FACILITY PERMIT TO OPERATE

IRVINE RANCH WATER DIST
3512 MICHELSON DR
IRVINE, CA 92612

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Barry R. Wallerstein, D. Env.
EXECUTIVE OFFICER

By_____
Mohsen Nazemi, P.E.
Deputy Executive Officer
Engineering & Compliance

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

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FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

SECTION A: FACILITY INFORMATION

LEGAL OWNER &/OR OPERATOR:	IRVINE RANCH WATER DIST
LEGAL OPERATOR (if different than owner):	
EQUIPMENT LOCATION:	3512 MICHELSON DR IRVINE, CA 92612
MAILING ADDRESS:	P O BOX 57000 ATTN JOHN DAYER IRVINE, CA 92619-7000
RESPONSIBLE OFFICIAL:	PAUL COOK
TITLE:	GENERAL MANAGER
TELEPHONE NUMBER:	(949) 453-5590
CONTACT PERSON:	LYNDY LEWIS
TITLE:	REGULATORY COMPLIANCE MANAGER
TELEPHONE NUMBER:	(949) 453-5832
TITLE V PERMIT ISSUED:	TBD
TITLE V PERMIT EXPIRATION DATE:	TBD

TITLE V	RECLAIM	
YES	NOx:	NO
	SOx:	NO
	CYCLE:	0
	ZONE:	COASTAL

FACILITY PERMIT TO OPERATE
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SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

NOT APPLICABLE

FACILITY PERMIT TO OPERATE
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SECTION C: FACILITY PLOT PLAN

(TO BE DEVELOPED)

FACILITY PERMIT TO OPERATE
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Facility Equipment and Requirements
(Section D)

This section consists of a table listing all permitted equipment at the facility, facility wide requirements, copies of all individual 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
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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 No.	Permit No.	Equipment description	Page No.
317078	F2584	SCRUBBER, OTHER VENTING MULTIPLE SOURCES	4
383705	R-F38226	IC ENGINE (50-500 HP) EMERGENCY STATIONARY DIESEL	5
393835	F48065	STORAGE TANK METHANOL	7
466394	G5854	IC ENGINE (50-500 HP) NON-EMERGENCY STATIONARY NATURAL GAS ONLY	8
484192	F97751	IC ENGINE (50-500 HP) EMERGENCY STATIONARY DIESEL	11
495044	N23911	SERV STAT STORAGE & DISPENSING GASOLINE	14
510239	G11944	IC ENGINE (50-500 HP) NON-EMERGENCY STATIONARY NATURAL GAS ONLY	19
512858	G9444	IC ENGINE (>500 HP) EMERGENCY STATIONARY DIESEL	22
512859	G9445	IC ENGINE (>500 HP) EMERGENCY STATIONARY DIESEL	25
512860	G9446	IC ENGINE (>500 HP) EMERGENCY STATIONARY DIESEL	28
535794	G30509	SEWAGE TREATMENT (>5 MG/D) ANAEROBIC	31
535813	TBD	IC ENGINE (>500 HP) EMERGENCY ELECTRICAL GENERATION, DIESEL	38
551658	TBD	IC ENGINE (>500 HP) NON-EMERGENCY STATIONARY, NATURAL GAS ONLY	42
551660	TBD	IC ENGINE (>500 HP) NON-EMERGENCY STATIONARY, NATURAL GAS ONLY	46
554495	TBD	PLASMA ARC CUTTER	50
554496	TBD	APC SYSTEM, DUST COLLECTOR WITH HEPA	51
557286	G28212	IC ENGINE (50-500 HP) NON-EMERGENCY STATIONARY NATURAL GAS ONLY	53

NOTE: 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.

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FACILITY WIDE CONDITION(S)

Condition(s):

1. THE OPERATOR SHALL NOT USE FUEL OIL CONTAINING SULFUR COMPOUNDS IN EXCESS OF 0.05 PERCENT BY WEIGHT. AFTER JUNE 1, 2004, THE OPERATOR SHALL NOT PURCHASE ANY DIESEL FUEL UNLESS THE FUEL IS LOW SULFUR DIESEL FOR WHICH THE SULFUR CONTENT SHALL NOT EXCEED 15 PPM BY WEIGHT AS SUPPLIED BY THE SUPPLIER.
[RULE 431.2]

2. THE FACILITY SHALL NOT EMIT MORE THAN 5 LBS/DAY OF TOTAL SULFUR COMPOUNDS, CALCULATED AS H2S, FROM BURNING OF GASEOUS FUELS OTHER THAN NATURAL GAS.
[RULE 431.1]

3. THE OWNER/OPERATOR SHALL NOT DISCHARGE FROM ANY SINGLE SOURCE SULFUR COMPOUNDS IN ANY STATE OR COMBINATION IN EXCESS OF 0.05 PERCENT BY VOLUME AS SO2.
[RULE 53(a)(1)]

4. THE FACILITY SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF 40 CR 63 SUBPART ZZZZ.
[40 CFR 63 SUBPART ZZZZ]

FACILITY PERMIT TO OPERATE
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PERMIT TO OPERATE

Permit No. F2584
A/N 317078

Equipment Description:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. SCRUBBER, RJ-2000, VERTICAL, PACKED TOWER, NaOH SOLUTION, 6'-6" W. X 10'-0" L. X 11'-3" H., 6,000 CFM CAPACITY.

2. EXHAUST SYSTEM WITH A 10 H.P. BLOWER VENTING THE PRIMARY CLARIFIERS.

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 MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THE CONCENTRATION OF HYDROGEN SULFIDE (H2S) IN THE SCRUBBER EXHAUST SHALL BE MEASURED AND RECORDED AT LEAST ONCE PER DAY.
[RULE 204]

4. THE CONCENTRATION OF SULFUR COMPOUNDS, CALCULATED AS HYDROGEN SULFIDE (H2S), IN THE SCRUBBER EXHAUST SHALL NOT EXCEED 1.0 PPMV.
[RULE 204, RULE 402]

5. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3005(a)]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. R-F38226
A/N 383705

Equipment Description:

INTERNAL COMBUSTION ENGINE, PERKINS, MODEL NO. 1006-6GT, 6 CYLINDERS, 166 BHP, DIESEL FUELED, TURBOCHARGED, 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 MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2; RULE 1303(a)(1)-BACT, RULE 1304(a)(4) -Modeling and Offsets, RULE 1470]

4. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.
[RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4) -Modeling and Offsets, RULE 1470]

5. OPERATION OF THE ENGINE BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND 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. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.
[RULE 1303(a)(1)-BACT, RULE 1470]

6. THIS ENGINE SHALL NOT BE USED AS PART OF A DEMAND RESPONSE PROGRAM USING AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ITS ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO SO BY THE UTILITY OR GRID OPERATOR.
[RULE 1303(a)(1)-BACT, RULE 1470]

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7. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

   A. EMERGENCY USE HOURS OF OPERATION.
   B. MAINTENANCE AND TESTING HOURS.
   C. HOURS OF OPERATION FOR DEMONSTRATING COMPLIANCE WITH EMISSION LIMITS.
   D. OTHER OPERATION 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 TOTALIZING TIME METER READING IN HOURS AT THE BEGINNING AND END OF OPERATION. THE OPERATING HOUR TOTALS FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.
   [RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)- Modeling and Offsets, RULE 1470, 40CFR63 SUBPART ZZZZ]

8. THE SULFUR CONTENT OF DIESEL FUEL SUPPLIED TO THIS ENGINE SHALL NOT EXCEED 15 PPM (0.0015%) BY WEIGHT.
   [RULE 431.2, RULE 1470, 40CFR63 SUBPART ZZZZ]]

9. THE OWNER OR OPERATOR SHALL DOCUMENT THE USE OF CARB DIESEL FUEL (NO. 2-ULTRA LOW SULFUR) THROUGH THE RETENTION OF FUEL PURCHASE RECORDS.
   [RULE 1470]

10. THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 431.2, RULE 1470, AND 40CFR63 SUBPART ZZZZ.
    [RULE 431.2, RULE 1470, 40CFR63 SUBPART ZZZZ]

11. OPERATING RECORDS FOR THE EQUIPMENT, WHICH SHALL INCLUDE ALL DATA, LOGS, TEST REPORTS, DATES OF OPERATION, TOTAL HOURS OF OPERATION, AND FUEL CONSUMPTION FOR EACH TYPE OF FUEL SHALL BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
    [RULE 204, RULE 1110.2, RULE 3004(a)]

Emissions and Requirements:

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

    PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
    PM/PM10: RULE 1470

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. F48065
A/N 393835

Equipment Description:

STORAGE TANK, METHANOL, 12'-0" DIA. X 13'-4" H., 10,000 GALLON CAPACITY, VERTICAL FIXED ROOF TANK, WITH TWO 51 GPH PUMPS AND TWO ½ H.P. ELECTRIC MOTORS.

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 MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
   [RULE 204]

3. THIS EQUIPMENT SHALL NOT BE USED FOR STORING ANY ORGANIC LIQUID WITH A VAPOR PRESSURE HIGHER THAN 2.5 PSIA.
   [RULE 204, RULE 1303]

4. THE TOTAL THROUGHPUT OF ORGANIC LIQUID STORED IN THIS TANK SHALL NOT EXCEED 8,400 GALLONS IN ANY ONE CALENDAR MONTH. RECORDS ON THE MONTHLY THROUGHPUT OF THE EQUIPMENT AND ITS CUMULATIVE TOTAL THROUGHPUT FOR THE CALENDAR MONTH SHALL BE MAINTAINED AND KEPT ON FILE FOR AT LEAST FIVE (5) YEARS AND SHALL BE MADE AVAILABLE AT THE REQUEST OF THE DISTRICT.
   [RULE 204, RULE 1303]

5. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
   [RULE 204, RULE 3004(a)]

6. RAW MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY COMPOUNDS IDENTIFIED AS TOXIC AIR CONTAMINANTS IN RULE 1401, TABLE I AS AMENDED ON JUNE 15, 2001, EXCEPT METHANOL.
   [RULE 1401]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. G5854
A/N 466394

Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, MODEL NO. G3306TA, FOUR-STROKE, 6 CYLINDERS, 203 BHP, NATURAL GAS FIRED, RICH BURN, TURBOCHARGED, AFTERCOOLED, WITH AN AIR TO FUEL RATIO CONTROLLER, ALTRONIC, MODEL EPC-100, VENTED TO A THREE WAY CATALYST, MINE-X, MODEL 2-DC49-6, DRIVING A WATER PUMP.

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 MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THIS ENGINE SHALL NOT BE OPERATED UNLESS IT IS VENTED TO A THREE WAY CATALYST.
[RULE 1303(a)(1)-BACT]

4. THIS ENGINE SHALL BE FIRED ON NATURAL GAS ONLY.
[RULE 1110.2, RULE 1303(a)(1)-BACT]

5. 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 CONDITION AT ALL TIMES AS SPECIFIED BY THE MANUFACTURER.
[RULE 1110.2]

6. A TEMPERATURE MEASUREMENT AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED TO ACCURATELY INDICATE THE TEMPERATURE AT THE INLET AND OUTLET OF THE CATALYST.
[RULE 204]

7. THE INLET AND OUTLET TEMPERATURE OF THE CATALYTIC CONVERTER (EXCEPT FOR STARTUP PERIODS) AND THE EXHAUST OXYGEN CONCENTRATION SHALL BE MAINTAINED AS SPECIFIED BY THE MANUFACTURER.
[RULE 204]

8. WHENEVER THE ENGINE IS OPERATING, THE TEMPERATURE AT THE INLET OF THE CATALYTIC OXIDIZER SHALL BE 750 DEGREES FAHRENHEIT OR HIGHER EXCEPT DURING START-UP PERIODS NOT TO EXCEED 30 MINUTES PER EVENT.
[RULE 204]

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9. AN OPERATIONAL TOTALIZING FUEL METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE FUEL USAGE IN THE FUEL SUPPLY LINE TO THE ENGINE.
[RULE 204, RULE 1110.2]

10. THE MAXIMUM FUEL CONSUMPTION SHALL NOT EXCEED 1.28 MILLION CUBIC FEET PER MONTH.
[RULE 1303(b)(2)-Offsets]

11. AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2]

12. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:
A. TOTAL HOURS OF OPERATION.
B. FUEL CONSUMPTION OF EACH FUEL TYPE.
C. CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST.
[RULE 1110.2]

13. THE OPERATOR SHALL MAINTAIN AND IMPLEMENT AN INSPECTION AND MONITORING (I&M) PLAN FOR THIS EQUIPMENT AS DESCRIBED IN THIS PERMIT IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF RULE 1110.2(f)(1)(D).
[RULE 1110.2]

14. THE OWNER OR OPERATOR SHALL CONDUCT SOURCE TESTING FOR NOx, VOC REPORTED AS CARBON, AND CO CONCENTRATIONS (CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON A 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. 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 SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE). IN ADDITION, A SOURCE TEST SHALL BE CONDUCTED FOR NOx AND CO EMISSIONS FOR AT LEAST 15 MINUTES AT: (1) THE ENGINES ACTUAL PEAK LOAD, OR THE MAXIMUM LOAD THAT CAN BE PRACTICALLY ACHIEVED DURING THE TEST, AND, (2) THE ENGINE'S ACTUAL MINIMUM LOAD, EXCLUDING IDLE, OR 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 RESULTS OF THESE TESTS SHALL BE FURNISHED TO THE SCAQMD IN WRITING WITHIN 60 DAYS OF THE COMPLETION OF THE TEST. WRITTEN NOTICE OF THE PERFORMANCE TESTS SCHEDULE SHALL BE PROVIDED TO THE SCAQMD 7 DAYS PRIOR TO THE TESTS SO THAT AN OBSERVER MAY BE PRESENT.
[RULE 1110.2]

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15. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2(f)(1)(H)(i) THROUGH (iii), PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.
[RULE 1110.2]

16. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF RULE 431.1, RULE 1110.2, AND 40 CFR 60 SUBPART JJJJ, AND 40 CFR 63 SUBPART ZZZZ.
[RULE 431.1, RULE 1110.2, 40CFR60 SUBPART JJJJ, 40CFR63 SUBPART ZZZZ]

17. OPERATING RECORDS FOR THE EQUIPMENT, WHICH SHALL INCLUDE ALL DATA, LOGS, TEST REPORTS, DATES OF OPERATION, TOTAL HOURS OF OPERATION, AND FUEL CONSUMPTION FOR EACH TYPE OF FUEL SHALL BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 1110.2, RULE 3004(a)]

Emissions and Requirements:

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

PM:	RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO:	250 PPMV @15% O2 DRY, RULE 1110.2
NOx:	11 PPMV @15% O2 DRY, RULE 1110.2
VOC:	30 PPMV @15% O2 DRY, RULE 1110.2
CO:	0.6g/bhp-hr, RULE 1303(a)(1)-BACT
NOx:	0.15 g/bhp-hr, RULE 1303(a)(1)-BACT
VOC:	0.15 g/bhp-hr, RULE 1303(a)(1)-BACT

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IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. F97751
A/N 484192

Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, MODEL C4.4 (60/80 KW), FOUR STROKE, 4 CYLINDERS, 130 BHP, DIESEL FUELED, 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 MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. A OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4) -Modeling and Offsets, RULE 1470]

4. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.
[RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)-Modeling and Offsets, RULE 1401, RULE 1470]

5. OPERATION OF THE ENGINE BEYOND THE 50 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND 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. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.
[RULE 1303(a)(1)-BACT, RULE 1470]

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 DO SO BY THE UTILITY OR THE GRID OPERATOR.
[RULE 1303(a)(1)-BACT, RULE 1470]

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7. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

   A. EMERGENCY USE HOURS OF OPERATION.
   B. MAINTENANCE AND TESTING HOURS.
   C. HOURS OF OPERATION FOR DEMONSTRATING COMPLIANCE WITH EMISSION LIMITS.
   D. 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, THE SPECIFIC REASON FOR OPERATION, AND THE TOTALIZING TIME METER READING IN HOURS AND TENTHS OF HOURS AT THE BEGINNING AND END OF OPERATION. THE OPERATING HOUR TOTALS FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.
   [RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)- Modeling and Offsets, RULE 1470, 40CFR60 Subpart IIII]

8. THE OPERATOR SHALL OPERATE AND MAINTAIN THE STATIONARY ENGINE AND CONTROL DEVICE ACCORDING TO THE MANUFACTURER'S WRITTEN EMISSION-RELATED INSTRUCTIONS (OR PROCEDURES DEVELOPED BY THE OPERATOR THAT ARE APPROVED BY THE ENGINE MANUFACTURER), CHANGE ONLY THOSE EMISSION-RELATED SETTINGS THAT ARE PERMITTED BY THE MANUFACTURER, AND MEET THE REQUIREMENTS OF 40 CFR 89, 94, AND/OR 1068, AS THEY APPLY.
   [40 CFR 60 Subpart IIII]

9. THE OPERATOR SHALL COMPLY WITH THE EMISSION STANDARDS SPECIFIED IN 40 CFR 60.4205(b) BY PURCHASING AN ENGINE CERTIFIED TO THE EMISSION STANDARDS IN 40 CFR 60.4205(b), AS APPLICABLE, FOR THE SAME MODEL YEAR AND MAXIMUM ENGINE POWER. THE ENGINE MUST BE INSTALLED AND CONFIGURED ACCORDING TO THE MANUFACTURER'S EMISSION RELATED SPECIFICATIONS.
   [40 CFR 60 Subpart IIII]

10. THE SULFUR CONTENT OF DIESEL FUEL SUPPLIED TO THIS ENGINE SHALL NOT EXCEED 15 PPM (0.0015%) BY WEIGHT.
    [RULE 431.2, RULE 1470, 40CFR60 Subpart IIII]

11. THE OWNER OR OPERATOR SHALL DOCUMENT THE USE OF CARB DIESEL FUEL (NO. 2-ULTRA LOW SULFUR) THROUGH THE RETENTION OF FUEL PURCHASE RECORDS.
    [RULE 1470]

12. THIS ENGINE SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 431.2, RULE 1470, 40 CFR PART 60 SUBPART IIII, AND 40CFR63 SUBPART ZZZZ.
    [RULE 431.2, RULE 1470, 40CFR60 Subpart IIII, 40CFR63SUBPART ZZZZ]

13. OPERATING RECORDS FOR THE EQUIPMENT, WHICH SHALL INCLUDE ALL DATA, LOGS, TEST REPORTS, DATES OF OPERATION, TOTAL HOURS OF OPERATION, AND FUEL CONSUMPTION FOR EACH TYPE OF FUEL SHALL BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
    [RULE 204, RULE 1110.2, RULE 3004(a)]

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Emissions and Requirements:

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

PM:	RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM:	0.22 g/bhp-hr, 40CFR60 Subpart IIII
PM/PM10:	0.15 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470
CO:	3.7 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII
NOx +NMHC:	3.0 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII

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PERMIT TO OPERATE

Permit No. N23911
A/N 495044

Equipment Description:

FUEL STORAGE AND DISPENSING FACILITY CONSISTING OF:

1. 2-GASOLINE BELLOWS-LESS NOZZLES DISPENSING 2 PRODUCTS, EQUIPPED WITH ASSIST PHASE II ENHANCED VAPOR RECOVERY (EVR) SYSTEM NOT INCLUDING IN-STATION DIAGNOSTICS (ISD) SYSTEM (VR-201-H/R).

2. 1-GASOLINE UNDERGROUND STORAGE TANK, 15,000 GALLON CAPACITY, EQUIPPED WITH PHASE I VAPOR RECOVERY SYSTEM PHIL-TITE (VR-101-B/N), 1 METHANOL COMPATIBLE.

