OPERATOR SHALL INSTALL AND MAINTAIN A PH METER TO ACCURATELY INDICATE THE PH OF THE EFFLUENT OF THE SCRUBBER.
[RULE 204]
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
- 3) THE DIFFERENTIAL PRESSURE GAUGE, INDICATING INCHES OF WATER COLUMN, SHALL BE INSTALLED AND MAINTAINED ACROSS THE SCRUBBER PACKING.
[RULE 1405]
- 4) THE DIFFERENTIAL PRESSURE ACROSS THE PACKING SHALL NOT EXCEED 2.0 INCHES OF WATER COLUMN.
[RULE 1405]
- 5) NOT LESS THAN 80 GALLONS OF RECIRCULATING SCRUBBER SOLUTION SHALL BE SUPPLIED TO THE SCRUBBER SPRAY NOZZLES WHEN THE EQUIPMENT IT SERVES IS IN OPERATION.
[RULE 1405]
- 6) A FLOW METER INDICATING THE FLOW RATE IN GALLONS PER MINUTE SHALL BE INSTALLED AND MAINTAINED ON THE RECIRCULATION LINE TO THE SCRUBBER.
[RULE 1405]
- 7) AN AUTOMATIC PH METER INDICATOR AND CONTROLLER SHALL BE INSTALLED AND MAINTAINED TO MEASURE THE PH OF THE RECIRCULATION SCRUBBING SOLUTION. THE SCRUBBING SOLUTION SHALL MAINTAIN A PH BETWEEN 7.0 AND 8.0.
[RULE 1405]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

- 8) AN OPERATION RECORD OF THIS EQUIPMENT SHALL BE MAINTAINED IN A WRITTEN FORM. THE RECORD SHALL INCLUDE, AT A MINIMUM, THE HOURS AND DAYS OF OPERATION OF THE EQUIPMENT BETWEEN CLEANING, THE DATE OF CLEANING OF THE EQUIPMENT, AN EXPLANATION OF ANY MAINTENANCE PROBLEM ASSOCIATED WITH THE EQUIPMENT. THESE RECORD SHALL BE KEPT FOR A MINIMUM OF FIVE YEARS AND MADE AVAILABLE UPON REQUEST BY DISTRICT PERSONNEL.
[RULE 3004(a)(4)]

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS****PERMIT TO OPERATE****Permit No. F49549
A/N 393358****Equipment Description**

AIR POLLUTION CONTROL SYSTEM NO. 1 CONSISTING OF:

1. SCRUBBER NO. 1, HARRINGTON, MODEL ECH 4, 4' -0" W. x 12' -0" L x 7' -3" H, WITH LANPAC POLYPROPYLENE PACKING MEDIA, SPRAY NOZZLES, AND MIST ELIMINATOR.
2. EXHAUST SYSTEM WITH TWO 5.36-HP BLOWERS, VENTING UP TO EIGHT (8) HOODS.

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. [TO COMPLY WITH COND. 3, THE OPERATOR SHALL INSTALL AND MAINTAIN A PH METER TO ACCURATELY INDICATE THE PH OF THE EFFLUENT OF THE SCRUBBER.
[RULE 204]
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
- 3) THE DIFFERENTIAL PRESSURE GAUGE, INDICATING INCHES OF WATER COLUMN, SHALL BE INSTALLED AND MAINTAINED ACROSS THE SCRUBBER PACKING.
[RULE 1405]
- 5) THE DIFFERENTIAL PRESSURE ACROSS THE PACKING SHALL NOT EXCEED 2.0 INCHES OF WATER COLUMN.
[RULE 1405]
- 5) NOT LESS THAN 80 GALLONS OF RECIRCULATING SCRUBBER SOLUTION SHALL BE SUPPLIED TO THE SCRUBBER SPRAY NOZZLES WHEN THE EQUIPMENT IT SERVES IS IN OPERATION.
[RULE 1405]
- 6) A FLOW METER INDICATING THE FLOW RATE IN GALLONS PER MINUTE SHALL BE INSTALLED AND MAINTAINED ON THE RECIRCULATION LINE TO THE SCRUBBER.
[RULE 1405]
- 7) AN AUTOMATIC PH METER INDICATOR AND CONTROLLER SHALL BE INSTALLED AND MAINTAINED TO MEASURE THE PH OF THE RECIRCULATION SCRUBBING SOLUTION. THE SCRUBBING SOLUTION SHALL MAINTAIN A PH BETWEEN 7.0 AND 8.0.
[RULE 1405]

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS**

- 8) AN OPERATION RECORD OF THIS EQUIPMENT SHALL BE MAINTAINED IN A WRITTEN FORM. THE RECORD SHALL INCLUDE, AT A MINIMUM, THE HOURS AND DAYS OF OPERATION OF THE EQUIPMENT BETWEEN CLEANING, THE DATE OF CLEANING OF THE EQUIPMENT, AN EXPLANATION OF ANY MAINTENANCE PROBLEM ASSOCIATED WITH THE EQUIPMENT. THESE RECORD SHALL BE KEPT FOR A MINIMUM OF FIVE YEARS AND MADE AVAILABLE UPON REQUEST BY DISTRICT PERSONNEL.
[RULE 3004(a)(4)]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO CONSTRUCT/OPERATE

Permit No. R-F55254
A/N 401586

Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, MODEL G3412, NATURAL GAS-FIRED, RICH BURN, FOUR CYCLE, TWELVE CYLINDER, TURBOCHARGED, AFTERCOOLED, RATED AT 607 BHP, WITH A NON-SELECTIVE CATALYTIC CONVERTER, MIRATECH MODEL EQ-801-08-C2, AND AN AIR/FUEL RATIO CONTROLLER, MIRATECH, MODEL MEC-2001-1 DRIVING A COMPRESSOR.

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 CONTROL SYSTEM THAT REGULATES ENGINE EXHAUST OXYGEN CONTENT.
[RULE 1303(a)(1)-BACT]
- 4) THE ENGINE EMISSIONS SHALL NOT EXCEED THE FOLLOWING LIMITS:

COMPOUND	PMV @ 15% O ₂ , DRY BASIS
VOLATILE ORGANIC CPD, VOC	0.15 GR/BHP-HR
NITROGEN OXIDES (NO _x)	0.15 GR/BHP-HR
CARBON MONOXIDE (CO) [RULE 1303(a)(1)-BACT]	0.6 GR/BHP-HR
- 5) THE OWNER OR OPERATOR OF THIS ENGINE SHALL CONDUCT SOURCE TESTS UNDER THE FOLLOWING CONDITIONS:

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

- A. A TEST PLAN SHALL BE SUBMITTED TO THE DISTRICT'S MECHANICAL TEAM WITHIN 30 DAYS OF THE INITIAL STARTUP AND SHALL BE APPROVED BY THE TEAM MANAGER BEFORE THE TEST COMMENCES. THE PLAN SHALL INCLUDE THE OPERATING CONDITIONS OF THE EQUIPMENT DURING THE TEST, THE IDENTITY OF THE TESTING LABORATORY, A STATEMENT FROM THE TESTING LABORATORY CERTIFYING THAT IT MEETS THE CRITERIA IN DISTRICT RULE 304(k), AND A DESCRIPTION OF ALL SAMPLING AND ANALYTICAL PROCEDURES TO BE USED.
- B. EMISSION TESTING SHALL BE CONDUCTED WITHIN 60 DAYS AFTER APPROVAL OF THE TEST PLAN. A COMPLETE TEST REPORT SHALL BE SUBMITTED TO THE DISTRICT ENGINEER WITHIN 45 DAYS OF COMPLETION OF THE TEST.
- C. THE TEST SHALL BE CONDUCTED WITH NATURAL GAS AS FUEL AND SHALL DETERMINE THE FOLLOWING:
- (1) HOURLY RATE, IN POUNDS PER HOUR, AFTER THE CATALYTIC CONVERTER, OF THE FOLLOWING POLLUTANTS: NON-METHANE ORGANIC GASES, OXIDES OF NITROGEN, AND CARBON MONOXIDE.
 - (2) ENGINE LOADS, IN HORSEPOWER, DURING THE TESTING PERIOD.
 - (3) FUEL CONSUMPTION, IN STANDARD CUBIC FEET PER HOUR, DURING THE TESTING PERIOD.
 - (4) TEMPERATURE OF EXHAUST GASES ENTERING THE CONVERTER.
 - (5) OXYGEN CONTENT OF EXHAUST GASES ENTERING THE CONVERTER.
- D. THE DISTRICT ENGINEER SHALL BE NOTIFIED OF THE DATE AND TIME OF THE TEST AT LEAST 10 DAYS PRIOR TO THE TEST, OR WITHIN A TIME PERIOD AGREED UPON BY THE DISTRICT ENGINEER.
- E. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES", PURSUANT TO RULE 217.
[RULE 1303(a)(1)-BACT]
- 6) THE OWNER OR OPERATOR OF THIS ENGINE SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 1110.2.
[RULE 1110.2]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. F71623
A/N 419503