Conditions:

SECTION I: GENERAL 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 MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

SECTION II: PHASE I VAPOR RECOVERY SYSTEM AND TESTING REQUIREMENTS

3. EXCEPT FOR DIESEL TRANSFERS, PHASE I VAPOR RECOVERY SYSTEMS SHALL BE IN FULL OPERATION WHENEVER FUEL IS BEING TRANSFERRED INTO STORAGE TANKS.
[RULE 461]

4. A STATIC TORQUE TEST OF ROTATABLE PHASE I ADAPTORS SHALL BE CONDUCTED TO QUANTIFY THE AMOUNT OF STATIC TORQUE REQUIRED TO START THE ROTATION OF THE ROTATABLE PHASE I ADAPTORS. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE TEST PROCEDURE METHOD OUTLINED IN TP-201.1B (OCTOBER 8, 2003) AS A PERFORMANCE TEST AND AS A REVERIFICATION TEST. RESULTS SHALL BE SUBMITTED TO THE SCAQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.
[RULE 461]

5. DEPENDING ON THE SYSTEM CONFIGURATION, EITHER A LEAK RATE TEST OF DROP TUBE/DRAIN VALVE ASSEMBLY SHALL BE CONDUCTED TO QUANTIFY THE PRESSURE INTEGRITY OF BOTH THE DROP TUBE AND DRAIN VALVE SEAL OR A LEAK RATE TEST OF DROP TUBE OVERFILL PREVENTION DEVICE AND DRAIN VALVE SHALL BE CONDUCTED TO QUANTIFY THE PRESSURE INTEGRITY OF THE DROP TUBE OVERFILL PREVENTION DEVICE

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AND THE PRESSURE INTEGRITY OF THE SPILL CONTAINER DRAIN VALVE. EITHER TEST SHALL BE CONDUCTED IN ACCORDANCE WITH TEST PROCEDURE METHOD TP-201.1C (OCTOBER 8, 2003) OR TP-201.1D (OCTOBER 8, 2003), RESPECTIVELY. RESULTS SHALL BE SUBMITTED TO THE SCAQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.
[RULE 461]

6. A LEAK RATE AND CRACKING PRESSURE TEST OF PRESSURE/VACUUM RELIEF VENT VALVES SHALL BE CONDUCTED WITHIN TEN (10) DAYS AFTER THE START OF OPERATION OF THE PHASE I EVR EQUIPMENT AND AT LEAST ONCE EVERY THREE (3) YEARS THEREAFTER TO DETERMINE THE PRESSURE AND VACUUM AT WHICH THE PRESSURE/VACUUM VENT VALVE ACTUATES, AND TO DETERMINE THE VOLUMETRIC LEAK RATE AT A GIVE PRESSURE. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE TEST PROCEDURE METHOD TP-201.1E (OCTOBER 8, 2003). RESULTS SHALL BE SUBMITTED TO THE SCAQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST. THIS TEST RESULT SHALL BE KEPT ON SITE FOR THREE (3) YEARS AND MADE AVAILABLE TO DISTRICT REPRESENTATIVES UPON REQUEST.
[RULE 461]

SECTION III: PHASE II VAPOR RECOVERY SYSTEM AND TESTING REQUIREMENTS

7. EXCEPT FOR DIESEL TRANSFER, PHASE II VAPOR RECOVERY SYSTEMS SHALL BE IN FULL OPERATION WHENEVER FUEL IS BEING TRANSFERRED INTO MOTOR VEHICLES, AS DEFINED IN RULE 461.
[RULE 461]

8. A STATIC PRESSURE INTEGRITY TEST SHALL BE CONDUCTED TO DEMONSTRATE THAT THE STORAGE TANKS, THE REMOTE AND/OR NOZZLE VAPOR RECOVERY CHECK VALVES, ASSOCIATED VAPOR RETURN PIPING AND FITTINGS ARE FREE FROM VAPOR LEAKS. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH CARB TEST PROCEDURE METHOD TP-201.3 (MARCH 17, 1999) AS A PERFORMANCE TEST AND AS A REVERIFICATION TEST. RESULTS SHALL BE SUBMITTED TO THE SCAQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.
[RULE 461]

9. THE STATIC PRESSURE LEAK DECAY TEST TP-201.3 SHALL BE CONDUCTED IN ACCORDANCE WITH THE MOST RECENT VERSION OF EXHIBIT 8 OF CARB EXECUTIVE ORDER VR-201. VERIFICATION OF COMPLETING EACH STEP AS OUTLINED SHALL BE DOCUMENTED BY SUBMITTING A COPY OF EXHIBIT 8 TO THE SCAQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.
[RULE 461]

10. THE PHASE II VAPOR RECOVERY SYSTEM SHALL BE INSTALLED, OPERATED, AND MAINTAINED SUCH THAT THE MAXIMUM ALLOWABLE PRESSURE THROUGH THE RISER, AND UNDERGROUND PIPING DOES NOT EXCEED THE DYNAMIC BACK PRESSURE DESCRIBED BY THE CARB EXECUTIVE ORDER BY WHICH THE SYSTEM WAS CERTIFIED:

NITROGEN FLOWRATES (CFH)	DYNAMIC BACK PRESSURE (INCHES OF WATER)
60	0.50

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DYNAMIC BACK PRESSURE TESTS SHALL BE CONDUCTED AS A PERFORMANCE TEST TO DETERMINE THE PHASE II SYSTEM VAPOR RECOVERY BACK PRESSURES. THE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH CARB TEST PROCEDURE TP-201.4, METHODOLOGY 4 AND 6 (JULY 3, 2002); AS A PERFORMANCE TEST. THIS TEST SHALL BE A ONE-TIME TEST AND THE RESULTS KEPT PERMANENTLY ON SITE. RESULTS SHALL BE SUBMITTED TO THE SCAQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.
[RULE 461]

11. A STATIC PRESSURE PERFORMANCE TEST FOR THE HEALY CLEAN AIR SEPARATOR USING BOTH THE VACUUM DECAY PROCEDURE AND THE POSITIVE PRESSURE PROCEDURE SHALL BE CONDUCTED TO QUANTIFY THE VAPOR TIGHTNESS OF THE HEALY CLEAN AIR SEPARATOR TANK PRESSURE MANAGEMENT SYSTEM. THESE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST VERSION OF EXHIBIT 4 OF CARB EXECUTIVE ORDER VR-201 AS A PERFORMANCE TEST AND REVERIFICATION TEST. RESULTS SHALL BE SUBMITTED TO THE SCAQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.
[RULE 461]

12. A VAPOR TO LIQUID VOLUME RATIO TEST SHALL BE CONDUCTED TO QUANTIFY THE VAPOR TO LIQUID (V/L) VOLUMETRIC RATIO OF THE HEALY CLEAN AIR SEPARATOR SYSTEM. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST VERSION OF EXHIBIT 5 OF CARB EXECUTIVE ORDER VR-201. AS PERFORMANCE TEST AND REVERIFICATION TEST. RESULTS SHALL BE SUBMITTED TO THE SCAQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.
[RULE 461]

13. A NOZZLE BAG TEST SHALL BE CONDUCTED ON THE HEALY PHASE II EVR NOZZLES TO VERIFY THE INTEGRITY OF THE VAPOR VALVE. THE TEST SHALL BE CONDUCTED ON ANY NEWLY INSTALLED OR REPLACED HEALY PHASE II EVR NOZZLES AND IN ACCORDANCE WITH THE LATEST VERSION OF EXHIBIT 7 OF CARB EXECUTIVE ORDER VR-201. RESULTS SHALL BE SUBMITTED TO THE SCAQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.
[RULE 461]

SECTION IV: GENERAL REQUIREMENTS

14. ALL PHASE I AND PHASE II VAPOR RECOVERY EQUIPMENT AT THIS FACILITY SHALL BE INSTALLED, OPERATED, MAINTAINED TO MEET ALL CARB CERTIFICATION REQUIREMENTS.
[RULE 461]

15. NEW EQUIPMENT INSTALLATIONS AND SUBSEQUENT SERVICE AND REPAIRS FOR ANY CERTIFIED COMPONENT FOR WHICH THIS PERMIT WAS ISSUED, SHALL ONLY BE PERFORMED BY A CURRENT AND CERTIFIED PERSON WHO HAS SUCCESSFULLY COMPLETED THE MANUFACTURER'S TRAINING COURSE AND APPROPRIATE INTERNATIONAL CODE COUNCIL (ICC) CERTIFICATION. COMPLETION OF ANY SCAQMD TRAINING COURSE DOES NOT CONSTITUTE AS A SUBSTITUTE FOR THIS REQUIREMENT. PROOF OF SUCCESSFUL COMPLETION OF ANY MANUFACTURER TRAINING COURSE SHALL BE WITH THE MANUFACTURER.
[RULE 461]

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16. AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO BACK-FILLING ANY UNDERGROUND STORAGE TANK OR PIPING, THE SCAQMD SHALL BE NOTIFIED ELECTRONICALLY OR OTHER MEANS AS SPECIFIED BY THE EXECUTIVE OFFICER. SUCH NOTIFICATION SHALL INCLUDE THE NAME OF THE OWNER OR OPERATOR, THE NAME OF THE CONTRACTORS, THE LOCATION OF THE FACILITY, AND THE SCHEDULED START AND COMPLETION DATES OF THE BACK-FILLING PROCEDURE. THE BACK-FILLING PROCEDURE SHALL NOT COMMENCE UNTIL INSPECTED BY A DISTRICT REPRESENTATIVE.
[RULE 461]

17. UNLESS SCAQMD RULE 461 REQUIRES A MORE FREQUENT TESTING OR INSPECTION SCHEDULE, THE OWNER/OPERATOR SHALL BE RESPONSIBLE TO PERFORM THE SCHEDULED WEEKLY, QUARTERLY, AND ANNUAL INSPECTIONS AS OUTLINED IN THE CARB APPROVED INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR BOTH THE PHASE I AND PHASE II EVR SYSTEMS, AS WELL AS ALL THE REQUIRED VAPOR RECOVERY SYSTEM TESTS AS PER THE CURRENT AND APPROPRIATE CARB EXECUTIVE ORDER.
[RULE 461]

18. THE SCAQMD SHALL BE NOTIFIED ELECTRONICALLY OR OTHER MEANS AS SPECIFIED BY THE EXECUTIVE OFFICER AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO ANY OF THE ABOVE MENTIONED TESTING REQUIREMENTS. SUCH NOTIFICATION SHALL INCLUDE THE NAME OF THE OWNER OR OPERATOR, THE NAME OF THE CONTRACTOR, THE LOCATION OF THE FACILITY, AND THE SCHEDULED START AND COMPLETION DATES OF THE TESTS TO BE PERFORMED.
[RULE 461]

19. A COPY OF THE PASS/FAIL TEST RESULTS SHALL BE SENT ELECTRONICALLY OR OTHER MEANS AS SPECIFIED BY THE EXECUTIVE OFFICER WITHIN SEVENTY-TWO (72) HOURS AFTER EACH TEST IS CONDUCTED. FURTHERMORE, THE FINAL TEST RESULTS DEMONSTRATING COMPLIANCE SHALL BE SUBMITTED ELECTRONICALLY OR OTHER MEANS AS SPECIFIED BY THE EXECUTIVE OFFICER WITHIN FOURTEEN (14) CALENDAR DAYS FROM THE DATE WHEN ALL TESTS WERE PASSED. THE TEST REPORT SHALL INCLUDE AT A MINIMUM ALL THE REQUIRED RECORDS OF ALL TESTS PERFORMED, TEST DATA, CURRENT SCAQMD FACILITY ID NUMBER OF THE LOCATION BEING TESTED, THE EQUIPMENT PERMIT TO OPERATE OR APPLICATION NUMBER, THE SCAQMD ID NUMBER OF THE COMPANY PERFORMING THE TESTS, A STATEMENT WHETHER THE SYSTEM OR COMPONENT TESTED MEETS THE REQUIRED STANDARDS, AND THE NAME, SCAQMD TESTER ID NUMBER AND SIGNATURE OF THE PERSON RESPONSIBLE FOR CONDUCTING THE TESTS.
[RULE 461]

20. THE TESTING FOR THE ABOVE MENTIONED TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH THE MOST RECENT RULE 461 AMENDMENT OR CARB EXECUTIVE ORDER REQUIREMENTS, WHICHEVER IS MORE STRINGENT.
[RULE 461]

21. SHOULD THE FACILITY DISPENSE MORE THAN 600,000 GALLONS OF GASOLINE IN ANY CALENDAR YEAR; THE OPERATOR SHALL FILE AN APPLICATION FOR A NEW PERMIT TO CONSTRUCT/OPERATE TO INSTALL A CARB CERTIFIED ISD SYSTEM. THE ISD SYSTEM SHALL BE FULLY INSTALLED, TESTED, AND OPERATIVE UPON EXCEEDING 600,000 GALLONS PER CALENDAR YEAR.
[RULE 461]

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22. THE OPERATOR SHALL HAVE A PERSON THAT HAS BEEN TRAINED IN ACCORDANCE WITH RULE 461, CONDUCT A SEMI-ANNUAL INSPECTION OF THE GASOLINE TRANSFER AND DISPENSING EQUIPMENT. THE FIRST INSPECTION SHALL BE IN ACCORDANCE WITH RULE 461, ATTACHMENT B, THE SECOND INSPECTION SHALL BE IN ACCORDANCE WITH RULE 461, ATTACHMENT C, AND THE SUBSEQUENT INSPECTIONS SHALL ALTERNATE PROTOCOLS. THE OPERATOR SHALL KEEP RECORDS OF THE INSPECTION AND THE REPAIRS IN ACCORDANCE TO RULE 461 AND SECTION K OF THIS PERMIT.
[RULE 461, RULE 3004(a)]

23. ALL RECORDS REQUIRED BY THIS PERMIT OR RULE 461 INCLUDING MONTHLY AND ANNUAL FUEL DISPENSED SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 461, RULE 3004(a)]

SECTION V: GASOLINE THROUGHPUT REQUIREMENTS

24. THE MAXIMUM QUANTITY OF GASOLINE DISPENSED FROM THE STORAGE TANK AT THIS FACILITY SHALL NOT EXCEED 13,450 GALLONS IN ANY ONE CALENDAR MONTH NOR 161,400 GALLONS IN ANY ONE CALENDAR YEAR.
[RULE 1303(b)(2)-Offsets]

25. THE OWNER/OPERATOR SHALL SUBMIT THE FACILITY'S MONTHLY GASOLINE THROUGHPUT DATA FOR THE PREVIOUS CALENDAR YEAR TO THE EXECUTIVE OFFICER ON OR BEFORE MARCH 1 FOLLOWING EACH CALENDAR YEAR.

Emissions and Requirements

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

VOC:	RULE 461
HAP:	40 CFR 63, Subpart CCCCCC

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PERMIT TO OPERATE

Permit No. G11944
A/N 510239

Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, MODEL NO. G3306TA, FOUR STROKE, 6 CYLINDERS, 203 BHP, NATURAL GAS FIRED, RICH BURN, TURBOCHARGED, AFTERCOOLED, WITH AN AIR TO FUEL RATIO CONTROLLER, ALTRONIC, MODEL EPC-100, VENTED TO A CATALYTIC CONVERTER, DCL, MINE-X MODEL 2-DC49-6, DRIVING A WATER PUMP.

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 MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THIS ENGINE SHALL NOT BE OPERATED UNLESS IT IS VENTED TO A THREE WAY CATALYST.
[RULE 1303(a)(1)-BACT]

4. THIS ENGINE SHALL BE FIRED ON NATURAL GAS ONLY.
[RULE 204, RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1303(b)(2)-Offsets]

5. 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 CONDITION AT ALL TIMES AS SPECIFIED BY THE MANUFACTURER.
[RULE 1110.2]

6. A TEMPERATURE MEASUREMENT AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED TO ACCURATELY INDICATE THE TEMPERATURE AT THE INLET AND OUTLET OF THE CATALYST.
[RULE 204]

7. THE INLET AND OUTLET TEMPERATURE OF THE CATALYTIC CONVERTER (EXCEPT FOR STARTUP PERIODS) AND THE EXHAUST OXYGEN CONCENTRATION SHALL BE MAINTAINED AS SPECIFIED BY THE MANUFACTURER.
[RULE 204]

8. WHENEVER THE ENGINE IS OPERATING, THE TEMPERATURE AT THE INLET OF THE CATALYTIC OXIDIZER SHALL BE 750 DEGREES FAHRENHEIT OR HIGHER EXCEPT DURING START-UP PERIODS NOT TO EXCEED 30 MINUTES PER EVENT.
[RULE 204]

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9. AN OPERATIONAL TOTALIZING FUEL METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE FUEL USAGE IN THE FUEL SUPPLY LINE TO THE ENGINE.
[RULE 204, RULE 1110.2]

10. AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2]

11. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. TOTAL HOURS OF OPERATION.
B. TYPE OF GASEOUS FUEL.
C. FUEL CONSUMPTION (CUBIC FEET OF GAS).
D. CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST.
[RULE 1110.2]

12. THE OPERATOR SHALL MAINTAIN AND IMPLEMENT AN INSPECTION AND MONITORING (I & M) PLAN FOR THIS EQUIPMENT AS DESCRIBED IN THIS PERMIT IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF RULE 1110.2(f)(1)(D).
[RULE 1110.2]

13. THE OWNER OR OPERATOR SHALL 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. 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 SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE). IN ADDITION, A SOURCE TEST SHALL BE CONDUCTED FOR NOx AND CO EMISSIONS FOR AT LEAST 15 MINUTES AT: (1) THE ENGINE'S ACTUAL PEAK LOAD, OR THE MAXIMUM LOAD THAT CAN BE PRACTICALLY ACHIEVED DURING THE TEST, AND (2) THE ENGINE'S ACTUAL MINIMUM LOAD, EXCLUDING IDLE, OR 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 RESULTS OF THESE TESTS SHALL BE FURNISHED TO THE SCAQMD IN WRITING WITHIN 60 DAYS OF THE COMPLETION OF THE TEST. WRITTEN NOTICE OF THE PERFORMANCE TESTS SCHEDULE SHALL BE PROVIDED TO THE SCAQMD 7 DAYS PRIOR TO THE TESTS SO THAT AN OBSERVER MAY BE PRESENT.
[RULE 1110.2]

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14. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2(f)(1)(H)(i) THROUGH (iii), PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS. [RULE 1110.2]

15. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF RULE 431.1, RULE 1110.2, AND 40 CFR 63 SUBPART ZZZZ. [RULE 431.1, RULE 1110.2, 40CFR63 SUBPART ZZZZ]

16. OPERATING RECORDS FOR THE EQUIPMENT, WHICH SHALL INCLUDE ALL DATA, LOGS, TEST REPORTS, DATES OF OPERATION, TOTAL HOURS OF OPERATION, AND FUEL CONSUMPTION FOR EACH TYPE OF FUEL SHALL BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST. [RULE 204, RULE 1110.2, RULE 3004(a)]

Emissions and Requirements:

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

PM:	RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO:	250 PPMV @15% O2 DRY, RULE 1110.2
NOx:	11 PPMV @15% O2 DRY, RULE 1110.2
VOC:	30 PPMV @15% O2 DRY, RULE 1110.2
CO:	64 PPMV @15% O2 DRY, RULE 1303(a)(1)-BACT
NOx:	10 PPMV @15% O2 DRY, RULE 1303(a)(1)-BACT
VOC:	28 PPMV @15% O2 DRY, RULE 1303(a)(1)-BACT

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. G9444
A/N 512858

Equipment Description:

INTERNAL COMBUSTION ENGINE, VOLVO PENTA (KOHLER), MODEL TAD1641GE (D50016.1B65), FOUR STROKE, 6 CYLINDERS, 757 BHP, DIESEL FUELED, 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 MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. AN OPERATIONAL NON-RESETTABLE TOTALIZING TIMER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2; RULE 1303(a)(1)-BACT, RULE 1304(a)(4) -Modeling and Offsets, RULE 1470]

4. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.
[RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)-Modeling and Offsets, RULE 1401, RULE 1470]

5. OPERATION OF THIS ENGINE BEYOND THE 50 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND 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. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.
[RULE 1303(a)(1)-BACT, RULE 1470]

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 GRID OPERATOR.
[RULE 1303(a)(1)-BACT, RULE 1470]

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7. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

   A. EMERGENCY USE HOURS OF OPERATION.
   B. MAINTENANCE AND TESTING HOURS.
   C. HOURS OF OPERATION FOR DEMONSTRATING COMPLIANCE WITH EMISSION LIMITS.
   D. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION).

   IN ADDITION, FOR EACH TIME THE ENGINE IS MANUALLY STARTED, THE LOG SHALL INCLUDE THE DATE OF OPERATION, THE SPECIFIC REASON FOR OPERATION, AND THE TOTALIZING HOUR METER READING IN HOURS AND TENTHS OF HOURS AT THE BEGINNING AND THE END OF THE OPERATION. THE OPERATING HOUR TOTALS FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR. [RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)- Modeling and Offsets, RULE 1470, 40CFR60 Subpart IIII]

8. THE OPERATOR SHALL OPERATE AND MAINTAIN THE STATIONARY ENGINE AND CONTROL DEVICE ACCORDING TO THE MANUFACTURER'S WRITTEN EMISSION-RELATED INSTRUCTIONS (OR PROCEDURES DEVELOPED BY THE OPERATOR THAT ARE APPROVED BY THE ENGINE MANUFACTURER), CHANGE ONLY THOSE EMISSION-RELATED SETTINGS THAT ARE PERMITTED BY THE MANUFACTURER, AND MEET THE REQUIREMENTS OF 40 CFR 89, 94, AND/OR 1068, AS THEY APPLY.
   [40 CFR 60 Subpart IIII]

9. THE OPERATOR SHALL COMPLY WITH THE EMISSION STANDARDS SPECIFIED IN 40 CFR 60.4205(b) BY PURCHASING AN ENGINE CERTIFIED TO THE EMISSION STANDARDS IN 40 CFR 60.4205(b), AS APPLICABLE, FOR THE SAME MODEL YEAR AND MAXIMUM ENGINE POWER. THE ENGINE MUST BE INSTALLED AND CONFIGURED ACCORDING TO THE MANUFACTURER'S EMISSION RELATED SPECIFICATIONS.
   [40 CFR 60 Subpart IIII]

10. THE SULFUR CONTENT OF DIESEL FUEL SUPPLIED TO THIS ENGINE SHALL NOT EXCEED 15 PPM (0.0015%) BY WEIGHT.
    [RULE 431.2, RULE 1470, 40CFR60 Subpart IIII]

11. THE OWNER OR OPERATOR SHALL DOCUMENT THE USE OF CARB DIESEL FUEL (NO. 2-ULTRA LOW SULFUR) THROUGH THE RETENTION OF FUEL PURCHASE RECORDS.
    [RULE 1470]

12. THIS ENGINE SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 431.2, RULE 1470, 40 CFR PART 60 SUBPART IIII, AND 40CFR63 SUBPART ZZZZ.
    [RULE 431.2, RULE 1470, 40CFR60 Subpart IIII, 40CFR63SUBPART ZZZZ]

13. OPERATING RECORDS FOR THE EQUIPMENT, WHICH SHALL INCLUDE ALL DATA, LOGS, TEST REPORTS, DATES OF OPERATION, TOTAL HOURS OF OPERATION, AND FUEL CONSUMPTION FOR EACH TYPE OF FUEL SHALL BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
    [RULE 204, RULE 1110.2, RULE 3004(a)]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

Emissions and Requirements:

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

PM:	RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO:	2.6 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII
PM/PM10:	0.15 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII
NOx +NMHC:	4.8 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. G9445
A/N 512859

Equipment Description:

INTERNAL COMBUSTION ENGINE, MITSUBISHI, MODEL NO. S12H-Y2PTAW-1, FOUR STROKE, 12 CYLINDERS, 1528 BHP, DIESEL FUELED, 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 MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. AN OPERATIONAL NON-RESETTABLE TOTALIZING TIMER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2; RULE 1303(a)(1)-BACT, RULE 1304(a)(4) -Modeling and Offsets, RULE 1470]

4. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.
[RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)-Modeling and Offsets, RULE 1401, RULE 1470]

5. OPERATION OF THIS ENGINE BEYOND THE 50 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND 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. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.
[RULE 1303(a)(1)-BACT, RULE 1470]

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 GRID OPERATOR.
[RULE 1303(a)(1)-BACT, RULE 1470]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

7. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

   A. EMERGENCY USE HOURS OF OPERATION.
   B. MAINTENANCE AND TESTING HOURS.
   C. HOURS OF OPERATION FOR DEMONSTRATING COMPLIANCE WITH EMISSION LIMITS.
   D. OTHER OPERATING HOURS(DESCRIBE THE REASON FOR OPERATION).