Equipment Description:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. CATALYTIC OXIDIZER, DONALDSON, MODEL ETO ABATOR, WITH 8.5 KW ELECTRICAL PREHEATER .
2. EXHAUST SYSTEM WITH A 3/4-H.P. BLOWER VENTING TO TWO STERILIZERS.

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. CATALYST BED TEMPERATURE SHALL BE MAINTAINED ABOVE 280 DEGREES F AND NOT TO EXCEED 500 DEGREES F EXCEPT DURING START-UP OPERATIONS
4. THIS EQUIPMENT SHALL NOT BE PURGED OR AIRWASHED UNLESS IT IS VENTED TO THE AIR POLLUTION CONTROL EQUIPMENT, WHICH IS IN FULL USE AND HAS BEEN ISSUED A PERMIT TO OPERATE.
5. THIS EQUIPMENT SHALL BE IN FULL USE WHEN THE STERILIZER IT SERVES IS IN OPERATION.
6. THE STERILIZER EXHAUST SYSTEM SHALL BE LEAK FREE.
7. LEAK INSPECTIONS SHALL BE CONDUCTED ONCE EVERY SIX MONTHS IN ACCORDANCE WITH RULE 1405.
7. RECORDS OF THE LEAK INSPECTIONS SHALL BE MAINTAINED IN ACCORDANCE WITH RULE 1405, AND KEPT ON FILE FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT STAFF UPON REQUEST.
9. THIS EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF RULE 1405.

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. F71622
A/N 423568

Equipment Description

SCRUBBER A, HARRINGTON, MODEL ECH 4, 4' -0" W. x 12' -0" L x 7' -3" H, WITH SPRAY NOZZLES AND ONE MIST ELIMINATOR, CONSISTING OF TWO 5.36 H.P. BLOWERS, VENTING FROM THE BENCHED-TYPE POLISHING STATIONS, LOCATED IN BUILDING A.

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. [TO COMPLY WITH COND. 3, THE OPERATOR SHALL INSTALL AND MAINTAIN A PH METER TO ACCURATELY INDICATE THE PH OF THE EFFLUENT OF THE SCRUBBER.
[RULE 204]
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
- 3) THE OPERATOR SHALL USE THIS EQUIPMENT IN SUCH A MANNER THAT THE PH BEING MONITORED AS INDICATED BELOW, DOES NOT FALL BELOW 8.0.
[RULE 1405]
- 4) COMPLY WITH COND. 3, THE OPERATOR SHALL INSTALL AND MAINTAIN A PH METER TO ACCURATELY INDICATE THE PH OF THE EFFLUENT OF THE SCRUBBER.
[RULE 1405]
- 5) THE OPERATOR SHALL KEEP RECORD OF THE ACID CONSUMPTIONS AND THE PH READING OF THE EFFLUENT OF THE SCRUBBER. SUCH RECORD SHALL BE KEPT FOR AT LEAST FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO DISTRICT STAFF UPON REQUEST.
[RULE 1405]
- 6) THIS EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF RULE 1405.
[RULE 1405]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. F71621
A/N 423571

Equipment Description

SCRUBBER B, HARRINGTON, MODEL ECH 4, 4' -0" W. x 12' -0" L x 7' -3" H, WITH SPRAY NOZZLES AND ONE MIST ELIMINATOR, CONSISTING OF TWO 5.36 H.P. BLOWERS, VENTING FROM THE BENCHED-TYPE POLISHING STATIONS, LOCATED IN BUILDING B.

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 OPERATOR SHALL USE THIS EQUIPMENT IN SUCH A MANNER THAT THE PH BEING MONITORED AS INDICATED BELOW DOES NOT FALL BELOW 8.0.
[RULE 1405]
- 4) TO COMPLY WITH COND. 3, THE OPERATOR SHALL INSTALL AND MAINTAIN A PH METER TO ACCURATELY INDICATE THE PH OF THE EFFLUENT OF THE SCRUBBER.
[RULE 1405]
- 5) THE OPERATOR SHALL KEEP RECORD OF THE ACID CONSUMPTIONS AND THE PH READING OF THE EFFLUENT OF THE SCRUBBER. SUCH RECORD SHALL BE KEPT FOR AT LEAST FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO DISTRICT STAFF UPON REQUEST.
[RULE 1405]
- 6) THIS EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF RULE 1405.
[RULE 1405]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. F71663
A/N 429270

Equipment Description

LASER CUTTING SYSTEM CONSISTING OF:

1. 15 LASER CUTTING MACHINES, QUANTRONIX, MODEL 532DP-O, EACH 7.5 WATTS, 2' -10" W x 7' -3" L x 7' -2" H.
2. 15 LASER CUTTING MACHINES, LASAG, MODEL KLS246, EACH 6 WATTS, 3' -2" W x 6' -9" L x 5' -4" H.

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. [TO COMPLY WITH COND. 3, THE OPERATOR SHALL INSTALL AND MAINTAIN A PH METER TO ACCURATELY INDICATE THE PH OF THE EFFLUENT OF THE SCRUBBER.
[RULE 204]
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
- 3) THIS EQUIPMENT SHALL NOT PROCESS MORE THAN 12,000 STENTS OF STAINLESS STEEL OR COBALT CHROME IN ANY ONE DAY.
[RULE 1401]
- 4) THE OPERATOR SHALL KEEP A DAILY RECORD OF THE NUMBER OF STENTS AND THE TYPE OF ALLOY PROCESSED. SUCH RECORD SHALL BE KEPT FOR A MINIMUM OF FIVE YEARS AND SHALL BE AVAILABLE TO DISTRICT STAFF UPON REQUEST.
[RULE 3004(a)(4)- Periodic Monitoring]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. F83293
A/N 443789

Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, 6 CYLINDER, TURBOCHARGED, AFTERCOOLED, MODEL 3456 DITA AA, 764 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 OPERATION OF THIS ENGINE BEYOND 20 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 ROTATING OUTAGES, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED, OR HAS INDICATED THAT THE DISTRIBUTION COMPANY IS EXPECTED TO ISSUE SUCH ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN THE UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.
[RULE 1470]
4. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE CALENDAR YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS FOR MAINTENANCE AND PERFORMANCE TESTING.
[RULE 1470]
5. AN OPERATIONAL, NON-RESETTABLE ELAPSED TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1470]
6. THIS ENGINE SHALL NOT BE USED AS PART OF A DEMAND RESPONSE PROGRAM USING INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATE IN RETURN FOR REDUCING ITS ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY COMPANY OR THE GRID OPERATOR.
[RULE 1470]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

7. THIS ENGINE SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.
[RULES 431.2, 1470]

8. AN ENGINE OPERATING LOG SHALL BE MAINTAINED ON A MONTHLY BASIS, WHICH SHALL INCLUDE MANUAL AND AUTOMATIC OPERATION AND SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:
 - A. EMERGENCY USE HOURS OF OPERATION
 - B. MAINTENANCE AND TESTING HOURS
 - 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 LOG SHALL BE KEPT FOR A MINIMUM OF FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT STAFF UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.
[RULE 3004(a)(4)-Periodic Monitoring]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. F83295

A/N 447835

Equipment Description:

STERILIZER, ETHYLENE OXIDE, 3M MODEL 8 XL, 8.8 CUBIC FEET INTERNAL CAPACITY.