   IN ADDITION, FOR EACH TIME THE ENGINE IS MANUALLY STARTED, THE LOG SHALL INCLUDE THE DATE OF OPERATION, THE SPECIFIC REASON FOR OPERATION, AND THE TOTALIZING HOUR METER READING IN HOURS AND TENTHS OF HOURS AT THE BEGINNING AND THE END OF THE OPERATION. THE OPERATING HOUR TOTALS FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR. [RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)- Modeling and Offsets, RULE 1470, 40CFR60 Subpart IIII]

8. THE OPERATOR SHALL OPERATE AND MAINTAIN THE STATIONARY ENGINE AND CONTROL DEVICE ACCORDING TO THE MANUFACTURER'S WRITTEN EMISSION-RELATED INSTRUCTIONS (OR PROCEDURES DEVELOPED BY THE OPERATOR THAT ARE APPROVED BY THE ENGINE MANUFACTURER), CHANGE ONLY THOSE EMISSION-RELATED SETTINGS THAT ARE PERMITTED BY THE MANUFACTURER, AND MEET THE REQUIREMENTS OF 40 CFR 89, 94, AND/OR 1068, AS THEY APPLY.
   [40 CFR 60 Subpart IIII]

9. THE OPERATOR SHALL COMPLY WITH THE EMISSION STANDARDS SPECIFIED IN 40 CFR 60.4205(b) BY PURCHASING AN ENGINE CERTIFIED TO THE EMISSION STANDARDS IN 40 CFR 60.4205(b), AS APPLICABLE, FOR THE SAME MODEL YEAR AND MAXIMUM ENGINE POWER. THE ENGINE MUST BE INSTALLED AND CONFIGURED ACCORDING TO THE MANUFACTURER'S EMISSION RELATED SPECIFICATIONS.
   [40 CFR 60 Subpart IIII]

10. THE SULFUR CONTENT OF DIESEL FUEL SUPPLIED TO THIS ENGINE SHALL NOT EXCEED 15 PPM (0.0015%) BY WEIGHT.
   [RULE 431.2, RULE 1470, 40CFR60 Subpart IIII]

11. THE OWNER OR OPERATOR SHALL DOCUMENT THE USE OF CARB DIESEL FUEL (NO. 2-ULTRA LOW SULFUR) THROUGH THE RETENTION OF FUEL PURCHASE RECORDS.
   [RULE 1470]

12. THIS ENGINE SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 431.2, RULE 1470, 40 CFR PART 60 SUBPART IIII, AND 40CFR63 SUBPART ZZZZ.
   [RULE 431.2, RULE 1470, 40CFR60 Subpart IIII, 40CFR63SUBPART ZZZZ]

13. OPERATING RECORDS FOR THE EQUIPMENT, WHICH SHALL INCLUDE ALL DATA, LOGS, TEST REPORTS, DATES OF OPERATION, TOTAL HOURS OF OPERATION, AND FUEL CONSUMPTION FOR EACH TYPE OF FUEL SHALL BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
   [RULE 204, RULE 1110.2, RULE 3004(a)]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

Emissions and Requirements:

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

PM:	RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO:	2.6 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII
PM/PM10:	0.15 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII
NOx +NMHC:	4.8 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. G9446
A/N 512860

Equipment Description:

INTERNAL COMBUSTION ENGINE, MITSUBISHI, MODEL NO. S12A2-Y2PTAW-2, FOUR STROKE, 12 CYLINDERS, 1207 BHP, DIESEL FUELED, 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 MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. AN OPERATIONAL NON-RESETTABLE TOTALIZING TIMER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2; RULE 1303(a)(1)-BACT, RULE 1304(a)(4) -Modeling and Offsets, RULE 1470]

4. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.
[RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)-Modeling and Offsets, RULE 1401, RULE 1470]

5. OPERATION OF THIS ENGINE BEYOND THE 50 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND 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. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.
[RULE 1303(a)(1)-BACT, RULE 1470]

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 GRID OPERATOR.
[RULE 1303(a)(1)-BACT, RULE 1470]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

7. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

   A. EMERGENCY USE HOURS OF OPERATION.
   B. MAINTENANCE AND TESTING HOURS.
   C. HOURS OF OPERATION FOR DEMONSTRATING COMPLIANCE WITH EMISSION LIMITS.
   D. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION).

   IN ADDITION, FOR EACH TIME THE ENGINE IS MANUALLY STARTED, THE LOG SHALL INCLUDE THE DATE OF OPERATION, THE SPECIFIC REASON FOR OPERATION, AND THE TOTALIZING HOUR METER READING IN HOURS AND TENTHS OF HOURS AT THE BEGINNING AND THE END OF THE OPERATION. THE OPERATING HOUR TOTALS FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR. [RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)- Modeling and Offsets, RULE 1470, 40CFR60 Subpart IIII]

8. THE OPERATOR SHALL OPERATE AND MAINTAIN THE STATIONARY ENGINE AND CONTROL DEVICE ACCORDING TO THE MANUFACTURER'S WRITTEN EMISSION-RELATED INSTRUCTIONS (OR PROCEDURES DEVELOPED BY THE OPERATOR THAT ARE APPROVED BY THE ENGINE MANUFACTURER), CHANGE ONLY THOSE EMISSION-RELATED SETTINGS THAT ARE PERMITTED BY THE MANUFACTURER, AND MEET THE REQUIREMENTS OF 40 CFR 89, 94, AND/OR 1068, AS THEY APPLY.
   [40 CFR 60 Subpart IIII]

9. THE OPERATOR SHALL COMPLY WITH THE EMISSION STANDARDS SPECIFIED IN 40 CFR 60.4205(b) BY PURCHASING AN ENGINE CERTIFIED TO THE EMISSION STANDARDS IN 40 CFR 60.4205(b), AS APPLICABLE, FOR THE SAME MODEL YEAR AND MAXIMUM ENGINE POWER. THE ENGINE MUST BE INSTALLED AND CONFIGURED ACCORDING TO THE MANUFACTURER'S EMISSION RELATED SPECIFICATIONS.
   [40 CFR 60 Subpart IIII]

10. THE SULFUR CONTENT OF DIESEL FUEL SUPPLIED TO THIS ENGINE SHALL NOT EXCEED 15 PPM (0.0015%) BY WEIGHT.
   [RULE 431.2, RULE 1470, 40CFR60 Subpart IIII]

11. THE OWNER OR OPERATOR SHALL DOCUMENT THE USE OF CARB DIESEL FUEL (NO. 2-ULTRA LOW SULFUR) THROUGH THE RETENTION OF FUEL PURCHASE RECORDS.
   [RULE 1470]

12. THIS ENGINE SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 431.2, RULE 1470, 40 CFR PART 60 SUBPART IIII, AND 40CFR63 SUBPART ZZZZ.
   [RULE 431.2, RULE 1470, 40CFR60 Subpart IIII, 40CFR63SUBPART ZZZZ]

13. OPERATING RECORDS FOR THE EQUIPMENT, WHICH SHALL INCLUDE ALL DATA, LOGS, TEST REPORTS, DATES OF OPERATION, TOTAL HOURS OF OPERATION, AND FUEL CONSUMPTION FOR EACH TYPE OF FUEL SHALL BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
   [RULE 204, RULE 1110.2, RULE 3004(a)]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

Emissions and Requirements:

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

PM:	RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO:	2.6 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII
PM/PM10:	0.15 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII
NOx +NMHC:	4.8 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO CONSTRUCT/OPERATE

Permit No. G30509
A/N 535794

Equipment Description:

ALTERATION OF AN EXISTING AEROBIC SEWAGE TREATMENT PLANT, 18 MGD, INTO AN ANAEROBIC SEWAGE TREATMENT PLANT, RESOURCE RECOVERY AND RECYCLING PLANT, 28 MGD, CONSISTING OF:

I. HEADWORKS (PRETREATMENT) PROCESSES CONSISTING OF:

1. COVERED INFLUENT SEWER JUNCTION STRUCTURE COMBINING NORTH IRVINE INTERCEPTOR WITH INFLUENT FLOW METER AND SOUTH IRVINE INTERCEPTOR WITH INFLUENT FLOW METER.

2. COVERED HEADWORKS WITH:
   - A. THREE (3) PERFORATED PLATE MECHANICAL SCREENS.
   - B. ONE (1) BYPASS MANUAL BAR SCREEN.
   - C. THREE (3) VORTEX GRIT CHAMBERS, WITH ASSOCIATED MIXERS AND GRIT PUMPS.
   - D. TWO (2) SCREW SCREENING WASHER/COMPACTORS.
   - E. FOUR (4) VORTEX GRIT WASHER/CLASSIFIERS.
   - F. TWO (2) CONTINUOUS GRIT DEWATERING BELTS.
   - G. ASSOCIATED SCUM PUMPS AND CHANNEL AIR BLOWERS.

II. PRIMARY TREATMENT PROCESSES CONSISTING OF:

3. NINE (9) COVERED PRIMARY SEDIMENTATION TANKS (CLARIFIERS) EACH WITH CHAIN AND FLIGHT SLUDGE CONVEYOR AND ASSOCIATED SLUDGE PUMPS AND SCUM PUMPS:
   - A. THREE (3) 110' L. X 18' W. X 10' SIDE WATER DEPTH (SWD) CLARIFIERS.
   - B. TWO (2) 110' L. X 20' W. X 10' SIDE WATER DEPTH (SWD) CLARIFIERS.
   - C. FOUR (4) 120' L. X 20' W. x 12' SIDE WATER DEPTH (SWD) CLARIFIERS.

4. TWO (2) 2.74 MG CAPACITY FLOW EQUALIZATION BASINS (FEB), EACH 250' W. X 150' L.

5. MPS-3 PRIMARY EFFLUENT PUMP STATION.

6. PRIMARY EFFLUENT PUMP STATION (PEPS), 25' L. X 25' W. X 18.8' H., COVERED, WITH ASSOCIATED FEB BASIN FEED PUMPS AND MEMBRANE BIOREACTOR FEED PUMPS.

III. SECONDARY TREATMENT PROCESSES CONSISTING OF:

7. SIX (6) 0.746 MG AERATION BASINS, EACH 32' W. X 128' L. X 25' SIDE WATER DEPTH (SWD), WITH ASSOCIATED AERATION BLOWERS, MIXERS, MIXED LIQUOR RECIRCULATION PUMPS, AND DEWATERING PUMPS.

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8. NINE (9) 20' W. X 155' L. X 10' H. SECONDARY CLARIFIERS WITH A CHAIN AND FLIGHT SLUDGE CONVEYOR, WITH ASSOCIATED WAS PUMPS, SECONDARY SCUM PUMPS, RETURN ACTIVATED SLUDGE (RAS) PUMPS, AND DEWATERING PUMPS.

9. ONE (1) 100' DIA. X 16' SIDE WATER DEPTH (SWD) CIRCULAR SECONDARY CLARIFIER, WITH ASSOCIATED SCUM PUMP, RETURN ACTIVATED SLUDGE (RAS) PUMPS, AND DEWATERING PUMP.

10. ONE (1) 22 MGD HIGH RATE CLARIFIER:
    - A. TWO (2) 2,000 LB CAPACITY POLYMER STORAGE TOTES.
    - B. TWO (2) POLYMER FEEDERS AND ASSOCIATED FEED PUMPS.
    - C. THREE MIXERS.
    - D. RECIRCULATION PUMPS.
    - E. ONE (1) SAND FEED SYSTEM.
    - F. TWO (2) SAND RECIRCULATION PUMPS.
    - G. TWO (2) SLUDGE RESIDUALS PUMPS.

IV. TERTIARY TREATMENT PROCESSES CONSISTING OF:

11. TERTIARY FILTER PUMP STATION, WITH ASSOCIATED FILTER INFLUENT PUMPS.

12. SEVEN (7) DUAL MEDIA (TERTIARY FILTERS), EACH 14' W. X 36' L., WITH 504 SQ. FT. SURFACE AREA, AND 3' MEDIA DEPTH.

13. ONE (1) 55' W. X 90' L. X 12' SIDE WATER DEPTH (SWD) TERTIARY FILTER BACKWASH SUPPLY TANK, WITH ASSOCIATED BACKWASH SUPPLY PUMPS.

14. FILTER AIR SCOUR AIR BLOWER.

15. ONE (1) 20' W. X 267' L. X 12' SIDE WATER DEPTH (SWD), 0.48 MG CAPACITY SPENT BACKWASH STORAGE TANK, AND ASSOCIATED PUMPS.

V. MEMBRANE BIOREACTOR PROCESSES CONSISTING OF:

16. TWO (2) MEMBRANE BIOREACTOR TRAINS WITH ASSOCIATED PUMPS AND BLOWERS:
    - A. COVERED INFLUENT SCREENING AREA.
    - B. TWO (2) 11.5 MGD CAPACITY BAND FINE SCREENS WITH ASSOCIATED CHOPPER SCREENING PUMPS.
    - C. TWO (2) 140' L. X 465' W. X 19' SIDE WATER DEPTH (SWD) AERATION BASINS, WITH FOUR (4) VERTICAL MIXERS.
    - D. COVERED MIXED LIQUOR PUMP STATION AND RAS CHANNEL, WITH ASSOCIATED RECIRCULATION PUMPS, WASTE ACTIVATED SLUDGE (WAS), AND FOAM PUMPS.
    - E. EIGHT (8) 50' L. X 11' W. X 12' SIDE WATER DEPTH (SWD) MEMBRANE TANKS.
    - F. ONE (1) BACKPULSE TANK, 3,000 GALLONS.
    - G. ONE (1) SODIUM HYPOCHLORITE TANK, 1,500 GALLONS, WITH ASSOCIATED PUMPS.
    - H. ONE (1) 300 GAL CAPACITY CITRIC ACID TOTE WITH ASSOCIATED PUMPS.

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VI. DISINFECTION PROCESSES CONSISTING OF:

17. FOUR (4) 14,500 GAL CAPACITY SODIUM HYPOCHLORITE STORAGE TANKS AND ASSOCIATED METERING PUMPS.

18. ONE (1) COVERED 15.9 MGD AVERAGE DAY CAPACITY ULTRAVIOLET (UV) BASIN WITH THREE (3) 50.75' L. X 4' W. X 5' SIDE WATER DEPTH (SWD) CHANNELS AND ONE (1) 6' L. X 5' W. X 7' D. DIP TANK.

19. ONE (1) 4-PASS SERPENTINE 20' W. X 1017' L. X 12' SIDE WATER DEPTH (SWD) CHLORINE CONTACT TANK.

VII. MISCELLANEOUS CHEMICAL SYSTEMS CONSISTING OF:

20. TWO (2) 7,500 GALLON CAPACITY MAGNESIUM HYDROXIDE TANKS AND ASSOCIATED METERING PUMPS.

21. TWO (2) 11,000 GALLON CAPACITY ALUMINUM SULFATE TANKS AND ASSOCIATED METERING PUMPS.

22. ONE (1) 4,500 GALLON CAPACITY SODIUM HYDROXIDE TANK AND ASSOCIATED METERING PUMPS.

VIII. RECYCLED WATER PUMPING SYSTEM CONSISTING OF:

23. MPS-2 RECYCLED WATER PUMP STATION WITH ONE (1) 53' L. X 20' W. X 12' SIDE WATER DEPTH (SWD) RECYCLED WATER WETWELL, AND ASSOCIATED RECYCLED WATER HIGH PRESSURE PUMPS.

24. RECYCLED WATER PUMPING SURGE TANK.

IX. SOLIDS HANDLING:

25. PRIMARY SLUDGE PUMP STATION.

26. WAS PUMP STATION.

27. FOUR SLUDGE SCREENS.

28. THREE WETWELLS, 12' L. X 12' W. X 20' H., EACH WITH A MIXER AND MIXER MOTOR.

29. FOUR GRINDERS, SLUDGE.

30. THICKENING POLYMER SYSTEM, CONSISTING OF:
    - A. STORAGE TANK, THICKENING EMULSION POLYMER, 12,800 GALLONS, 10' DIA. X 29.5' H., WITH TRANSFER PUMP.
    - B. TWO FEEDER/BLENDERS, THICKENING EMULSION POLYMER.
    - C. STORAGE TANK, THICKENING MANNICH POLYMER, 12,800 GALLONS, 10' DIA. X 29.5' H., WITH TRANSFER PUMP.

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D. TWO AGING TANKS, THICKENING POLYMER, 1,600 GALLONS EACH, WITH A MIXER.
E. FOUR METERING PUMPS, THICKENING POLYMER.

31. FOUR THICKENING CENTRIFUGES, EACH WITH A 200 HP MAIN MOTOR AND A 50 HP BACKDRIVE MOTOR, AND WITH FOUR FEED PUMPS, EACH 30 HP.

32. CENTRATE SPLITTER BOX.

33. TWO EQUALIZATION TANKS, CENTRATE, EACH WITH TWO CENTRATE TRANSFER PUMPS, AND A DECANT TROUGH.

34. DECANT WETWELL.

35. TWO THICKENED SLUDGE WETWELLS, 10' L. X 8' W. X 30' H.

36. FOUR FEED PUMPS, DIGESTERS, 7.5 HP EACH.

37. FATS, OILS, AND GREASE (FOG)/FOOD WASTE SYSTEM, CONSISTING OF:
A. TRUCK UNLOADING STATION.
B. TWO ROCK TRAPS.
C. TWO GRINDERS.
D. TWO RECEIVING PUMPS.
E. TWO FOG/FOOD WASTE STORAGE TANKS, 10,000 GALLONS EACH, EACH WITH A GRINDER.
F. THREE MIXING PUMPS.
G. TWO HEAT EXCHANGERS.
H. TWO DRAIN PUMPS.

38. THREE DIGESTERS, ACID PHASE, 129,000 GALLON CAPACITY, EACH WITH A 20 HP MIXER, A RECIRCULATION GRINDER, A 30 HP RECIRCULATION PUMP, A HEAT EXCHANGER, AND A SECONDARY HEATING LOOP PUMP.

39. FOAM SEPARATOR.

40. TWO BLOWERS, ACID PHASE DIGESTER GAS, 10 HP.

41. TWO GRINDERS, ACID PHASE SLUDGE.

42. TWO TRANSFER PUMPS, ACID PHASE SLUDGE, 15 HP.

43. THREE DIGESTERS, METHANE PHASE, 1,569,000 GALLON CAPACITY, EACH WITH A 50 HP MIXER, A 15 HP RECIRCULATION PUMP, A HEAT EXCHANGER, AND A SECONDARY HEATING LOOP PUMP.

44. TWO MIXING PUMPS, STANDBY, METHANE PHASE DIGESTER, 125 HP.

45. TWO RECYCLE PUMPS, METHANE PHASE DIGESTED SLUDGE, 20 HP.

46. TWO DIGESTED SLUDGE HOLDING TANKS, EACH WITH A MIXER, 20 HP.

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47. THREE GRINDERS, DIGESTED SLUDGE.

48. DEWATERING POLYMER SYSTEM, CONSISTING OF:
    - A. STORAGE TANK, DEWATERING EMULSION POLYMER, 12,800 GALLONS, 10' DIA. X 29.5' H., WITH TRANSFER PUMP.
    - B. TWO FEEDER/BLENDERS, DEWATERING EMULSION POLYMER.
    - C. STORAGE TANK, DEWATERING MANNICH POLYMER, 18,472 GALLONS, 12' DIA. X 29.5' H., WITH TRANSFER PUMP.
    - D. TWO AGING TANKS, DEWATERING POLYMER, 5,300 GALLONS EACH, WITH A MIXER.
    - E. THREE METERING PUMPS, DEWATERING POLYMER.

49. THREE DEWATERING CENTRIFUGES, EACH WITH A 20 HP FEED PUMP, AND A SCREW CONVEYOR.

50. TWO HORIZONTAL DISTRIBUTION CONVEYORS.

51. ONE INCLINED DISTRIBUTION CONVEYOR.

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 BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
   [RULE 204]

4. THE PRIMARY CLARIFIERS SHALL BE VENTED TO AN AIR POLLUTION CONTROL SYSTEM WHICH IS IN FULL OPERATION AND HAS A VALID PERMIT TO CONSTRUCT OR OPERATE BY THE SCAQMD.
   [RULE 130(a)(1)-BACT]

5. A DAILY AND MONTHLY LOG SHALL BE KEPT TO DOCUMENT THE AMOUNT OF SEWAGE, FATS, OILS, AND GREASE (FOG), AND FOOD WASTE TREATED. SUCH RECORDS SHALL BE MAINTAINED FOR A PERIOD OF AT LEAST TWO YEARS AND MADE AVAILABLE TO DISTRICT (SCAQMD) PERSONNEL UPON REQUEST.
   [RULE 204, RULE 130(a)(1)-BACT]

6. THE AVERAGE DAILY INFLUENT SEWAGE TREATED AT THIS FACILITY, ON AN ANNUAL BASIS, SHALL NOT EXCEED THE AVERAGE DESIGN FLOW OF 28 MILLION GALLONS PER DAY, EXCEPT DURING WET WEATHER AND EMERGENCY SITUATIONS INVOLVING PUBLIC HEALTH AND SAFETY.
   [RULE 1303(b)(2)-Offsets]

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7. RECYCLED WATER FROM THE MPS-2 RECYCLED WATER PUMP STATION SHALL BE MONITORED WITH FLOW METERS THAT MEASURE AND RECORD THE TOTAL DAILY VOLUME OF SEWAGE TREATED AT THE MICHELSON WATER RECYCLING PLANT (MWRP).
[RULE 204, RULE 130(a)(1)-BACT]

8. UNTIL DIGESTER SLUDGE IS DEWATERED IT SHALL BE PIPED AND STORED IN AN ENCLOSED MANNER TO PREVENT THE RELEASE OF AIR CONTAMINANTS.
[RULE 402]

9. A CONTINUOUS FLOW INDICATING, TOTALIZING, AND RECORDING SYSTEM SHALL BE INSTALLED AND MAINTAINED TO MEASURE AND RECORD THE AMOUNT OF DIGESTER GAS PRODUCED IN THIS EQUIPMENT.
[RULE 1303(b)(2)-Offsets]

10. DIGESTER GAS PRODUCED AT THIS FACILITY SHALL BE STORED, COMBUSTED, OR TREATED BY EQUIPMENT THAT IS ADEQUATELY SIZED TO HANDLE THE TOTAL GAS FLOWS AND HAS A VALID PERMIT OR IS EXEMPTED BY RULE 219.
[RULE 130(a)(1)-BACT]

11. THE OWNER OR OPERATOR SHALL SUBMIT A SOURCE TEST PROTOCOL FOR THE PROPOSED MEMBRANE BIOREACTOR (MBR) UNIT(S) TO SCAQMD FOR APPROVAL AT LEAST 60 DAYS PRIOR TO START OF TEST. IF SCAQMD DETERMINES PERFORMANCE TESTING THE MBR UNIT(S) IS FEASIBLE, NO LATER THAN 180 DAYS AFTER THE APPROVAL OF THE SOURCE TEST PROTOCOL AND THE START OF OPERATION OF THE MBR UNIT(S), OR AS APPROVED IN WRITING BY SCAQMD, THE OWNER OR OPERATOR SHALL CONDUCT PERFORMANCE TESTS OF THE MBR UNIT(S) IN ACCORDANCE WITH THE APPROVED PROTOCOL:

    A. AT A MINIMUM, THE TEST PROTOCOL SHALL INCLUDE THE FOLLOWING:

        I. A DESCRIPTION OF THE EQUIPMENT TESTED INCLUDE A PROCESS SCHEMATIC INDICATING SAMPLING LOCATIONS/PORTS, SAMPLING DUCT/STACK DIMENSIONS ALONG WITH UPSTREAM AND DOWNSTREAM FLOW DISTURBANCES (E.G. ELBOWS, TEES AND FANS).

        II. A BRIEF PROCESS DESCRIPTION.

        III. OPERATING CONDITIONS UNDER WHICH THE TEST WILL BE PERFORMED.

        IV. A DESCRIPTION OF THE SAMPLING AND ANALYTICAL METHODS FOR EACH CONSTITUENT MEASURED.

        V. COMPLETE CALCULATIONS FOR FLOW RATES, CONCENTRATIONS, EMISSION RATES AND EFFICIENCIES.

        VI. A DESCRIPTION OF THE CALIBRATION AND QUALITY ASSURANCE PROCEDURES.

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IRVINE RANCH WATER DISTRICT

VII. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.

VIII. TEMPORARY ENCLOSURES FOR SOURCE TESTING PURPOSES SHALL BE CONSTRUCTED FOR THE EQUIPMENT AS NEEDED.

IX. A STATEMENT DETERMINING THAT THE TESTING LABORATORY QUALIFIES AS AN "INDEPENDENT TESTING LABORATORY" UNDER RULE 304 (NO CONFLICT OF INTEREST) AND SIGNED BY THE RESPONSIBLE AUTHORITY.

B. THE EQUIPMENT TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO:

I. TOTAL NON-METHANE ORGANIC COMPOUNDS (TNMOC).
II. SPECIATED ORGANICS.
III. TOTAL SULFUR COMPOUNDS AS H2S.
IV. AMMONIA.

ALL COMPOUNDS SHALL BE TESTED AND RESULTS REPORTED IN UNITS OF PPMV AND LBS/HR, UNLESS OTHERWISE NOTED.
[RULE 204, RULE 1303(b)(2)-Offsets]

12. THE WRITTEN RESULTS OF THE ABOVE INDICATED PERFORMANCE TESTS SHALL BE FURNISHED TO THE SCAQMD WITHIN 60 DAYS AFTER TESTING IS COMPLETED. WRITTEN NOTICE OF THE TEST SHALL BE PROVIDED TO THE SCAQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT.
[RULE 204]

13. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO THE SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

14. IN ACCORDANCE WITH RULE 205, THE PERMIT TO CONSTRUCT PORTION OF THIS PERMIT SHALL EXPIRE IF CONSTRUCTION IS NOT COMPLETE WITHIN ONE (1) YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER. IRVINE RANCH WATER DISTRICT (IRWD) SHALL MAKE A WRITTEN REQUEST FOR AND OBTAIN AN EXTENSION OF TIME TO CONSTRUCT THIS EQUIPMENT ON AN ANNUAL BASIS UNTIL SUCH TIME CONSTRUCTION IS COMPLETED AND IRWD INTENDS TO OPERATE. AT LEAST THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE OF THE PERMIT TO CONSTRUCT PORTION OF THIS PERMIT (BASED ON DATE GRANTED), IRWD SHALL PROVIDE IN THE WRITTEN REQUEST VERIFIABLE DATA IN ORDER TO SHOW COMPLIANCE WITH THE CONSTRUCTION SCHEDULE AS PROVIDED IN THE APPLICATION UNDER WHICH THIS PERMIT IS GRANTED.
[RULE 205]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO CONSTRUCT/OPERATE

Permit No. TBD
A/N 535813

Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, MODEL C32TA, FOUR STROKE, 12 CYLINDERS, 1502 BHP, DIESEL FUELED, TURBOCHARGED, AFTERCOOLED, WATER COOLED, VENTED TO A CATALYZED PASSIVE CONTINUOUSLY REGENERATED DIESEL PARTICULATE FILTER (DPF), JOHNSON MATTHEY, MODEL CRT+, WITH CRTDM BACKPRESSURE AND TEMPERATURE MONITOR, DATA LOGGER, AND ALARM, 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 CONDITIONS AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2; RULE 1303(a)(1)-BACT, RULE 1304(a)(4) -Modeling and Offsets, RULE 1470, 40CFR60 Subpart IIII]

5. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND PERFORMANCE TESTING, AND NO MORE THAN 11.2 HOURS IN ANY ONE MONTH FOR MAINTENANCE AND TESTING.
[RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)-Modeling and Offsets, RULE 1401, RULE 1470]

6. OPERATION OF THE ENGINE BEYOND THE 50 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND 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. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.
[RULE 1303(a)(1)-BACT, RULE 1470]

FACILITY PERMIT TO OPERATE
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7. 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 DO SO BY THE UTILITY OR THE GRID OPERATOR.
[RULE 1303(a)(1)-BACT, RULE 1470]

8. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

   A. EMERGENCY USE HOURS OF OPERATION.
   B. MAINTENANCE AND TESTING HOURS.
   C. HOURS OF OPERATION FOR DEMONSTRATING COMPLIANCE WITH EMISSION LIMITS.
   D. INITIAL START-UP TESTING HOURS.
   E. 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, THE SPECIFIC REASON FOR OPERATION, AND THE TOTALIZING TIME METER READING IN HOURS AND TENTHS OF HOURS AT THE BEGINNING AND END OF OPERATION. THE OPERATING HOUR TOTALS FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.
   [RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)- Modeling and Offsets, RULE 1470, 40CFR60 Subpart IIII]

9. THIS ENGINE SHALL NOT BE OPERATED UNLESS ITS EXHAUST IS VENTED TO THE DIESEL PARTICULATE FILTER (DPF) SYSTEM WHICH IS IN FULL OPERATION AND WHICH IS IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

10. A BACK PRESSURE MONITOR SHALL BE INSTALLED AND MAINTAINED ON THE DIESEL PARTICULATE FILTER (DPF) TO INDICATE THE BACKPRESSURE OF THE DPF.
[RULE 204]

11. A ENGINE EXHAUST TEMPERATURE MONITOR SHALL BE INSTALLED AND MAINTAINED ON THE DIESEL PARTICULATE FILTER (DPF) TO INDICATE THE PRE-FILTER TEMPERATURE OF THE ENGINE EXHAUST.
[RULE 204]

12. OWNER OR OPERATOR SHALL KEEP RECORDS OF ANY CORRECTIVE ACTION TAKEN AFTER THE BACKPRESSURE MONITOR HAS NOTIFIED THE OWNER OR OPERATOR THAT THE HIGH BACKPRESSURE LIMIT OF THE ENGINE IS APPROACHED.
[RULE 204, 40 CFR 60 Subpart IIII]

13. THE ENGINE SHALL BE OPERATED ONLY AT THE LOAD LEVEL REQUIRED TO ACHIEVE A PRE-FILTER ENGINE EXHAUST TEMPERATURE OF 465 DEGREES FAHRENHEIT FOR A MINIMUM OF 40 PERCENT OF THE ENGINE'S OPERATING TIME. THIS ENGINE SHALL NOT BE OPERATED FOR MORE THAN 720 CONSECUTIVE MINUTES WITH THE EXHAUST TEMPERATURE BELOW THE PASSIVE REGENERATION TEMPERATURE OF 465 DEGREES FAHRENHEIT.
[RULE 204]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

14. THIS ENGINE SHALL BE OPERATED ONLY AT AN OXIDE OF NITROGEN (NOX)/PM RATIO OF 15 AT GREATER OR EQUAL TO 572 DEGREES FAHRENHEIT AND NOX/PM RATIO OF 20 AT LESS THAN OR EQUAL TO 572 DEGREES FAHRENHEIT. THE ENGINE SHALL NOT OPERATE AT A NOX/PM RATIO OF LESS THAN 8.
[RULE 204]

15. THE OPERATOR SHALL REGENERATE THE DPF AFTER EVERY 24 CONSECUTIVE COLD STARTS AND 30-MINUTE IDLE SESSIONS, OR WHENEVER THE WARNING SIGNAL (YELLOW LIGHT) IS RECEIVED FROM THE BACKPRESSURE MONITOR, WHICHEVER OCCURS FIRST. IN ORDER TO ACHIEVE FILTER REGENERATION, THE OPERATOR SHALL RUN THE ENGINE UNTIL THE EXHAUST TEMPERATURE EXCEEDS 465 DEGREES FAHRENHEIT AND THE BACKPRESSURE MONITOR INDICATES A NORMAL BACKPRESSURE READING (GREEN LIGHT).
[RULE 204]

16. AFTER 150 CONSECUTIVE HALF-HOUR COLD STARTS WITH ASSOCIATED REGENERATIONS OR EVERY 1,000 HOURS OF ENGINE OPERATION, THE OPERATOR SHALL INSPECT THE INTEGRITY OF THE DIESEL PARTICULATE FILTER AND, IF NECESSARY, CLEAN IT.
[RULE 204]

17. THE DPF FILTER SHALL BE CLEANED WHEN THE CRTDM, WHICH MONITORS ENGINE EXHAUST BACK PRESSURE AND TEMPERATURE, INDICATES FILTER CLEANING IS REQUIRED.
[RULE 204]

18. THERE SHALL NOT BE ANY CHANGES TO THE DESIGN OR OPERATING CONDITIONS OF THE DPF WITHOUT PRIOR WRITTEN APPROVAL BY THE EXECUTIVE OFFICER.
[RULE 204]

19. THE ENGINE SHALL NOT CONSUME LUBRICATING OIL AT A RATE GREATER THAN THAT SPECIFIED BY THE ENGINE MANUFACTURER.
[RULE 204]

20. THE OPERATOR SHALL OPERATE AND MAINTAIN THE STATIONARY ENGINE AND CONTROL DEVICE ACCORDING TO THE MANUFACTURER'S WRITTEN EMISSION-RELATED INSTRUCTIONS (OR PROCEDURES DEVELOPED BY THE OPERATOR THAT ARE APPROVED BY THE ENGINE MANUFACTURER), CHANGE ONLY THOSE EMISSION-RELATED SETTINGS THAT ARE PERMITTED BY THE MANUFACTURER, AND MEET THE REQUIREMENTS OF 40 CFR 89, 94, AND/OR 1068, AS THEY APPLY.
[40 CFR 60 Subpart IIII]

21. THE OPERATOR SHALL COMPLY WITH THE EMISSION STANDARDS SPECIFIED IN 40 CFR 60.4205(b) BY PURCHASING AN ENGINE CERTIFIED TO THE EMISSION STANDARDS IN 40 CFR 60.4205(b), AS APPLICABLE, FOR THE SAME MODEL YEAR AND MAXIMUM ENGINE POWER. THE ENGINE MUST BE INSTALLED AND CONFIGURED ACCORDING TO THE MANUFACTURER'S EMISSION RELATED SPECIFICATIONS.
[40 CFR 60 Subpart IIII]

22. THE SULFUR CONTENT OF DIESEL FUEL SUPPLIED TO THIS ENGINE SHALL NOT EXCEED 15 PPM (0.0015%) BY WEIGHT.
[RULE 431.2, RULE 1470, 40CFR60 Subpart IIII]

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23. THE OWNER OR OPERATOR SHALL DOCUMENT THE USE OF CARB DIESEL FUEL (NO. 2-ULTRA LOW SULFUR) THROUGH THE RETENTION OF FUEL PURCHASE RECORDS.
[RULE 1470]

24. THIS ENGINE SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 431.2, RULE 1470, 40 CFR PART 60 SUBPART IIII, AND 40CFR63 SUBPART ZZZZ.
[RULE 431.2, RULE 1470, 40CFR60 Subpart IIII, 40CFR63SUBPART ZZZZ]

25. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THIS EQUIPMENT IS NOT COMPLETE WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

26. OPERATING RECORDS FOR THE EQUIPMENT, WHICH SHALL INCLUDE ALL DATA, LOGS, TEST REPORTS, DATES OF OPERATION, TOTAL HOURS OF OPERATION, AND FUEL CONSUMPTION FOR EACH TYPE OF FUEL SHALL BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 1110.2, RULE 3004(a)]

Emissions and Requirements:

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

PM:	RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO:	2.6 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII
PM/PM10:	0.15 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII
NOx +NMHC:	4.8 g/bhp-hr, RULE 1303(a)(1)- BACT, RULE 1470, 40CFR60 Subpart IIII

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. TBD
A/N 551658

Equipment Description:

INTERNAL COMBUSTION ENGINE, WAUKESHA, MODEL NO. L7044GSI, FOUR STROKE, 12 CYLINDERS, 1692 BHP, NATURAL GAS FIRED, RICH BURN, NATURALLY ASPIRATED, WITH AN AUTOMATIC AIR TO FUEL RATIO CONTROLLER, ALTRONIC, MODEL EPC 100-E, VENTED TO A THREE WAY CATALYST, DCL, MODEL NO. 2DC76-14, DRIVING A 1.25 KW 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. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. THIS ENGINE SHALL NOT BE OPERATED UNLESS ITS EXHAUST IS VENTED TO AN AIR POLLUTION CONTROL DEVICE, WHICH IS IN FULL OPERATION AND WHICH IS IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 1303(a)(1)-BACT]

5. THIS ENGINE SHALL ONLY BE FIRED ON NATURAL GAS. LPG MAY BE USED IN THE EVENT OF NATURAL GAS CURTAILMENT.
[RULE 204, RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1303(b)(2)-Offsets]

6. 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 1110.2]

7. THE CATALYST IN THE CONVERTER SHALL BE MAINTAINED IN GOOD WORKING CONDITION. THE OPERATOR SHALL MAINTAIN RECORDS OF CATALYST CLEANING PERIODS AND REPLACEMENT FREQUENCY.
[RULE 204]

8. A TEMPERATURE INDICATING DEVICE SHALL BE INSTALLED AND MAINTAINED TO ACCURATELY INDICATE THE TEMPERATURE AT THE INLET AND OUTLET OF THE CATALYST.
[RULE 204]

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9. A HIGH TEMPERATURE SHUT-DOWN MECHANISM SHALL BE INSTALLED AT THE OUTLET PORT OF THE CONVERTER AND SET TO 1350 DEGREES FAHRENHEIT OR LESS.
[RULE 204]

10. WHENEVER THE ENGINE IS OPERATING, THE TEMPERATURE AT THE INLET OF THE CATALYTIC OXIDIZER SHALL BE MAINTAINED BETWEEN 600 DEGREES FAHRENHEIT AND 1250 DEGREES FAHRENHEIT, OR PER MANUFACTURER RECOMMENDATIONS, EXCEPT DURING COLD START-UP AND SHUTDOWN PERIODS OF THE ENGINE, EACH PERIOD SHALL NOT EXCEED 30 MINUTES.
[RULE 204]

11. AN OPERATIONAL NON-RESETTABLE TOTALIZING FUEL METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE FUEL USAGE, IN CUBIC FEET, IN THE FUEL SUPPLY LINE TO THE ENGINE.
[RULE 204, RULE 1110.2]

12. AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE, IN CUMULATIVE HOURS, THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2]

13. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

    A. TOTAL HOURS OF OPERATION.
    B. FUEL CONSUMPTION OF EACH FUEL TYPE.
    C. CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST.