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 OPERATOR SHALL NOT OPERATE THIS STERILIZER UNLESS IT IS VENTED TO AN AIR POLLUTION CONTROL EQUIPMENT, WHICH IS IN FULL USE AND HAS BEEN ISSUED A PERMIT TO OPERATE BY THE EXECUTIVE OFFICER.
4. THIS EQUIPMENT SHALL NOT USE MORE THAN 170 GRAMS OF ETHYLENE OXIDE IN ANY ONE CYCLE.
5. THE OPERATOR SHALL CONDUCT NO MORE THAN TWO STERILIZING CYCLES IN THIS EQUIPMENT IN ANY ONE DAY.
6. THE OPERATOR SHALL MAINTAIN THE STERILIZER EXHAUST SYSTEM TO BE LEAK FREE, WITH LEAK TESTS CONDUCTED EVERY SIX MONTHS IN ACCORDANCE WITH THE TEST METHODS SPECIFIED IN RULE 1405.
7. THE OPERATOR SHALL MAINTAIN A DAILY OPERATING LOG AND RECORD THE LEAK TESTS IN ACCORDANCE WITH RULE 1405, WHICH SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS, AND BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
8. THE OPERATOR SHALL NOT PURGE OR AIRWASH THIS EQUIPMENT UNLESS IT IS VENTED TO AN AIR POLLUTION CONTROL EQUIPMENT, WHICH IS IN FULL USE AND HAS BEEN ISSUED A PERMIT TO OPERATE.

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. F83294
A/N 447836

Equipment Description:

STERILIZER, ETHYLENE OXIDE, 3M, MODEL 8XL, 8.8 CUBIC FEET INTERNAL CAPACITY.

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 OPERATOR SHALL NOT OPERATE THIS STERILIZER UNLESS IT IS VENTED TO AN AIR POLLUTION CONTROL EQUIPMENT, WHICH IS IN FULL USE AND HAS BEEN ISSUED A PERMIT TO OPERATE BY THE EXECUTIVE OFFICER.
4. THIS EQUIPMENT SHALL NOT USE MORE THAN 170 GRAMS OF ETHYLENE OXIDE IN ANY ONE CYCLE.
5. THE OPERATOR SHALL CONDUCT NO MORE THAN TWO STERILIZING CYCLES IN THIS EQUIPMENT IN ANY ONE DAY.
6. THE OPERATOR SHALL MAINTAIN THE STERILIZER EXHAUST SYSTEM TO BE LEAK FREE, WITH LEAK TESTS CONDUCTED EVERY SIX MONTHS IN ACCORDANCE WITH THE TEST METHODS SPECIFIED IN RULE 1405.
7. THE OPERATOR SHALL MAINTAIN A DAILY OPERATING LOG AND RECORD THE LEAK TESTS IN ACCORDANCE WITH RULE 1405, WHICH SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS, AND BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
8. THE OPERATOR SHALL NOT PURGE OR AIRWASH THIS EQUIPMENT UNLESS IT IS VENTED TO AN AIR POLLUTION CONTROL EQUIPMENT, WHICH IS IN FULL USE AND HAS BEEN ISSUED A PERMIT TO OPERATE.