    [RULE 1110.2]

14. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL NOT OPERATE THIS EQUIPMENT FOR MORE THAN 1,000 HOURS PER CALENDAR YEAR.
[RULE 1303(b)(2)-Offsets]

15. THE OPERATOR SHALL INSTALL AND MAINTAIN A SENSOR TO ACCURATELY INDICATE THE OXYGEN CONCENTRATION OF THE EXHAUST GAS ENTERING THE CATALYST. THE ENGINE OXYGEN SENSOR(S) SHALL BE REPLACED PER MANUFACTURER RECOMMENDATIONS, OR WHEN AN "OXYGEN SENSOR FAILURE" WARNING FROM THE ENGINE CONTROL SYSTEM IS RECEIVED, WHICHEVER OCCURS FIRST. IMMEDIATELY FOLLOWING EACH OXYGEN SENSOR REPLACEMENT, THE EXHAUST OXYGEN SET POINT SHALL BE RECHECKED AND RESET AS NECESSARY.
[RULE 1110.2]

16. THE ENGINE SHALL OPERATE BETWEEN 1080 AND 1320 RPM, EXCEPT DURING START-UP OR SHUT-DOWN PERIODS OF THE ENGINE, EACH PERIOD SHALL NOT EXCEED 30 MINUTES.
[RULE 1110.2]

17. THE OPERATOR SHALL MAINTAIN AND IMPLEMENT AN INSPECTION AND MONITORING (I&M) PLAN FOR THIS EQUIPMENT AS DESCRIBED IN THIS PERMIT IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF RULE 1110.2(f)(1)(D).
[RULE 1110.2]

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18. TESTING SHALL BE CONDUCTED AT THE OUTLET OF THE ENGINE 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. 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 RESULTS OF THESE TESTS SHALL BE FURNISHED TO THE SCAQMD IN WRITING WITHIN 60 DAYS OF THE COMPLETION OF THE TEST. WRITTEN NOTICE OF THE PERFORMANCE TESTS SCHEDULE SHALL BE PROVIDED TO THE SCAQMD 7 DAYS PRIOR TO THE TESTS SO THAT AN OBSERVER MAY BE PRESENT. THE TESTING SHALL INCLUDE, BUT NOT BE LIMITED TO:

    A. TOTAL NON-METHANE NON-ETHANE ORGANICS
    B. OXIDES OF NITROGEN
    C. CARBON MONOXIDE
    D. CARBON DIOXIDE
    E. OXYGEN
    F. MOISTURE CONTENT
    G. TEMPERATURE
    H. FLOW RATE

    THE FINAL REPORT SHALL INCLUDE FUEL CONSUMPTION AND THE ENGINE LOAD DURING THE TESTS.
    [RULE 1110.2, RULE 1303(b)(2)-Offsets]

19. SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED IN THE EXHAUST STACK OF THE ENGINE DOWNSTREAM OF THE CATALYST. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE PROVIDED.
    [RULE 204, RULE 217]

20. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2(f)(1)(H)(i) THROUGH (iii), PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.
    [RULE 1110.2]

21. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF RULE 431.1, RULE 1110.2, AND 40 CFR 63 SUBPART ZZZZ.
    [RULE 431.1, RULE 1110.2, 40CFR63 SUBPART ZZZZ]

22. OPERATING RECORDS FOR THE EQUIPMENT, WHICH SHALL INCLUDE ALL DATA, LOGS, TEST REPORTS, DATES OF OPERATION, TOTAL HOURS OF OPERATION, AND FUEL CONSUMPTION FOR EACH TYPE OF FUEL SHALL BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
    [RULE 204, RULE 1110.2, RULE 3004(a)]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

Emissions and Requirements:

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

PM:	RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO:	250 PPMV @15% O2 DRY, RULE 1110.2
NOx:	11 PPMV @15% O2 DRY, RULE 1110.2
VOC:	30 PPMV @15% O2 DRY, RULE 1110.2
CO:	65.5 PPMV @15% O2 DRY, ONE HOUR AVERAGE, RULE 1303(a)(1)-BACT
NOx:	11 PPMV @15% O2 DRY, ONE HOUR AVERAGE, RULE 1303(a)(1)-BACT
VOC:	30 PPMV @15% O2 DRY, ONE HOUR AVERAGE, RULE 1303(a)(1)-BACT
HAP:	40 CFR 63 SUBPART ZZZZ

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. TBD
A/N 551660

Equipment Description:

INTERNAL COMBUSTION ENGINE, WAUKESHA, MODEL NO. L7044GSI, FOUR STROKE, 12 CYLINDERS, 1692 BHP, NATURAL GAS FIRED, RICH BURN, NATURALLY ASPIRATED, WITH AN AUTOMATIC AIR TO FUEL RATIO CONTROLLER, ALTRONIC, MODEL EPC 100-E, VENTED TO A THREE WAY CATALYST, DCL, MODEL NO. 2DC76-14, DRIVING A 1.25 KW 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. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. THIS ENGINE SHALL NOT BE OPERATED UNLESS ITS EXHAUST IS VENTED TO AN AIR POLLUTION CONTROL DEVICE, WHICH IS IN FULL OPERATION AND WHICH IS IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 1303(a)(1)-BACT]

5. THIS ENGINE SHALL ONLY BE FIRED ON NATURAL GAS. LPG MAY BE USED IN THE EVENT OF NATURAL GAS CURTAILMENT.
[RULE 204, RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1303(b)(2)-Offsets]

6. 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 1110.2]

7. THE CATALYST IN THE CONVERTER SHALL BE MAINTAINED IN GOOD WORKING CONDITION. THE OPERATOR SHALL MAINTAIN RECORDS OF CATALYST CLEANING PERIODS AND REPLACEMENT FREQUENCY.
[RULE 204]

8. A TEMPERATURE INDICATING DEVICE SHALL BE INSTALLED AND MAINTAINED TO ACCURATELY INDICATE THE TEMPERATURE AT THE INLET AND OUTLET OF THE CATALYST.
[RULE 204]

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9. A HIGH TEMPERATURE SHUT-DOWN MECHANISM SHALL BE INSTALLED AT THE OUTLET PORT OF THE CONVERTER AND SET TO 1350 DEGREES FAHRENHEIT OR LESS.
[RULE 204]

10. WHENEVER THE ENGINE IS OPERATING, THE TEMPERATURE AT THE INLET OF THE CATALYTIC OXIDIZER SHALL BE MAINTAINED BETWEEN 600 DEGREES FAHRENHEIT AND 1250 DEGREES FAHRENHEIT, OR PER MANUFACTURER RECOMMENDATIONS, EXCEPT DURING COLD START-UP AND SHUTDOWN PERIODS OF THE ENGINE, EACH PERIOD SHALL NOT EXCEED 30 MINUTES.
[RULE 204]

11. AN OPERATIONAL NON-RESETTABLE TOTALIZING FUEL METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE FUEL USAGE, IN CUBIC FEET, IN THE FUEL SUPPLY LINE TO THE ENGINE.
[RULE 204, RULE 1110.2]

12. AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE, IN CUMULATIVE HOURS, THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2]

13. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

    A. TOTAL HOURS OF OPERATION.
    B. FUEL CONSUMPTION OF EACH FUEL TYPE.
    C. CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST.

    [RULE 1110.2]

14. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL NOT OPERATE THIS EQUIPMENT FOR MORE THAN 1,000 HOURS PER CALENDAR YEAR.
[RULE 1303(b)(2)-Offsets]

15. THE OPERATOR SHALL INSTALL AND MAINTAIN A SENSOR TO ACCURATELY INDICATE THE OXYGEN CONCENTRATION OF THE EXHAUST GAS ENTERING THE CATALYST. THE ENGINE OXYGEN SENSOR(S) SHALL BE REPLACED PER MANUFACTURER RECOMMENDATIONS, OR WHEN AN "OXYGEN SENSOR FAILURE" WARNING FROM THE ENGINE CONTROL SYSTEM IS RECEIVED, WHICHEVER OCCURS FIRST. IMMEDIATELY FOLLOWING EACH OXYGEN SENSOR REPLACEMENT, THE EXHAUST OXYGEN SET POINT SHALL BE RECHECKED AND RESET AS NECESSARY.
[RULE 1110.2]

16. THE ENGINE SHALL OPERATE BETWEEN 1080 AND 1320 RPM, EXCEPT DURING START-UP OR SHUT-DOWN PERIODS OF THE ENGINE, EACH PERIOD SHALL NOT EXCEED 30 MINUTES.
[RULE 1110.2]

17. THE OPERATOR SHALL MAINTAIN AND IMPLEMENT AN INSPECTION AND MONITORING (I&M) PLAN FOR THIS EQUIPMENT AS DESCRIBED IN THIS PERMIT IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF RULE 1110.2(f)(1)(D).
[RULE 1110.2]

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18. TESTING SHALL BE CONDUCTED AT THE OUTLET OF THE ENGINE 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. 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 RESULTS OF THESE TESTS SHALL BE FURNISHED TO THE SCAQMD IN WRITING WITHIN 60 DAYS OF THE COMPLETION OF THE TEST. WRITTEN NOTICE OF THE PERFORMANCE TESTS SCHEDULE SHALL BE PROVIDED TO THE SCAQMD 7 DAYS PRIOR TO THE TESTS SO THAT AN OBSERVER MAY BE PRESENT. THE TESTING SHALL INCLUDE, BUT NOT BE LIMITED TO:

    A. TOTAL NON-METHANE NON-ETHANE ORGANICS
    B. OXIDES OF NITROGEN
    C. CARBON MONOXIDE
    D. CARBON DIOXIDE
    E. OXYGEN
    F. MOISTURE CONTENT
    G. TEMPERATURE
    H. FLOW RATE

    THE FINAL REPORT SHALL INCLUDE FUEL CONSUMPTION AND THE ENGINE LOAD DURING THE TESTS.
    [RULE 1110.2, RULE 1303(b)(2)-Offsets]

19. SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED IN THE EXHAUST STACK OF THE ENGINE DOWNSTREAM OF THE CATALYST. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE PROVIDED.
    [RULE 204, RULE 217]

20. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2(f)(1)(H)(i) THROUGH (iii), PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.
    [RULE 1110.2]

21. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF RULE 431.1, RULE 1110.2, AND 40 CFR 63 SUBPART ZZZZ.
    [RULE 431.1, RULE 1110.2, 40CFR63 SUBPART ZZZZ]

22. OPERATING RECORDS FOR THE EQUIPMENT, WHICH SHALL INCLUDE ALL DATA, LOGS, TEST REPORTS, DATES OF OPERATION, TOTAL HOURS OF OPERATION, AND FUEL CONSUMPTION FOR EACH TYPE OF FUEL SHALL BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
    [RULE 204, RULE 1110.2, RULE 3004(a)]

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Emissions and Requirements:

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

PM:	RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO:	250 PPMV @15% O2 DRY, RULE 1110.2
NOx:	11 PPMV @15% O2 DRY, RULE 1110.2
VOC:	30 PPMV @15% O2 DRY, RULE 1110.2
CO:	65.5 PPMV @15% O2 DRY, ONE HOUR AVERAGE, RULE 1303(a)(1)-BACT
NOx:	11 PPMV @15% O2 DRY, ONE HOUR AVERAGE, RULE 1303(a)(1)-BACT
VOC:	30 PPMV @15% O2 DRY, ONE HOUR AVERAGE, RULE 1303(a)(1)-BACT
HAP:	40 CFR 63 SUBPART ZZZZ

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. TBD
A/N 554495

Equipment Description:

METAL CUTTING TORCH, PLASMA ARC TYPE, WITH POWER SUPPLY, LINCOLN ELECTRIC, MODEL PRO-CUT 125, 18.5 KVA, 40-102 AMPERE INPUT, 220 - 460 VDC INPUT.

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 CONDITIONS AT ALL TIMES.
[RULE 204]

3. AN IDENTIFICATION TAG OR NAMEPLATE SHALL BE DISPLAYED ON THE POWER SUPPLY AND THE PLASMA ARC CUTTER TO SHOW MANUFACTURER, MODEL NO. AND SERIAL NO. THE TAG(S) OR NAMEPLATE(S) SHALL BE ISSUED BY THE MANUFACTURER AND SHALL BE AFFIXED TO THE EQUIPMENT IN A PERMANENT AND CONSPICUOUS LOCATION.
[RULE 204]

4. THIS EQUIPMENT SHALL NOT BE OPERATED TO CUT STEEL UNLESS THE PLASMA ARC CUTTER IS VENTED TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL OPERATION AND WHICH HAS BEEN ISSUED A VALID OPERATING PERMIT BY THE EXECUTIVE OFFICER.
[RULE 204, RULE 1303]

5. THE AMOUNT OF METAL CUT BY THIS EQUIPMENT SHALL NOT EXCEED 17,500 LINEAR INCHES PER CALENDAR YEAR.
[RULE 204, RULE 1303]

6. A DAILY OPERATING LOG SHALL BE MAINTAINED TO RECORD THE NUMBER OF LINEAR INCHES OF METAL CUT BY THIS EQUIPMENT.
[RULE 204, RULE 1303]

7. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. TBD
A/N 554496

Equipment Description:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. DOWNDRAFT TABLE, LINCOLN ELECTRIC, MODEL DOWNFLEX 400-MS/A, 3'-0" W. X 4'-6" L. X 3'-3" H., WITH CELLULOSE/POLYESTER FIBER FILTER, 560 SQ. FT. FILTER AREA, AND HEPA CARTRIDGE FILTER, 366 SQ. FT. FILTER AREA, MOUNTED ON OUTLET OF DOWNDRAFT TABLE, WITH A REVERSE AIR CLEANING SYSTEM.

2. DOWNDRAFT TABLE EXHAUST SYSTEM WITH A 1,860 CFM BLOWER, VENTING A PLASMA ARC CUTTER.

3. DUST COLLECTOR, MILLER, MODEL SWX-S, 2'-9" L. X 2'-3" W. X 2'-9" H., WALL MOUNTED, HEPA 10 FILTER, 490 SQ. FT. TOTAL FILTER AREA, WITH TWO FUME EXTRACTOR ARMS, 8" DIA., WITH A REVERSE AIR CLEANING SYSTEM.

4. DUST COLLECT EXHAUST SYSTEM WITH AN 875 CFM BLOWER VENTING A PLASMA ARC CUTTER.

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 CONDITIONS AT ALL TIMES.
[RULE 204]

1. AN IDENTIFICATION TAG OR NAMEPLATE SHALL BE DISPLAYED ON THE DUST COLLECTORS TO SHOW MANUFACTURER, MODEL NO. AND SERIAL NO. THE TAG(S) OR NAMEPLATE(S) SHALL BE ISSUED BY THE MANUFACTURER AND SHALL BE AFFIXED TO THE EQUIPMENT IN A PERMANENT AND CONSPICUOUS LOCATION.
[RULE 204]

4. AIR CONTAMINANTS COLLECTED IN THE AIR POLLUTION CONTROL SYSTEM SHALL BE DISCHARGED ONLY INTO CLOSED CONTAINERS.
[RULE 204]

5. THE DOWNDRAFT TABLE SHALL BE EQUIPPED WITH HEPA CARTRIDGE FILTER(S).
[RULE 204, RULE 1303]

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6. THE DOWNDRAFT TABLE FILTERS SHALL BE CLEANED OR REPLACED WHEN THE CONTROL PANEL FILTER GAUGE INDICATES CLEANING IS REQUIRED (RED).
[RULE 204]

7. HEPA FILTERS SHALL BE CLEANED OR REPLACED ACCORDING TO MANUFACTURER RECOMMENDATIONS.
[RULE 204]

8. RECORDS OF FILTER REPLACEMENT SHALL BE KEPT ON FILE.
[RULE 204]

9. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO OPERATE

Permit No. G28212
A/N 557286

Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, MODEL G3306TA, FOUR STROKE, 6 CYLINDERS, 203 BHP, NATURAL GAS FIRED, RICH BURN, TURBOCHARGED, AFTERCOOLED, WITH AN AIR TO FUEL RATIO CONTROLLER, ALTRONIC, MODEL EPC 100, VENTED TO A NON-SELECTIVE CATALYTIC REDUCTION SYSTEM, DCL, MODEL 2-DC49-6, DRIVING WATER PUMP NO. 3.

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 CONDITIONS AT ALL TIMES.
[RULE 204]

3. THIS ENGINE SHALL NOT BE OPERATED UNLESS IT IS VENTED TO A THREE-WAY CATALYST.
[RULE 1303(a)(1)-BACT]

4. THIS ENGINE SHALL BE FIRED WITH NATURAL GAS ONLY.
[RULE 204, RULE 1110.2, RULE 1303(a)(1)-BACT, RULE 1303(b)(2)-Offsets]

5. 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 CONDITION AT ALL TIMES AS SPECIFIED BY THE MANUFACTURER.
[RULE 1110.2, 40 CFR 60 SUBPART JJJJ]

6. A TEMPERATURE MEASUREMENT DEVICE SHALL BE INSTALLED AND MAINTAINED TO ACCURATELY INDICATE THE TEMPERATURE AT THE INLET AND OUTLET OF THE CATALYST.
[RULE 204]

7. THE INLET AND OUTLET TEMPERATURE OF THE CATALYTIC CONVERTER (EXCEPT FOR STARTUP AND SHUTDOWN PERIODS) AND THE EXHAUST OXYGEN CONCENTRATION SHALL BE MAINTAINED AS SPECIFIED BY THE MANUFACTURER.
[RULE 204]

8. AN OPERATIONAL TOTALIZING FUEL METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE FUEL USAGE IN THE FUEL SUPPLY LINE TO THE ENGINE.
[RULE 204, RULE 1110.2]

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9. AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2]

10. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. TOTAL HOURS OF OPERATION.
B. TYPE OF GASEOUS FUEL.
C. FUEL CONSUMPTION (CUBIC FEET OF GAS).
D. CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST.
[RULE 1110.2]

11. THE OPERATOR SHALL MAINTAIN AND IMPLEMENT AN INSPECTION AND MONITORING (I & M) PLAN FOR THIS EQUIPMENT AS DESCRIBED IN THIS PERMIT IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF RULE 1110.2(f)(1)(D).
[RULE 1110.2]

12. THE OWNER OR OPERATOR SHALL CONDUCT SOURCE TESTING FOR NOx, VOC REPORTED AS CARBON, AND CO CONCENTRATIONS (CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON A 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. 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 SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE). IN ADDITION, A SOURCE TEST SHALL BE CONDUCTED FOR NOx AND CO EMISSIONS FOR AT LEAST 15 MINUTES AT: (1) THE ENGINES ACTUAL PEAK LOAD, OR THE MAXIMUM LOAD THAT CAN BE PRACTICALLY ACHIEVED DURING THE TEST, AND, (2) THE ENGINE'S ACTUAL MINIMUM LOAD, EXCLUDING IDLE, OR 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 RESULTS OF THESE TESTS SHALL BE FURNISHED TO THE SCAQMD IN WRITING WITHIN 60 DAYS OF THE COMPLETION OF THE TEST. WRITTEN NOTICE OF THE PERFORMANCE TESTS SCHEDULE SHALL BE PROVIDED TO THE SCAQMD 7 DAYS PRIOR TO THE TESTS SO THAT AN OBSERVER MAY BE PRESENT.
[RULE 1110.2]

13. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2(f)(1)(H)(i) THROUGH (iii), PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.
[RULE 1110.2]

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14. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF RULE 431.1, RULE 1110.2, 40 CFR 60 SUBPART JJJJ, AND 40 CFR 63 SUBPART ZZZZ.
[RULE 431.1, RULE 1110.2, 40CFR60 SUBPART JJJJ, 40CFR63 SUBPART ZZZZ]

15. OPERATING RECORDS FOR THE EQUIPMENT, WHICH SHALL INCLUDE ALL DATA, LOGS, TEST REPORTS, DATES OF OPERATION, TOTAL HOURS OF OPERATION, AND FUEL CONSUMPTION FOR EACH TYPE OF FUEL SHALL BE MAINTAINED AND KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 1110.2, RULE 3004(a)]

Emissions and Requirements:

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

PM:	RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO:	70 PPMV @15% O2 DRY, RULE 1110.2, RULE 1303(a)(1)-BACT
NOx:	11 PPMV @15% O2 DRY, RULE 1110.2, RULE 1303(a)(1)-BACT
VOC:	30 PPMV @15% O2 DRY, RULE 1110.2, RULE 1303(a)(1)-BACT
CO:	540 PPMV @15% O2 DRY, 40 CFR 60 SUBPART JJJJ
NOx:	160 PPMV @15% O2 DRY, 40 CFR 60 SUBPART JJJJ
VOC:	63 PPMV @15% O2 DRY, 40 CFR 60 SUBPART JJJJ

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RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, BOILERS, < 2 MMBTU/HR.

Emissions and Requirements:

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

   CO: 2000 PPMV, RULE 407
   PM: 0.1 gr/scf, RULE 409
   CO: 400 PPMV, RULE 1146.2
   NOx: 55 PPMV @3% O2, DRY OR 40ng/J-TYPE 1 UNIT, ≤400,000 BTU/HR, RULE 1146.2
   NOx: 30 PPMV @3% O2, DRY OR 0.037 LBS/MMBTU -TYPE 2 UNIT, > 400,000 BTU/HR AND ≤2 MM BTU/HR, RULE 1146.2

FACILITY PERMIT TO OPERATE
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RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, ABRASIVE BLASTING EQUIPMENT, 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
IRVINE RANCH WATER DISTRICT

Emissions and Requirements:

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

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

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, REFRIGERANT RECOVERY AND RECYCLING UNITS.

Emissions and Requirements:

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

REFRIGERANT:	RULE 1411
REFRIGERANT:	40CFR 82 SUBPART F

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

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

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, HAND WIPING OPERATION.

Emissions and Requirements:

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

   VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

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 REGULATION:

   VOC: RULE 1415
   VOC: 40CFR 82 SUBPART F

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

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 REGULATION:

   HALON: RULE 1418

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

SECTION E: ADMINISTRATIVE CONDITIONS

The operating conditions in this section shall apply to all permitted equipment at this facility unless superseded by condition(s) listed elsewhere in this permit.

1. The permit shall remain effective unless this permit is suspended, revoked, modified, reissued, denied, or it is expired for nonpayment of permit processing or annual operating fees. [201, 203, 209, 301]
   a. The permit must be renewed annually by paying annual operating fees, and the permit shall expire if annual operating fees are not paid pursuant to requirements of Rule 301(d). [301(d)]
   b. The Permit to Construct listed in Section H shall expire one year from the Permit to Construct issuance date, unless a Permit to Construct extension has been granted by the Executive Officer or unless the equipment has been constructed and the operator has notified the Executive Officer prior to the operation of the equipment, in which case the Permit to Construct serves as a temporary Permit to Operate. [202, 205]
   c. The Title V permit shall expire as specified under Section K of the Title V permit. The permit expiration date of the Title V facility permit does not supercede the requirements of Rule 205. [205, 3004]
2. The operator shall maintain all equipment in such a manner that ensures proper operation of the equipment. [204]
3. This permit does not authorize the emissions of air contaminants in excess of those allowed by Division 26 of the Health and Safety Code of the State of California or the Rules and Regulations of the SCAQMD. This permit cannot be considered as permission to violate existing laws, ordinances, regulations, or statutes of other governmental agencies. [204]
4. The operator shall not use equipment identified in this facility permit as being connected to air pollution control equipment unless they are so vented to the identified air pollution control equipment which is in full use and which has been included in this permit. [204]

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5. The operator shall not use any equipment having air pollution control device(s) incorporated within the equipment unless the air pollution control device is in full operation. [204]

6. The operator shall maintain records to demonstrate compliance with rules or permit conditions that limit equipment operating parameters, or the type or quantity of material processed. These records shall be made available to SCAQMD personnel upon request and be maintained for at least five years. [204]

7. The operator shall maintain and operate all equipment to ensure compliance with all emission limits as specified in this facility permit. Compliance with emission limits shall be determined according to the following specifications, unless otherwise specified by SCAQMD rules or permit conditions: [204]

   a. For internal combustion engines and gas turbines, measured concentrations shall be corrected to 15 percent stack-gas oxygen content on a dry basis and be averaged over a period of 15 consecutive minutes; [1110.2, 1134]

   b. For other combustion devices, measured concentrations shall be corrected to 3 percent stack-gas oxygen content on a dry basis and be averaged over a period of 15 consecutive minutes; [1146, 1146.1, 204]

   c. For non-combustion sources, compliance with emission limits shall be determined and averaged over a period of 60 minutes; [204]

   d. For the purpose of determining compliance with Rule 407, carbon monoxide (CO) shall be measured on a dry basis and be averaged over 15 consecutive minutes, and sulfur compounds which would exist as liquid or gas at standard conditions shall be calculated as sulfur dioxide (SO2) and be averaged over 15 consecutive minutes; [407]

   e. For the purpose of determining compliance with Rule 409, combustion contaminant emission measurements shall be corrected to 12 percent of carbon dioxide (CO2) at standard conditions and averaged over a minimum of 15 consecutive minutes. [409]

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f. For the purpose of determining compliance with Rule 475, combustion contaminant emission measurements shall be corrected to 3 percent of oxygen (O2) at standard conditions and averaged over 15 consecutive minutes or any other averaging time specified by the Executive Officer. [475]

8. The operator shall, when a source test is required by SCAQMD, provide a source test protocol to SCAQMD no later than 60 days before the proposed test date. The test shall not commence until the protocol is approved by SCAQMD. The test protocol shall contain the following information: [204, 304]

   a. Brief description of the equipment tested.

   b. Brief process description, including maximum and normal operating temperatures, pressures, throughput, etc.

   c. Operating conditions under which the test will be performed.

   d. Method of measuring operating parameters, such as fuel rate and process weight. Process schematic diagram showing the ports and sampling locations, including the dimensions of the ducts and stacks at the sampling locations, and distances of flow disturbances, (e.g. elbows, tees, fans, dampers) from the sampling locations (upstream and downstream).

   e. Brief description of sampling and analytical methods used to measure each pollutant, temperature, flow rates, and moisture.

   f. Description of calibration and quality assurance procedures.

   g. Determination that the testing laboratory qualifies as an "independent testing laboratory" under Rule 304 (conflict of interest).

9. The operator shall submit a report no later than 60 days after conducting a source test, unless otherwise required by SCAQMD rules or equipment-specific conditions. The report shall contain the following information: [204]

   a. The results of the source test.

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b. Brief description of the equipment tested.

c. Operating conditions under which the test was performed.

d. Method of measuring operating parameters, such as fuel rate and process weight. Process schematic diagram showing the ports and sampling locations, including the dimensions of the ducts and stacks at the sampling locations, and distances of flow disturbances, (e.g. elbows, tees, fans, dampers) from the sampling locations (upstream and downstream).

e. Field and laboratory data forms, strip charts and analyses.

f. Calculations for volumetric flow rates, emission rates, control efficiency, and overall control efficiency.

10. The operator shall, when a source test is required, provide and maintain facilities for sampling and testing. These facilities shall comply with the requirements of SCAQMD Source Test Method 1.1 and 1.2. [217]

11. Whenever required to submit a written report, notification or other submittal to the Executive Officer, SCAQMD, or the District, the operator shall mail or deliver the material to: Deputy Executive Officer, Engineering and Compliance, SCAQMD, 21865 E. Copley Drive, Diamond Bar, CA 91765-4182. [204]

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SECTION F: RECLAIM MONITORING AND SOURCE TESTING REQUIREMENTS

NOT APPLICABLE

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SECTION G: RECORDKEEPING AND REPORTING REQUIREMENTS FOR RECLAIM SOURCES

NOT APPLICABLE

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Facility Equipment and Requirements
(Section H)

This section consists of a table listing all individual Permits to Construct and Temporary Permits to Operate issued to various equipment at the facility. Each permit 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 temporary permits to operate at this facility:

Application No.	Permit No.	Equipment description	Page No.
535798	-	SEWAGE SLUDGE DRYING SYSTEM	4
535800	-	ODOR CONTROL UNIT	11
535802	-	REGENERATIVE THERMAL OXIDIZER	16
535803	-	MICROTURBINE NO. 1	22
535804	-	MICROTURBINE NO. 2	26
535805	-	MICROTURBINE NO. 3	30
535806	-	MICROTURBINE NO. 4	34
535809	-	BOILER (5-20 MMBTU/HR) OTHER FUEL NO. 1	38
535810	-	BOILER (5-20 MMBTU/HR) OTHER FUEL NO. 2	41
535812	-	FLARE, ENCLOSED, DIGESTER GAS	44
544709	-	SCRUBBER, HEADWORKS AND PRIMARY TREATMENT	48
552110	-	MICROTURBINE NO. 5	50

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.

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FACILITY WIDE CONDITION(S)

Condition(s):

1. THE OPERATOR SHALL NOT USE FUEL OIL CONTAINING SULFUR COMPOUNDS IN EXCESS OF 0.05 PERCENT BY WEIGHT. AFTER JUNE 1, 2004, THE OPERATOR SHALL NOT PURCHASE ANY DIESEL FUEL UNLESS THE FUEL IS LOW SULFUR DIESEL FOR WHICH THE SULFUR CONTENT SHALL NOT EXCEED 15 PPM BY WEIGHT AS SUPPLIED BY THE SUPPLIER.
[RULE 431.2]

2. THE FACILITY SHALL NOT EMIT MORE THAN 5 LBS/DAY OF TOTAL SULFUR COMPOUNDS, CALCULATED AS H2S, FROM BURNING OF GASEOUS FUELS OTHER THAN NATURAL GAS.
[RULE 431.1]

3. THE OWNER/OPERATOR SHALL NOT DISCHARGE FROM ANY SINGLE SOURCE SULFUR COMPOUNDS IN ANY STATE OR COMBINATION IN EXCESS OF 0.05 PERCENT BY VOLUME AS SO2.
[RULE 53(A)(1)]

4. THE FACILITY SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF 40 CR 63 SUBPART ZZZZ.
[40 CFR 63 SUBPART ZZZZ]

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PERMIT TO CONSTRUCT

A/N 535798
Granted TBD

Equipment Description:

BIOSOLIDS RECEIVING, HEAT DRYING, AND LOAD OUT SYSTEM, CONSISTING OF:

I. BIOSOLIDS RECEIVING SYSTEM, CONSISTING OF:

1. TRUCK LOADING AND UNLOADING STATION.
2. TWO IMPORTED CAKE SOLIDS RECEIVING BINS, EACH 3,528 CUBIC FEET CAPACITY (14'-0" W. X 18'-0" L. X 14'-0" H.), WITH PUMPS.
3. TWO CAKE DISTRIBUTION CONVEYORS, HORIZONTAL.
4. THREE WET BIOSOLIDS BINS, ANDRITZ, MODEL DDS 60-015, EACH WITH 2,500 CU. FT. CAPACITY, WET BIOSOLIDS SCREW CONVEYORS, 310 CU. FT./HR PROCESS RATE, AND A PUMP, 18,567 LBS/HR.
5. DRUM MIXER, 56,000 LBS/HR PROCESSING RATE, 7'-6" L. X 4'-0" DIA.

II. BIOSOLIDS HEAT DRYING SYSTEM, CONSISTING OF:

6. FURNACE, FABER, MODEL WB-1-20-IFGR, 31 MMBTU/HR, DIRECT FIRED, DIGESTER GAS, NATURAL GAS/DIGESTER GAS BLEND OR NATURAL GAS FIRED, WITH EXHAUST HEAT RECOVERY SYSTEM FROM CONDENSER.
7. ROTARY DRUM DRYER, ANDRITZ-GRAZ, MODEL DDS 60, TRIPLE PASS, 13' DIA. X 33'-8" L.
8. PRESEPARATOR, ANDRITZ, MODEL DDS 60-003, 16'-2" H. X 9'-0" W. X 9'-11" D., VENTED TO CONDENSER.
9. POLYCYCLONE, PROCESS EQUIPMENT, MODEL 37 STD 9CBK-15-7X6W, 14,000 LB CAPACITY, WITH BLOWER, 37,000 ACFM CAPACITY, VENTED TO CONDENSER.
10. CONDENSER, VENTED TO A VENTURI SCRUBBER AND REGENERATIVE THERMAL OXIDIZER, UNDER APPLICATION 535802 OR SUBSEQUENT.

III. BIOSOLIDS PELLET SIZING AND RECYCLING SYSTEM, CONSISTING OF:

11. PRESEPARATOR/POLYCYCLONE SCREW CONVEYOR, 34,000 LBS/HR PROCESS RATE, 14'-10" L. X 1'-0" DIA.
12. VIBRATING SIZING SCREEN, ANDRITZ SPROUT BAUER, OR EQUIVALENT, TRIPLE DECK, 42,000 LBS/HR CAPACITY.
13. WASTE BIN, LARGE INORGANIC MATERIALS.
14. ROLLER CRUSHER, ROSKAMP, MODEL TRC 1200-24, 30,000 LBS/HR CAPACITY, 6'-6" L. X 3'-9" W. X 3'-9" H.
15. RECYCLE SCREW CONVEYOR, 42,000 LBS/HR CAPACITY, TO RECYCLE FEED BUCKET ELEVATOR.
16. RECYCLED PRODUCT BUCKET ELEVATOR, ANDRITZ, MODEL BE-144, 800 CU. FT./HR CAPACITY, TO RECYCLE BIN.
17. RECYCLE BIN, 800 CU. FT./HR CAPACITY, VENTED TO A DUST COLLECTOR.

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18. DUST COLLECTOR, NO. 1, SCHENCK PROCESS, MODEL 96AVR32, 2,500 CFM, 425 SQ. FT. TOTAL FILTER AREA, VENTING A RECYCLE BIN, VIBRATING SIZING SCREEN, ROLLER CRUSHER, RECYCLE SCREW CONVEYORS, RECYCLED PRODUCT BUCKET ELEVATOR, FINAL PRODUCT BUCKET ELEVATOR, PELLET COOLER, AND PNEUMATIC TRANSPORTER, VENTED TO THE ODOR CONTROL SYSTEM UNDER APPLICATION 535800 OR SUBSEQUENT.
19. RECYCLE SCREW CONVEYOR, 37,000 LBS/HR CAPACITY TO DRUM MIXER.
20. FINAL PRODUCT BUCKET ELEVATOR, 150 CU. FT./HOUR PROCESS RATE.
21. PELLET COOLER, 10 CU. FT. BATCH CAPACITY, 5,200 LBS/HR PROCESS RATE.
22. PELLET TRANSPORTER, PNEUMATIC, 15 CU. FT. CAPACITY, 2.6 TONS/HR PROCESS RATE, 3'-0" DIA. X 6'-0" H.

IV. BIOSOLIDS CAKE AND PELLET LOADOUT SYSTEM, CONSISTING OF:

23. LOADOUT SILO, CLASS B CAKE, 24' L. X 18' W. X 17' H.
24. TWO FINAL PRODUCT STORAGE SILOS, CLASS A PELLETS, 20'-0" DIA. X 28'-0" H.
25. TWO DUST COLLECTORS, NOS. 2 AND 3, SCHENCK PROCESS, MODEL 72AVS36, EACH WITH 2,000 CFM, 227 SQ. FT. TOTAL FILTER SURFACE AREA, AND A DUST COLLECTION BIN, EACH VENTING A STORAGE SILO, VENTED TO THE ODOR CONTROL SYSTEM UNDER APPLICATION 535800 OR SUBSEQUENT.

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 EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. AN IDENTIFICATION TAG OR NAMEPLATE SHALL BE DISPLAYED ON THE EQUIPMENT TO SHOW MANUFACTURER AND MODEL NUMBER OF THE EQUIPMENT. THE TAG(S) OR PLATE(S) SHALL BE ISSUED BY THE MANUFACTURER AND SHALL BE AFFIXED TO THE EQUIPMENT IN A PERMANENT AND CONSPICUOUS POSITION.
[RULE 204]

5. THE OWNER OR OPERATOR SHALL DISPLAY THE MODEL NUMBER AND THE RATED HEAT INPUT CAPACITY ON AN ACCESSIBLE PERMANENT RATING PLATE ON THIS EQUIPMENT.
[RULE 1147]

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6. THIS EQUIPMENT SHALL BE INSPECTED AND MAINTAINED PER MANUFACTURER'S OR DISTRIBUTOR'S SPECIFICATIONS. THE OWNER OR OPERATOR SHALL MAINTAIN ON SITE AT THE FACILITY A COPY OF THE MANUFACTURER'S, DISTRIBUTOR'S, INSTALLER'S, OR MAINTENANCE COMPANY'S WRITTEN INSTRUCTIONS AND A RECORD OF THE INSPECTION AND MAINTENANCE ACTIVITY FOR AT LEAST THREE YEARS AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1147]

7. THE OWNER OR OPERATOR SHALL MAINTAIN ON SITE AT THE FACILITY A COPY OF DISTRICT APPROVED SOURCE TEST REPORTS AND A COPY OF ALL DOCUMENTS IDENTIFYING THE UNIT'S RATED HEAT INPUT CAPACITY AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1147]

8. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL THE APPLICABLE REQUIREMENTS OF RULE 1147 AND RULE 1155.
[RULE 1147, RULE 1155]

9. THE FURNACE SHALL BE FIRED ON DIGESTER GAS, DIGESTER GAS/NATURAL GAS BLEND, OR NATURAL GAS ONLY.
[RULE 1303(a)(1)-BACT]

10. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE DRYER IS VENTED TO PRE-SEPARATOR, POLYCYCLONE, CONDENSER, VENTURI SCRUBBER, AND REGENERATIVE THERMAL OXIDIZER, WHICH ARE IN FULL OPERATION AND HAVE A VALID SCAQMD PERMIT.
[RULE 204, RULE 1303(a)(1)-BACT]

11. A NON-RESETTABLE, OPERATIONAL TOTALIZING FUEL INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN EACH FUEL SUPPLY LINE (DIGESTER GAS AND NATURAL GAS) TO THE FURNACE TO INDICATE AND RECORD THE FUEL USAGE IN CUBIC FEET. ONCE INSTALLED READINGS SHALL BE RECORDED AT LEAST MONTHLY.
[RULE 204, RULE 1303(b)(2)-Offsets]

12. THE TOTAL HEAT INPUT OF FUEL GAS COMBUSTED IN THE FURNACE SHALL NOT EXCEED 31 MILLION BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF DIGESTER GAS AND NATURAL GAS COMBUSTED IN THE FURNACE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST WEEKLY BTU CONTENT READING (FOR DIGESTER GAS).
[RULE 1303(a)(1)-BACT, RULE 1303(b)-Modeling and Offsets]

13. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY.
[RULE 204]

14. WEEKLY READINGS OF BTU CONTENT OF THE DIGESTER GAS DOWNSTREAM OF THE SULFUR REMOVAL SYSTEM AND UPSTREAM OF THE INLET GAS LINE TO THE FURNACE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE, 204, RULE 1303(b)(2)-Offsets]

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15. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR OF OCCURRENCE OR WITHIN ONE HOUR THE OWNER/OPERATOR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS BEING RELEASED INTO THE ATMOSPHERE.
[RULE 430]

16. A CONTINUOUS TEMPERATURE INDICATING AND RECORDING DEVICE WITH AN ACCURACY OF PLUS OR MINUS 5 DEGREES FAHRENHEIT SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE AIR DISCHARGE TEMPERATURE AT THE EXHAUST OF THE FURNACE (ENTRANCE TO THE DRYER).
[RULE 204, RULE 1147, RULE 1303(a)(1)-BACT]

17. WHENEVER THE FURNACE/DRYER IS IN OPERATION, THE AIR DISCHARGE TEMPERATURE AT THE EXHAUST OF THE FURNACE SHALL NOT EXCEED 1300 DEGREES FAHRENHEIT. THIS TEMPERATURE SHALL BE RECORDED ONCE EACH HOUR.
[RULE 204]

18. TWO SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED DOWNSTREAM OF THE DRYER AT THE CONDENSER INLET, 90 DEGREES FROM EACH OTHER, AND AT A LOCATION AT LEAST ONE DUCT DIAMETER UPSTREAM AND AT LEAST TWO DUCT DIAMETERS DOWNSTREAM OF ANY FLOW DISTURBANCES.
[RULE, 204, RULE 1303(b)(2)-Offsets]

19. MEASURING AND RECORDING DEVICES SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE PROCESSING RATE OF SLUDGE CAKE AND THE PRODUCTION RATE OF FINAL PRODUCT. THE QUANTITY OF SLUDGE CAKE AND THE QUANTITY OF FINAL PRODUCT PRODUCED SHALL BE MEASURED AND RECORDED EACH WEEK AND DAILY PRODUCTION RATES SHALL BE CALCULATED.
[RULE 204, RULE 1303(b)(2)-Offsets]

20. THE FOLLOWING EQUIPMENT SHALL NOT BE OPERATED UNLESS VENTED TO DUST COLLECTOR NO. 1, WHICH IS IN FULL OPERATION AND GOOD WORKING ORDER; RECYCLE BIN, VIBRATING SIZING SCREEN, ROLLER CRUSHER, RECYCLE SCREW CONVEYORS, RECYCLED PRODUCT BUCKET ELEVATOR, FINAL PRODUCT BUCKET ELEVATOR, PELLET COOLER, AND PNEUMATIC TRANSPORTER.
[RULE 204, RULE 1303(a)(1)-BACT]

21. THE TWO FINAL PRODUCT STORAGE SILOS SHALL NOT BE OPERATED UNLESS VENTED TO DUST COLLECTOR NO. 2 AND NO. 3, RESPECTIVELY, WHICH ARE IN FULL OPERATION AND GOOD WORKING ORDER.
[RULE 204, RULE 1303(a)(1)-BACT]

22. THE EXHAUST FLOWRATE OF DUST COLLECTOR NO. 1 SHALL NOT EXCEED 2,500 SCFM.
[RULE 204]

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23. THE EXHAUST FLOWRATE OF EACH DUST COLLECTOR NO. 2 AND NO. 3 SHALL NOT EXCEED 2,000 SCFM.
[RULE 204]

24. EACH DUST COLLECTOR SHALL BE EQUIPPED WITH A DIFFERENTIAL PRESSURE GAUGE SO AS TO INDICATE THE STATIC PRESSURE DIFFERENTIAL ACROSS THE BAGS IN INCHES OF WATER COLUMN. WHENEVER THE DIFFERENTIAL PRESSURE EXCEEDS THE MANUFACTURER'S RECOMMENDED PRESSURE, THE BAGS SHALL BE EITHER REPLACED OR CLEANED.
[RULE 204]

25. MANUAL SHAKERS SHALL NOT BE INSTALLED OR OPERATED ON THE DUST COLLECTORS.
[RULE 1155]

26. DUST COLLECTED BY THE PRESEPARATOR, POLYCYCLONE, AND DUST COLLECTORS SHALL BE DISCHARGED INTO CLOSED CONTAINERS OR BE RETURNED TO THE PROCESS THROUGH AN ENCLOSED CONVEYING SYSTEM.
[RULE 1155]

27. THE PM CONTROL EQUIPMENT SHALL BE OPERATED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S OPERATION AND MAINTENANCE MANUAL OR OTHER SIMILAR WRITTEN MATERIALS SUPPLIED BY THE MANUFACTURER OR DISTRIBUTOR OF THE PM CONTROL EQUIPMENT TO ENSURE THAT THE CONTROL DEVICE REMAINS IN PROPER OPERATING CONDITION.
[RULE 1155]

28. THE OPERATOR SHALL HAVE A PERSON TRAINED IN THE READING OF VISIBLE EMISSIONS PURSUANT TO EPA METHOD 22 CONDUCT A CONTINUOUS FIVE-MINUTE VISIBLE EMISSIONS OBSERVATION FOR EACH DUST COLLECTOR USING EPA METHOD 22 ONCE PER WEEK AND SHALL MAINTAIN RECORDS FOR EACH OBSERVATION AND ANY NECESSARY SUBSEQUENT ACTION(S) TAKEN TO ELIMINATE VISIBLE EMISSIONS. FOR PM AIR POLLUTION CONTROL DEVICES CONNECTED IN SERIES, THE READING OF VISIBLE EMISSIONS SHALL ONLY APPLY TO THE FINAL DEVICE EXHAUSTING TO THE ATMOSPHERE.
[RULE 1155]

29. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT SOURCE TEST(S) OF THIS EQUIPMENT UNDER THE FOLLOWING CONDITIONS:

    A. TESTING SHALL BE CONDUCTED BY AN APPROVED CONTRACTOR UNDER THE SCAQMD LABORATORY APPROVAL PROGRAM AND IN COMPLIANCE WITH SCAQMD RULE 304 (NO CONFLICT OF INTEREST).