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO OPERATE

Permit No. F83299

A/N 447837

Equipment Description:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. CATALYTIC OXIDIZER, 3M, MODEL 50 SCFM, 5 KW ELECTRIC PREHEATER.
2. EXHAUST BLOWER, 2 HP, 50 CFM

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 CATALYST BED TEMPERATURE SHALL BE MAINTAINED ABOVE 280 BUT NOT TO EXCEED 500 DEGREES F EXCEPT DURING START-UP OPERATIONS OF THIS EQUIPMENT.
[RULE 1303(a)(1)-BACT]
4. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS TEMPERATURE INDICATOR AND RECORDER TO ACCURATELY INDICATE AND RECORD THE TEMPERATURE AT THE EXHAUST OF THE OXIDIZER.
[RULE 1303(a)(1)-BACT]
5. THIS EQUIPMENT SHALL BE IN FULL USE WHEN THE STERILIZER IT SERVES IS IN OPERATION.
[RULE 1303(a)(1)-BACT]
6. ONLY ONE STERILIZER SHALL BE VENTED TO THIS EQUIPMENT AT ANY ONE TIME. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF RULE 1405.
[RULE 1303(a)(1)-BACT]
7. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF RULE 1405.
[RULE 1405]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

PERMIT TO CONSTRUCT/OPERATE

Permit No.
A/N 487422

Equipment Description

AIR POLLUTION CONTROL SYSTEM NO. 1 CONSISTING OF:

1. SCRUBBER NO. 1, HARRINGTON, MODEL ECH 44-5 LB, 5' -8" W. x 11' -8" L x 6' -11" H, WITH, SPRAY NOZZLE.
2. EXHAUST SYSTEM WITH TWO 20-HP BLOWERS, VENTING 10 BENCH-TYPE POLISHING BAYS.

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. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY TOXIC AIR CONTAMINANTS IDENTIFIED IN RULE 1401, TABLE I, WITH AN EFFECTIVE DATE OF [MARCH 7, 2008] OR EARLIER, EXCEPT FOR [SODIUM HYDROXIDE (CAS # 1310-73-2), PHOSPHORIC ACID (CAS # 7664-38-20), AND HYDROCHLORIC ACID (CAS # 7647-01-0)].
4. NOT LESS THAN 55 GALLONS PER MINUTE OF RECIRCULATING SCRUBBER SOLUTION SHALL BE SUPPLIED TO THE SCRUBBER SPRAY NOZZLES WHEN THE EQUIPMENT IT SERVES IS IN OPERATION.
[RULE 1303(a)(1)-BACT]
5. A FLOW METER INDICATING GALLONS PER MINUTE (GPM) SHALL BE MAINTAINED IN THE SCRUBBING SOLUTION CIRCULATION LINE TO THE SCRUBBER.
[RULE 1303(a)(1)-BACT]
6. THE SCRUBBING SOLUTION TO THE SCRUBBER NOZZLES SHALL BE MAINTAINED AT pH 8.0 OR HIGHER. THE pH METER SHALL BE USED TO MEASURE THE pH OF THE SOLUTION ON A DAILY BASIS.
[RULE 1303(a)(1)-BACT]

Periodic Monitoring:

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS**

7. RECORDS SHALL BE MAINTAINED TO DEMONSTRATE COMPLIANCE WITH CONDITIONS 4 AND 6. THE RECORDS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 3004(a)(4)]

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS****PERMIT TO CONSTRUCT/OPERATE****Permit No.
A/N 497147****Equipment Description**

AIR POLLUTION CONTROL SYSTEM NO. 1 CONSISTING OF:

1. SCRUBBER, HARRINGTON, MODEL ECH 4, 4' -0" W. X 12' -0" L. X 7' -3" H, WITH SPRAY NOZZLE.
2. EXHAUST SYSTEM WITH TWO 20-HP BLOWERS, VENTING BENCH-TYPE POLISHING STATIONS.