    B. TWO COPIES OF A SOURCE TEST PROTOCOL SHALL BE SUBMITTED TO SCAQMD WITHIN 30 DAYS AFTER INITIAL START-UP AND SHALL BE APPROVED BY SCAQMD BEFORE THE TEST COMMENCES. THE PROTOCOL SHALL INCLUDE PROPOSED OPERATING CONDITIONS OF THE EQUIPMENT DURING THE TEST AND A DESCRIPTION OF ALL SAMPLING AND ANALYTICAL PROCEDURES TO BE USED.

    C. SOURCE TESTS SHALL BE CONDUCTED WITHIN 60 CALENDAR DAYS AFTER NORMAL OPERATION OF THE EQUIPMENT HAS BEEN ESTABLISHED BUT NO LATER THAN 180 DAYS AFTER INITIAL START-UP, UNLESS OTHERWISE APPROVED BY THE EXECUTIVE

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OFFICER. WRITTEN NOTICE OF THE TEST SHALL BE PROVIDED TO THE SCAQMD TEN (10) DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT.

D. THE SOURCE TESTS SHALL BE PERFORMED WHEN THE TEMPERATURE INDICATOR FOR THE FURNACE DISCHARGE INDICATES A TEMPERATURE NOT LESS THAN 850 DEGREES FAHRENHEIT AND THE FACILITY IS OPERATING AT A BIOSOLIDS THROUGHPUT RATE OF 80% OR HIGHER OF THE EQUIPMENT MAXIMUM CAPACITY.

[RULE 204, RULE 217, RULE 1303(b)(2)-Offsets]

30. TWO COPIES OF THE SOURCE TEST RESULTS SHALL BE SUBMITTED TO SCAQMD WITHIN 60 DAYS OF TESTING. THE REPORT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, THE FOLLOWING:

A. THE FURNACE AIR DISCHARGE TEMPERATURE AT THE DRYER INLET.
B. THE OPERATING TEMPERATURE OF THE REGENERATIVE THERMAL OXIDIZER UNDER A/N 535802.
C. THE MATERIAL THROUGHPUT RATE IN TONS PER HOUR AND PERCENT LOADING.
D. THE FINAL PRODUCT THROUGHPUT RATE IN TONS PER HOUR.
E. A MINIMUM OF TEN (10) DRIED SLUDGE PELLETS (5 AT THE INLET TO THE ROTARY DRYER AND 5 AT THE OUTLET OF THE ROTARY DRYER), COLLECTED OVER THE DURATION OF THE SOURCE TESTING, INDICATING THE CONCENTRATION OF TOTAL NON-METHANE ORGANIC COMPOUNDS IN THE SLUDGE PELLET PRIOR TO AND FOLLOWING DRYING. THE SLUDGE SOIL SHALL ALSO BE TESTED FOR SPECIATED ORGANICS.
F. THE EMISSIONS OF CARBON MONOXIDE, OXIDES OF NITROGEN, OXIDES OF SULFUR, TOTAL NON-METHANE ORGANIC COMPOUNDS (TNMOC), MEASURED AS METHANE, PM10, METALS, AMMONIA, AND SPECIATED TOXIC COMPOUNDS INCLUDING HALOGENATED AND NON-HALOGENATED ORGANIC COMPOUNDS AT THE INLET TO THE CONDENSER AND AT THE REGENERATIVE THERMAL OXIDIZER EXHAUST STACK.
G. THE EMISSIONS OF TOTAL NON-METHANE ORGANIC COMPOUNDS (TNMOC), MEASURED AS METHANE, PM10, AMMONIA, TOTAL REDUCED SULFUR AS H2S, AND SPECIATED TOXIC COMPOUNDS INCLUDING HALOGENATED AND NON-HALOGENATED ORGANIC COMPOUNDS AT ODOR CONTROL SYSTEM EXHAUST STACK UNDER A/N 535800.
H. THE EMISSIONS OF PM10 AT EACH BAGHOUSE EXHAUST OUTLET.
I. OXYGEN CONTENT, CARBON DIOXIDE CONTENT, NITROGEN CONTENT, MOISTURE CONTENT, AND TEMPERATURE AT THE INLET TO THE CONDENSER, AT THE REGENERATIVE THERMAL OXIDIZER EXHAUST STACK, AT THE OUTLET OF EACH BAGHOUSE, AND AT THE ODOR CONTROL SYSTEM EXHAUST STACK.
J. THE EXHAUST FLOW RATE IN DSCFM MEASURED AT THE INLET TO THE CONDENSER, AT THE REGENERATIVE THERMAL OXIDIZER EXHAUST STACK, AT THE OUTLET OF EACH BAGHOUSE, AND AT THE ODOR CONTROL SYSTEM EXHAUST STACK.
K. THE PRESSURE DIFFERENTIAL ACROSS EACH DUST COLLECTOR (NOS. 1, 2, AND 3).

THE REPORT SHALL PRESENT THE EMISSIONS DATA IN PARTS PER MILLION (DRY, 60F, AND 15% O2), POUNDS PER HOUR, AND POUNDS PER MILLION BTU.

[RULE 204, RULE 217, RULE 1147, RULE 1303(b)(2)-Offsets]

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31. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THIS EQUIPMENT IS NOT COMPLETE WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

32. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

Emissions and Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.1 GRAIN/SCF @ 12% CO2, RULE 409
NOx: 30 PPM @ 3% O2, DRY OR 0.036 LBS/MMBTU, PROCESS TEMPERATURE > 800°F, < 1200°F, RULE 1147
NOx: 60 PPM @ 3% O2, DRY OR 0.073 LBS/MMBTU, PROCESS TEMPERATURE ≥ 1200°F, RULE 1147

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO CONSTRUCT

A/N 535800
Granted TBD

Equipment Description:

ODOR CONTROL SYSTEM CONSISTING OF:

1. ODOR SCRUBBER, DANIEL MECHANICAL, MODEL CUSTOM, THREE STAGES, TWO STAGES IN SERIES, ONE IN STANDBY, EACH STAGE WITH VERTICAL COUNTER CURRENT FLOW WET PACKED TYPE, 27' H. X 12' DIAM., WITH A MINIMUM DEPTH OF 12 FEET OF JAEGGER TRI-PACK, VERANTIS TELLERETTES, PROPYLENE PACKING MEDIA OR EQUIVALENT, AND OUTLET MIST ELIMINATOR, WITH TWO 450-GPM RECIRCULATION PUMPS.

2. TWO STORAGE TOTES, SULFURIC ACID, 275 GALLONS EACH, WITH ASSOCIATED PUMPS.

3. STORAGE TANK, SODIUM HYDROXIDE, 5,200 GALLONS, WITH ASSOCIATED PUMPS.

4. STORAGE TANK, SODIUM HYPOCHLORITE, 8,500 GALLONS, WITH ASSOCIATED PUMPS.

5. EXHAUST SYSTEM WITH TWO 200 H.P. BLOWERS, 41,500 CFM CAPACITY, VENTING THE FOUL AIR COLLECTION SYSTEM, WHICH VENTS THE FOLLOWING EQUIPMENT:
   - A. PRIMARY SLUDGE, WASTE ACTIVATED SLUDGE, AND BLEND INLET WETWELLS.
   - B. PRIMARY SLUDGE AND WASTE ACTIVATED SLUDGE PUMP STATIONS.
   - C. FOUR THICKENING CENTRIFUGES.
   - D. TWO THICKENED SLUDGE WETWELLS.
   - E. THREE DEWATERING CENTRIFUGES.
   - F. SLUDGE SCREENINGS DUMPSTER ROOM.
   - G. TWO SLUDGE CAKE RECEIVING BINS.
   - H. SIX CONVEYORS.
   - I. THREE WET MATERIAL BINS.
   - J. TWO TRUCK LOADING AND UNLOADING BAYS.
   - K. THREE DRYER SYSTEM DUST COLLECTORS.
   - L. CAKE LOADOUT HOPPER.
   - M. TWO FATS, OILS, AND GREASE (FOG) STORAGE TANKS.

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]

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3. THIS EQUIPMENT SHALL BE OPERATED AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. THIS EQUIPMENT SHALL BE OPERATED WHENEVER THE EQUIPMENT IT VENTS IS IN OPERATION, HOWEVER, THIS EQUIPMENT MAY BE SHUT DOWN FOR A PERIOD NOT EXCEEDING 96 HOURS FOR MAINTENANCE. EACH SHUTDOWN MUST BE RECORDED WITH DATE, TIME, DURATION AND PURPOSE OF THE SHUTDOWN.
[RULE 204, RULE 402, RULE 1303(a)(1)-BACT]

5. WHEN THE EQUIPMENT IS SHUT DOWN FOR MAINTENANCE, PERIMETER MONITORING SHALL BE PERFORMED DOWN WIND OF THE SCRUBBER AND IN THE DIRECTION OF THE RESIDENTIAL AREAS AT LEAST ONCE EVERY 4 HOURS FROM 6:30 A.M. TO 4 P.M. UNTIL THE SCRUBBER IS IN OPERATION.
[RULE 402]

6. A CONTINUOUS FLOW INDICATOR SHALL BE INSTALLED AND MAINTAINED AT THE OUTLET OF THE ODOR CONTROL SYSTEM TO INDICATE THE FLOW RATE IN STANDARD CUBIC FEET PER MINUTE (SCFM). IN CASE A PRESSURE SENSOR DEVICE IS USED IN PLACE OF THE FLOW INDICATOR, A CONVERSION CHART SHALL BE POSTED ON THE EQUIPMENT TO INDICATE THE FLOW RATE (IN SCFM) CORRESPONDING TO THE PRESSURE READING. THE FLOW RATE AT THE INLET TO THE VAPOR CONTROL SYSTEM SHALL BE MEASURED AND RECORDED AT LEAST ONCE WITH EACH MONITORING VISIT WHILE THE EQUIPMENT IS OPERATING.
[RULE 204]

7. A FLOW METER INDICATING IN GALLONS PER MINUTE SHALL BE INSTALLED IN THE FRESH WATER MAKE-UP LINE ATTACHED TO THE SCRUBBER.
[RULE 204]

8. A FLOW INDICATING DEVICE SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE SCRUBBER SOLUTION FLOW RATE IN GALLONS PER MINUTE (GPM) IN EACH SCRUBBER SOLUTION RECIRCULATION LINE. BETWEEN 50 AND 500 GALLONS PER MINUTE OF SOLUTION SHALL BE RECIRCULATED THROUGH EACH SCRUBBER RECIRCULATION LINE WHEN THE ODOR CONTROL SYSTEM IS IN OPERATION. IN CASE A PRESSURE SENSOR DEVICE IS USED IN PLACE OF A FLOW INDICATOR, A CONVERSION CHART SHALL BE POSTED ON THE EQUIPMENT TO INDICATE THE FLOW RATE (GPM) CORRESPONDING TO THE PRESSURE READING. THE FLOW RATE SHALL BE MEASURED AND RECORDED AT EACH MONITORING EVENT, UNLESS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER.
[RULE 204]

9. SULFURIC ACID, SODIUM HYDROXIDE, AND SODIUM HYPOCHLORITE USAGE SHALL BE MAINTAINED. STORAGE TANK FILLING LOGS OR PURCHASE ORDERS FOR THE TANK SOLUTIONS MAY BE USED TO ESTIMATE THE DAILY USAGE.
[RULE 204]

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10. A GAUGE SHALL BE INSTALLED AND MAINTAINED TO INDICATE, IN INCHES OF WATER COLUMN, THE DIFFERENTIAL PRESSURE DROP ACROSS THE PACKED BED OF EACH ODOR SCRUBBER STAGE. THE DIFFERENTIAL PRESSURE DROP ACROSS PACKED BED OF EACH ODOR SCRUBBER SHALL BE MEASURED AND RECORDED ON A DAILY BASIS WHEN IN OPERATION. THE PRESSURE DROP READING SHALL NOT EXCEED 5.0 INCHES OF WATER COLUMN. [RULE 204]

11. A PH INDICATOR SHALL BE INSTALLED TO MONITOR THE PH OF THE RECIRCULATING SCRUBBER SOLUTION. THE RECIRCULATING SCRUBBER SOLUTION PH SHALL BE MAINTAINED BETWEEN 8.0 AND 13.0 WHILE SCRUBBER IS IN OPERATION. THE PH OF THE SCRUBBING SOLUTION SHALL BE MEASURED AND RECORDED ON A DAILY BASIS WHEN IN OPERATION. [RULE 204]

12. A SIGHT GLASS, INDICATING THE WATER HEIGHT IN THE SCRUBBER'S WATER SUMP, SHALL BE MAINTAINED AND KEPT CLEAN AT ALL TIMES. [RULE 204]

13. THE CONCENTRATION OF SULFUR COMPOUNDS MEASURED AS HYDROGEN SULFIDE (H2S) AT THE OUTLET OF THIS AIR POLLUTION CONTROL SYSTEM SHALL NOT EXCEED 1.0 PARTS PER MILLION BY VOLUME. [RULE 402]

14. THE CONCENTRATION OF HYDROGEN SULFIDE (H2S) AT THE OUTLET OF THE AIR POLLUTION CONTROL SYSTEM SHALL BE MEASURED AND RECORDED WEEKLY, USING DRAEGER TEST TUBES OR ANOTHER TEST METHOD APPROVED BY THE SCAQMD. [RULE 204, RULE 402]

15. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT SOURCE TEST(S) OF THIS EQUIPMENT UNDER THE FOLLOWING CONDITIONS:

    A. TESTING SHALL BE CONDUCTED BY AN APPROVED CONTRACTOR UNDER THE SCAQMD LABORATORY APPROVAL PROGRAM AND IN COMPLIANCE WITH SCAQMD RULE 304 (NO CONFLICT OF INTEREST).

    B. TWO COPIES OF A SOURCE TEST PROTOCOL SHALL BE SUBMITTED TO SCAQMD WITHIN 30 DAYS AFTER INITIAL START-UP AND SHALL BE APPROVED BY SCAQMD BEFORE THE TEST COMMENCES. THE PROTOCOL SHALL INCLUDE PROPOSED OPERATING CONDITIONS OF THE EQUIPMENT DURING THE TEST AND A DESCRIPTION OF ALL SAMPLING AND ANALYTICAL PROCEDURES TO BE USED.

    C. SOURCE TESTS SHALL BE CONDUCTED WITHIN 60 CALENDAR DAYS AFTER NORMAL OPERATION OF THE EQUIPMENT HAS BEEN ESTABLISHED BUT NO LATER THAN 180 DAYS AFTER INITIAL START-UP, UNLESS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER. WRITTEN NOTICE OF THE TEST SHALL BE PROVIDED TO THE SCAQMD TEN (10) DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT.

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D. THE SOURCE TESTS SHALL BE PERFORMED WHEN THE TEMPERATURE INDICATOR FOR THE FURNACE DISCHARGE INDICATES A TEMPERATURE NOT LESS THAN 850 DEGREES FAHRENHEIT AND THE FACILITY IS OPERATING AT A BIOSOLIDS THROUGHPUT RATE OF 80% OR HIGHER OF THE EQUIPMENT MAXIMUM CAPACITY.

[RULE 204, RULE 217, RULE 1303(b)(2)-Offsets]

16. TWO COPIES OF THE SOURCE TEST RESULTS SHALL BE SUBMITTED TO SCAQMD WITHIN 60 DAYS OF TESTING. THE REPORT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, THE FOLLOWING:

A. THE FURNACE AIR DISCHARGE TEMPERATURE AT THE DRYER INLET.
B. THE OPERATING TEMPERATURE OF THE REGENERATIVE THERMAL OXIDIZER UNDER A/N 535802.
C. THE MATERIAL THROUGHPUT RATE IN TONS PER HOUR AND PERCENT LOADING.
D. THE FINAL PRODUCT THROUGHPUT RATE IN TONS PER HOUR.
E. A MINIMUM OF TEN (10) DRIED SLUDGE PELLETS (5 AT THE INLET TO THE ROTARY DRYER AND 5 AT THE OUTLET OF THE ROTARY DRYER), COLLECTED OVER THE DURATION OF THE SOURCE TESTING, INDICATING THE CONCENTRATION OF TOTAL NON-METHANE ORGANIC COMPOUNDS IN THE SLUDGE PELLET PRIOR TO AND FOLLOWING DRYING. THE SLUDGE SOIL SHALL ALSO BE TESTED FOR SPECIATED ORGANICS.
F. THE EMISSIONS OF CARBON MONOXIDE, OXIDES OF NITROGEN, OXIDES OF SULFUR, TOTAL NON-METHANE ORGANIC COMPOUNDS (TNMOC), MEASURED AS METHANE, PM10, METALS, AMMONIA, AND SPECIATED TOXIC COMPOUNDS INCLUDING HALOGENATED AND NON-HALOGENATED ORGANIC COMPOUNDS AT THE INLET TO THE CONDENSER AND AT THE REGENERATIVE THERMAL OXIDIZER EXHAUST STACK.
G. THE EMISSIONS OF TOTAL NON-METHANE ORGANIC COMPOUNDS (TNMOC), MEASURED AS METHANE, PM10, AMMONIA, TOTAL REDUCED SULFUR AS H2S, AND SPECIATED TOXIC COMPOUNDS INCLUDING HALOGENATED AND NON-HALOGENATED ORGANIC COMPOUNDS AT ODOR CONTROL SYSTEM EXHAUST STACK UNDER A/N 535800.
H. THE EMISSIONS OF PM10 AT EACH BAGHOUSE EXHAUST OUTLET.
I. OXYGEN CONTENT, CARBON DIOXIDE CONTENT, NITROGEN CONTENT, MOISTURE CONTENT, AND TEMPERATURE AT THE INLET TO THE CONDENSER, AT THE REGENERATIVE THERMAL OXIDIZER EXHAUST STACK, AT THE OUTLET OF EACH BAGHOUSE, AND AT THE ODOR CONTROL SYSTEM EXHAUST STACK.
J. THE EXHAUST FLOW RATE IN DSCFM MEASURED AT THE INLET TO THE CONDENSER, AT THE REGENERATIVE THERMAL OXIDIZER EXHAUST STACK, AT THE OUTLET OF EACH BAGHOUSE, AND AT THE ODOR CONTROL SYSTEM EXHAUST STACK.
K. THE PRESSURE DIFFERENTIAL ACROSS EACH DUST COLLECTOR (NOS. 1, 2, AND 3).

THE REPORT SHALL PRESENT THE EMISSIONS DATA IN PARTS PER MILLION (DRY, 60F, AND 15% O2), POUNDS PER HOUR, AND POUNDS PER MILLION BTU.
[RULE 204, RULE 217, RULE 1147, RULE 1303(b)(2)-Offsets]

17. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THE EQUIPMENT IS NOT COMPLETED WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

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18. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO CONSTRUCT

A/N 535802
Granted TBD

Equipment Description:

AIR POLLUTION CONTROL SYSTEM, VENTING THE ROTARY DRUM DRYER UNDER A/N 535798, CONSISTING OF:

1. VENTURI WET SCRUBBER, DIAMOND FIBERGLASS, MODEL CUSTOM, WITH MIST ELIMINATOR, OPTIONAL SULFURIC ACID INJECTION SYSTEM, RECIRCULATION PUMPS, AND EXHAUST FAN, 6,000 CFM.

2. REGENERATIVE THERMAL OXIDIZER (RTO), GULF COAST ENVIRONMENTAL SYSTEMS, CUSTOM, THREE CHAMBERS WITH CERAMIC MEDIA BED, NATURAL GAS FIRED, 2,600,000 BTU/HR, LOW NOX BURNER, MAXON, MODEL KINEDIZER LE, COMBUSTION BLOWER, 564 CFM, AND A FULLY MODULATING TEMPERATURE CONTROL SYSTEM.