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. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY TOXIC AIR CONTAMINANTS IDENTIFIED IN RULE 1401, TABLE I, WITH AN EFFECTIVE DATE OF [MARCH 7, 2008] OR EARLIER, EXCEPT FOR [SODIUM HYDROXIDE (CAS # 1310-73-2), PHOSPHORIC ACID (CAS # 7664-38-20), AND HYDROCHLORIC ACID (CAS # 7647-01-0)].
4. NOT LESS THAN 55 GALLONS PER MINUTE OF RECIRCULATING SCRUBBER SOLUTION SHALL BE SUPPLIED TO THE SCRUBBER SPRAY NOZZLES WHEN THE EQUIPMENT IT SERVES IS IN OPERATION.
[RULE 1303(a)(1)-BACT]
5. A FLOW METER INDICATING GALLONS PER MINUTE (GPM) SHALL BE MAINTAINED IN THE SCRUBBING SOLUTION CIRCULATION LINE TO THE SCRUBBER.
[RULE 1303(a)(1)-BACT]
6. THE SCRUBBING SOLUTION TO THE SCRUBBER NOZZLES SHALL BE MAINTAINED AT pH 8.0 OR HIGHER. THE pH METER SHALL BE USED TO MEASURE THE pH OF THE SOLUTION ON A DAILY BASIS.
[RULE 1303(a)(1)-BACT]

Periodic Monitoring:

**FACILITY PERMIT TO OPERATE
ADVANCED CARDIOVASCULAR SYSTEMS**

7. RECORDS SHALL BE MAINTAINED TO DEMONSTRATE COMPLIANCE WITH CONDITIONS 4 AND 6. THE RECORDS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 3004(a)(4)]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

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 COATING.

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 COATING.

[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
[RULE 1113, RULE 1171]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, HAND WIPING OPERATIONS.

Emissions And Requirements:

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

VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS
[RULE 1171]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, BOILER, > 400,000 BTU/HR BUT < 2 MMBTU/HR.

Emissions And Requirements:

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

PM: 0.1 gr/scf, RULE 409
NOx: 30 PPMV, RULE 1146.2
CO: 400 PPMV, RULE 1146.2
CO: 2000 PPMV, RULE 407

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, ABRASIVE BLASTING EQUIPMENT, GLOVE-BOX, < 53 FT3, WITH DUST FILTER.

Periodic Monitoring:

1. THE OPERATOR SHALL PERFORM AN ANNUAL INSPECTION OF THE EQUIPMENT AND FILTER MEDIA FOR LEAKS, BROKEN OR TORN FILTER MEDIA AND IMPROPERLY INSTALLED FILTER MEDIA. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):
 - A. THE NAME OF THE PERSON PERFORMING THE INSPECTION AND/OR MAINTENANCE OF THE FILTER MEDIA;
 - B. THE DATE, TIME AND RESULTS OF THE INSPECTION; AND
 - C. THE DATE, TIME AND DESCRIPTION OF ANY MAINTENANCE OR REPAIRS RESULTING FROM THE INSPECTION.[RULE 3004 (a)(4)]

2. THE OPERATOR SHALL DISCHARGE DUST COLLECTED IN THIS EQUIPMENT ONLY INTO CLOSED CONTAINERS.
[RULE 3004 (a)(4)]

3. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSIONS FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THERE IS A PUBLIC COMPLAINT OF VISIBLE EMISSIONS, WHENEVER VISIBLE EMISSIONS ARE OBSERVED, AND ON AN ANNUAL BASIS, AT LEAST, UNLESS THE EQUIPMENT DID NOT OPERATE DURING THE ENTIRE ANNUAL PERIOD. THE ROUTINE ANNUAL 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, THE OPERATOR SHALL TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN ACCORDANCE WITH THE REPORTING REQUIREMENTS IN SECTION K OF THIS PERMIT.
THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:
 - A. STACK OR EMISSION POINT IDENTIFICATION;
 - B. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS; AND
 - C. DATE AND TIME VISIBLE EMISSION WAS ABATED.[RULE 3004 (a)(4)]

FACILITY PERMIT TO OPERATE ADVANCED CARDIOVASCULAR SYSTEMS

Emissions And Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

PM: RULE 405, SEE APPENDIX B FOR EMISSION LIMITS

PM: RULE 1140, SEE APPENDIX B FOR EMISSION LIMITS