3. EXHAUST BLOWER, VENTING A ROTARY DRUM DRYER VIA A CONDENSER, MAXIMUM CAPACITY 11,000 CFM.

4. EXHAUST STACK, MINIMUM OF 79' 0" H. WITH NO RAIN CAP.

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 EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. AN IDENTIFICATION TAG OR NAMEPLATE SHALL BE DISPLAYED ON THE EQUIPMENT TO SHOW MANUFACTURER AND MODEL NUMBER OF THE EQUIPMENT. THE TAG(S) OR PLATE(S) SHALL BE ISSUED BY THE MANUFACTURER AND SHALL BE AFFIXED TO THE EQUIPMENT IN A PERMANENT AND CONSPICUOUS POSITION.
[RULE 204]

5. THE OWNER OR OPERATOR SHALL DISPLAY THE MODEL NUMBER AND THE RATED HEAT INPUT CAPACITY ON AN ACCESSIBLE PERMANENT RATING PLATE ON THIS EQUIPMENT.
[RULE 1147]

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6. THIS EQUIPMENT SHALL BE INSPECTED AND MAINTAINED PER MANUFACTURER'S OR DISTRIBUTOR'S SPECIFICATIONS. THE OWNER OR OPERATOR SHALL MAINTAIN ON SITE AT THE FACILITY A COPY OF THE MANUFACTURER'S, DISTRIBUTOR'S, INSTALLER'S, OR MAINTENANCE COMPANY'S WRITTEN INSTRUCTIONS AND A RECORD OF THE INSPECTION AND MAINTENANCE ACTIVITY FOR AT LEAST THREE YEARS AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1147]

7. THE OWNER OR OPERATOR SHALL MAINTAIN ON SITE AT THE FACILITY A COPY OF DISTRICT APPROVED SOURCE TEST REPORTS AND A COPY OF ALL DOCUMENTS IDENTIFYING THE UNIT'S RATED HEAT INPUT CAPACITY AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 1147]

8. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL THE APPLICABLE REQUIREMENTS OF RULE 1147 AND RULE 1155.
[RULE 1147, RULE 1155]

9. THE REGENERATIVE THERMAL OXIDIZER SHALL BE FIRED ON NATURAL GAS ONLY.
[RULE 1303(a)(1)-BACT]

10. A NON-RESETTABLE, OPERATIONAL TOTALIZING FUEL INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN THE NATURAL GAS SUPPLY LINE TO THE REGENERATIVE THERMAL OXIDIZER TO INDICATE AND RECORD THE FUEL USAGE IN CUBIC FEET. READINGS SHALL BE RECORDED AT LEAST MONTHLY.
[RULE 204, RULE 1303(b)(2)-Offsets]

11. THE TOTAL HEAT INPUT OF FUEL GAS COMBUSTED IN THE REGENERATIVE THERMAL OXIDIZER SHALL NOT EXCEED 2.6 MILLION BTU PER HOUR.
[RULE 1303(a)(1)-BACT, RULE 1303(b)-Modeling and Offsets]

12. AN EQUIPMENT SHUT-DOWN INTERLOCK SHALL BE INSTALLED AND MAINTAINED TO AUTOMATICALLY SHUT DOWN THE DRYER AND THE EXHAUST BLOWER FOR LOW OPERATING TEMPERATURES OF THE AFTERBURNER EXCEPT DURING STARTUPS.
[RULE 204]

13. A CONTINUOUS TEMPERATURE MEASURING AND RECORDING DEVICE WITH AN ACCURACY OF PLUS OR MINUS ONE PERCENT SHALL BE INSTALLED AND MAINTAINED AT THE OUTLET OF THE COMBUSTION CHAMBER OF THE REGENERATIVE THERMAL OXIDIZER.
[RULE 1303(a)(1)-BACT]

14. WHENEVER THE BIOSOLIDS ROTARY DRUM DRYER IS IN OPERATION, THE THERMAL OXIDIZER SHALL BE IN OPERATION WITH A TEMPERATURE AT THE OUTLET OF THE COMBUSTION CHAMBER NO LESS THAN 1500 DEGREES FAHRENHEIT.
[RULE 1303(a)(1)-BACT]

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15. TWO SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED DOWNSTREAM OF THE REGENERATIVE THERMAL OXIDIZER, 90 DEGREES FROM EACH OTHER, AND AT A LOCATION AT LEAST ONE DUCT DIAMETER UPSTREAM AND AT LEAST TWO DUCT DIAMETERS DOWNSTREAM OF ANY FLOW DISTURBANCES.
[RULE 204, RULE 1303(b)(2)-Offsets]

16. A FLOW METER INDICATING IN GALLONS PER MINUTE SHALL BE INSTALLED IN THE FRESH WATER MAKE-UP LINE TO THE SCRUBBER.
[RULE 204]

17. A FLOW INDICATING DEVICE SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE SCRUBBER SOLUTION FLOW RATE IN GALLONS PER MINUTE (GPM) IN EACH SCRUBBER SOLUTION RECIRCULATION LINE.
[RULE 204]

18. SULFURIC ACID USAGE SHALL BE MAINTAINED. STORAGE TANK FILLING LOGS OR PURCHASE ORDERS FOR THE SULFURIC ACID SOLUTION MAY BE USED TO ESTIMATE THE HOURLY USAGE.
[RULE 204]

19. A GAUGE SHALL BE INSTALLED AND MAINTAINED TO INDICATE, IN INCHES OF WATER COLUMN, THE DIFFERENTIAL PRESSURE DROP ACROSS THE VENTURI THROAT. THE PRESSURE DROP READING SHALL BE MAINTAINED BETWEEN 13 AND 26 INCHES OF WATER COLUMN.
[RULE 204]

20. A PH INDICATOR SHALL BE INSTALLED TO MONITOR THE PH OF THE RECIRCULATING SCRUBBER SOLUTION. THE RECIRCULATING SCRUBBER SOLUTION PH SHALL BE MAINTAINED BETWEEN 3.0 AND 6.0 WHILE SCRUBBER AND SULFURIC ACID INJECTION SYSTEM ARE IN OPERATION.
[RULE 204]

21. A CONTINUOUS COMBUSTION CHAMBER TEMPERATURE MONITORING AND RECORDING SYSTEM SHALL BE INSTALLED AND MAINTAINED PURSUANT TO THE OPERATION AND MAINTENANCE REQUIREMENTS SPECIFIED IN 40 CFR PART 64.7. SUCH A SYSTEM SHALL HAVE AN ACCURACY OF WITHIN ± 1% OF THE TEMPERATURE BEING MONITORED AND SHALL BE INSPECTED, MAINTAINED, AND CALIBRATED ON AN ANNUAL BASIS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

FOR THE PURPOSE OF THIS CONDITION, A DEVIATION SHALL BE DEFINED AS WHEN THE COMBUSTION CHAMBER TEMPERATURE OF LESS THAN 1500 DEGREES FAHRENHEIT, AVERAGED OVER 15 MINUTES, OCCURS DURING NORMAL OPERATION EXCEPT DURING STARTUPS OR SHUTDOWNS, WHICH SHALL NOT EXCEED 30 MINUTES PER EVENT. THE OPERATOR SHALL REVIEW THE RECORDS OF COMBUSTION CHAMBER TEMPERATURE ON A DAILY BASIS TO DETERMINE IF A DEVIATION OCCURS OR SHALL INSTALL AN ALARM SYSTEM TO ALERT THE OPERATOR WHEN A DEVIATION OCCURS.

ALL DEVIATIONS SHALL BE REPORTED TO THE SCAQMD ON A SEMI-ANNUAL BASIS PURSUANT TO THE REQUIREMENTS SPECIFIED IN 40 CFR PART 64.9 AND CONDITION NOS. 22 AND 23 IN SECTION K. OF THIS PERMIT.

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FOR EACH SEMI-ANNUAL REPORTING PERIOD SPECIFIED IN CONDITION NO. 23 IN SECTION K, WHENEVER A DEVIATION OCCURS FROM THE EXHAUST TEMPERATURE, THE OPERATOR SHALL TAKE IMMEDIATE CORRECTIVE ACTION UPON DETECTION, AND KEEP RECORDS OF THE DURATION AND CAUSE (INCLUDING UNKNOWN CAUSE, IF APPLICABLE) OF THE DEVIATION AND THE CORRECTIVE ACTION TAKEN.

A SEMI-ANNUAL MONITORING REPORT SHALL BE SUBMITTED TO SCAQMD, WHICH SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE TOTAL OPERATING TIME OF THIS EQUIPMENT AND THE TOTAL ACCUMULATED DURATION OF ALL DEVIATIONS FOR EACH SEMI-ANNUAL REPORTING PERIOD.

THE OWNER OR OPERATOR SHALL SUBMIT AN APPLICATION WITH A QUALITY IMPROVEMENT PLAN (QIP) IN ACCORDANCE WITH 40 CFR PART 64.8 TO SCAQMD IF AN ACCUMULATION OF DEVIATIONS FOR PARAMETERS MONITORED EXCEEDS 5% DURATION OF THIS EQUIPMENT'S TOTAL OPERATING TIME FOR ANY SEMI-ANNUAL REPORTING PERIOD SPECIFIED IN CONDITION NO. 23 IN SECTION K OF THIS PERMIT. THE REQUIRED QIP SHALL BE SUBMITTED TO THE SCAQMD WITHIN 90 CALENDAR DAYS AFTER THE DUE DATE OF THE SEMI-ANNUAL MONITORING REPORT.
[RULE 3004(a), 40 CFR 64]

22. THE PM CONTROL EQUIPMENT SHALL BE OPERATED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S OPERATION AND MAINTENANCE MANUAL OR OTHER SIMILAR WRITTEN MATERIALS SUPPLIED BY THE MANUFACTURER OR DISTRIBUTOR OF THE PM CONTROL EQUIPMENT TO ENSURE THAT THE CONTROL DEVICE REMAINS IN PROPER OPERATING CONDITION.
[RULE 1155]

23. THE OPERATOR SHALL HAVE A PERSON TRAINED IN THE READING OF VISIBLE EMISSIONS PURSUANT TO EPA METHOD 22 CONDUCT A CONTINUOUS FIVE-MINUTE VISIBLE EMISSIONS OBSERVATION FOR EACH DUST COLLECTOR USING EPA METHOD 22 ONCE PER WEEK AND SHALL MAINTAIN RECORDS FOR EACH OBSERVATION AND ANY NECESSARY SUBSEQUENT ACTION(S) TAKEN TO ELIMINATE VISIBLE EMISSIONS. FOR PM AIR POLLUTION CONTROL DEVICES CONNECTED IN SERIES, THE READING OF VISIBLE EMISSIONS SHALL ONLY APPLY TO THE FINAL DEVICE EXHAUSTING TO THE ATMOSPHERE.
[RULE 1155]

24. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT SOURCE TEST(S) OF THIS EQUIPMENT UNDER THE FOLLOWING CONDITIONS:

    A. TESTING SHALL BE CONDUCTED BY AN APPROVED CONTRACTOR UNDER THE SCAQMD LABORATORY APPROVAL PROGRAM AND IN COMPLIANCE WITH SCAQMD RULE 304 (NO CONFLICT OF INTEREST).

    B. TWO COPIES OF A SOURCE TEST PROTOCOL SHALL BE SUBMITTED TO SCAQMD WITHIN 30 DAYS AFTER INITIAL START-UP AND SHALL BE APPROVED BY SCAQMD BEFORE THE TEST COMMENCES. THE PROTOCOL SHALL INCLUDE PROPOSED OPERATING CONDITIONS OF THE EQUIPMENT DURING THE TEST AND A DESCRIPTION OF ALL SAMPLING AND ANALYTICAL PROCEDURES TO BE USED.

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C. SOURCE TESTS SHALL BE CONDUCTED WITHIN 60 CALENDAR DAYS AFTER NORMAL OPERATION OF THE EQUIPMENT HAS BEEN ESTABLISHED BUT NO LATER THAN 180 DAYS AFTER INITIAL START-UP, UNLESS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER. WRITTEN NOTICE OF THE TEST SHALL BE PROVIDED TO THE SCAQMD TEN (10) DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT.

D. THE SOURCE TESTS SHALL BE PERFORMED WHEN THE TEMPERATURE INDICATOR FOR THE FURNACE DISCHARGE INDICATES A TEMPERATURE NOT LESS THAN 850 DEGREES FAHRENHEIT AND THE FACILITY IS OPERATING AT A BIOSOLIDS THROUGHPUT RATE OF 80% OR HIGHER OF THE EQUIPMENT MAXIMUM CAPACITY.

[RULE 204, RULE 217, RULE 1303(b)(2)-Offsets]

25. TWO COPIES OF THE SOURCE TEST RESULTS SHALL BE SUBMITTED TO SCAQMD WITHIN 60 DAYS OF TESTING. THE REPORT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, THE FOLLOWING:

A. THE FURNACE AIR DISCHARGE TEMPERATURE AT THE DRYER INLET.
B. THE OPERATING TEMPERATURE OF THE REGENERATIVE THERMAL OXIDIZER UNDER A/N 535802.
C. THE MATERIAL THROUGHPUT RATE IN TONS PER HOUR AND PERCENT LOADING.
D. THE FINAL PRODUCT THROUGHPUT RATE IN TONS PER HOUR.
E. A MINIMUM OF TEN (10) DRIED SLUDGE PELLETS (5 AT THE INLET TO THE ROTARY DRYER AND 5 AT THE OUTLET OF THE ROTARY DRYER), COLLECTED OVER THE DURATION OF THE SOURCE TESTING, INDICATING THE CONCENTRATION OF TOTAL NON-METHANE ORGANIC COMPOUNDS IN THE SLUDGE PELLET PRIOR TO AND FOLLOWING DRYING. THE SLUDGE SOIL SHALL ALSO BE TESTED FOR SPECIATED ORGANICS.
F. THE EMISSIONS OF CARBON MONOXIDE, OXIDES OF NITROGEN, OXIDES OF SULFUR, TOTAL NON-METHANE ORGANIC COMPOUNDS (TNMOC), MEASURED AS METHANE, PM10, METALS, AMMONIA, AND SPECIATED TOXIC COMPOUNDS INCLUDING HALOGENATED AND NON-HALOGENATED ORGANIC COMPOUNDS AT THE INLET TO THE CONDENSER AND AT THE REGENERATIVE THERMAL OXIDIZER EXHAUST STACK.
G. THE EMISSIONS OF TOTAL NON-METHANE ORGANIC COMPOUNDS (TNMOC), MEASURED AS METHANE, PM10, AMMONIA, TOTAL REDUCED SULFUR AS H2S, AND SPECIATED TOXIC COMPOUNDS INCLUDING HALOGENATED AND NON-HALOGENATED ORGANIC COMPOUNDS AT ODOR CONTROL SYSTEM EXHAUST STACK UNDER A/N 535800.
H. THE EMISSIONS OF PM10 AT EACH BAGHOUSE EXHAUST OUTLET.
I. OXYGEN CONTENT, CARBON DIOXIDE CONTENT, NITROGEN CONTENT, MOISTURE CONTENT, AND TEMPERATURE AT THE INLET TO THE CONDENSER, AT THE REGENERATIVE THERMAL OXIDIZER EXHAUST STACK, AT THE OUTLET OF EACH BAGHOUSE, AND AT THE ODOR CONTROL SYSTEM EXHAUST STACK.
J. THE EXHAUST FLOW RATE IN DSCFM MEASURED AT THE INLET TO THE CONDENSER, AT THE REGENERATIVE THERMAL OXIDIZER EXHAUST STACK, AT THE OUTLET OF EACH BAGHOUSE, AND AT THE ODOR CONTROL SYSTEM EXHAUST STACK.
K. THE PRESSURE DIFFERENTIAL ACROSS EACH DUST COLLECTOR (NOS. 1, 2, AND 3).

THE REPORT SHALL PRESENT THE EMISSIONS DATA IN PARTS PER MILLION (DRY, 60F, AND 15% O2), POUNDS PER HOUR, AND POUNDS PER MILLION BTU.
[RULE 204, RULE 217, RULE 1147, RULE 1303(b)(2)-Offsets]

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IRVINE RANCH WATER DISTRICT

26. THE EXIT TO THE EXHAUST STACK SHALL HAVE A MINIMUM OF 79'-0" ABOVE GRADE. [RULE 204]

27. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THIS EQUIPMENT IS NOT COMPLETE WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER. [RULE 205]

28. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST. [RULE 204, RULE 3004(a)]

Emissions and Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.1 GRAIN/SCF @ 12% CO2, RULE 409
NOx: 60 PPM @ 3% O2, DRY OR 0.073 LBS/MMBTU, PROCESS TEMPERATURE ≥ 1200°F, RULE 1147
NOx: 1.31 LBS/HR, RULE 1303-Offsets
VOC: 0.55 LBS/HR, RULE 1303-Offsets

Periodic Monitoring:

30. THE OPERATOR SHALL CONDUCT SOURCE TEST(S) UNDER NORMAL OPERATING CONDITIONS IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

A. THE TEST(S) SHALL BE CONDUCTED AT LEAST ONCE EVERY 60 CALENDAR MONTHS.

B. THE TEST(S) SHALL BE CONDUCTED TO DETERMINE THE EMISSION OF OXIDES OF NITROGEN (NOx) AND VOLATILE ORGANIC COMPOUNDS (VOC) IN POUNDS PER HOUR.

[RULE 1303-Offsets, RULE 3004(a)]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO CONSTRUCT

A/N 535803
Granted TBD

Equipment Description:

MICROTURBINE SYSTEM, NO. 1, CONSISTING OF:

1. DIGESTER GAS FUEL TREATMENT SYSTEM (COMMON TO MICROTURBINE SYSTEM NOS. 2, 3, 4, AND 5), CONSISTING OF:
   A. SILOXANE REMOVAL VESSELS.
   B. NATURAL GAS FUEL BLENDING SYSTEM.
   C. GAS COMPRESSORS.
   D. AFTERCOOLER.

2. GAS MICROTURBINE, CAPSTONE, MODEL CR200, 2,280,000 BTU PER HOUR, DIGESTER GAS, DIGESTER GAS/NATURAL GAS BLEND, OR NATURAL GAS FIRED, DRIVING A 200 KW ELECTRICAL GENERATOR.

3. HEAT RECOVERY UNIT.

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 EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
   [RULE 204]

4. THIS EQUIPMENT SHALL BE FIRED ON DIGESTER GAS, DIGESTER GAS/NATURAL GAS BLEND, OR NATURAL GAS.
   [RULE 204, RULE 1303(a)(1)-BACT]

5. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULE 431.1.
   [RULE 431.1]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

6. SAMPLING PORTS SHALL BE PROVIDED IN THE MICROTURBINE HEAT RECOVERY UNIT EXHAUST STACK, 8-10 DUCT DIAMETERS DOWNSTREAM AND 2 DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, TWO SAMPLING PORTS AT 90 DEGREES APART SHALL BE PROVIDED AND SHALL CONSIST OF TWO WELDED NIPPLES WITH CAPS. THE OWNER/OPERATOR SHALL PROVIDE ADEQUATE AND SAFE ACCESS TO THE TEST PORTS. [RULE 204, RULE 217]

7. A NON-RESETTABLE, OPERATIONAL TOTALIZING FUEL INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN EACH FUEL SUPPLY LINE (DIGESTER GAS AND NATURAL GAS LINES) TO THIS SYSTEM TO INDICATE AND RECORD THE FUEL USAGE IN CUBIC FEET. ONCE INSTALLED READINGS SHALL BE RECORDED AT LEAST MONTHLY. [RULE 204, RULE 1303(b)(2)-Offsets]

8. A SAMPLING PORT SHALL BE INSTALLED AND MAINTAINED AT THE INLET DIGESTER GAS SUPPLY LINE TO THE MICROTURBINE TO ALLOW THE COLLECTION OF A DIGESTER GAS SAMPLE AND FOR FLOW RATE TESTING. [RULE 204, RULE 217]

9. TOTAL HEAT INPUT OF FUEL GAS COMBUSTED IN THE MICROTURBINE SHALL NOT EXCEED 2.28 MILLION BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS COMBUSTED IN THE MICROTURBINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST WEEKLY BTU CONTENT READING. [RULE 1303(a)(1)-BACT, RULE 1303(b)-Modeling and Offsets]

10. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY. [RULE 204]

11. WEEKLY READINGS OF THE BTU CONTENT OF THE DIGESTER GAS SUPPLY LINE TO THE MICROTURBINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED. [RULE, 204, RULE 1303(b)(2)-Offsets]

12. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR OF OCCURRENCE OR WITHIN ONE HOUR THE OWNER/OPERATOR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS BEING RELEASED INTO THE ATMOSPHERE. [RULE 430]

13. THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT PERFORMANCE TESTS FOR THE MICROTURBINE WITHIN 180 DAYS OF INITIAL OPERATION, OR AS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, UNDER THIS PERMIT UNDER THE FOLLOWING CONDITIONS:

    A. A TEST PROTOCOL SHALL BE SUBMITTED TO SCAQMD NO LATER THAN 60 DAYS BEFORE THE PROPOSED TEST DATE AND SHALL BE APPROVED BY SCAQMD BEFORE THE TEST COMMENCES. AT A MINIMUM, THE TEST PROTOCOL SHOULD INCLUDE THE FOLLOWING:

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

I. A DESCRIPTION OF THE EQUIPMENT TESTED INCLUDE A PROCESS SCHEMATIC INDICATING SAMPLING LOCATIONS/PORTS, SAMPLING DUCT/STACK DIMENSIONS ALONG WITH UPSTREAM AND DOWNSTREAM FLOW DISTURBANCES (E.G. ELBOWS, TEES AND FANS).

II. A BRIEF PROCESS DESCRIPTION.

III. OPERATING CONDITIONS UNDER WHICH THE TEST WILL BE PERFORMED.

IV. A DESCRIPTION OF THE SAMPLING AND ANALYTICAL METHODS FOR EACH CONSTITUENT MEASURED.

V. COMPLETE CALCULATIONS FOR FLOW RATES, CONCENTRATIONS, EMISSION RATES AND EFFICIENCIES.

VI. A DESCRIPTION OF THE CALIBRATION AND QUALITY ASSURANCE PROCEDURES.

VII. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.

VIII. TEMPORARY ENCLOSURES FOR SOURCE TESTING PURPOSES SHALL BE CONSTRUCTED FOR THE EQUIPMENT AS NEEDED.

IX. A STATEMENT DETERMINING THAT THE TESTING LABORATORY QUALIFIES AS AN "INDEPENDENT TESTING LABORATORY" UNDER RULE 304 (NO CONFLICT OF INTEREST) AND SIGNED BY THE RESPONSIBLE AUTHORITY.

B. THE SCAQMD SHALL BE NOTIFIED OF THE DATE AND THE TIME OF THE TEST AT LEAST 10 CALENDAR DAYS PRIOR TO THE TEST OR WITHIN THE TIME PERIOD AGREED UPON BY THE DISTRICT ENGINEER, SO THAT AN OBSERVER MAY BE PRESENT.

C. THE COMPLETE WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE FURNISHED TO THE SCAQMD WITHIN SIXTY (60) DAYS AFTER TESTING IS COMPLETED.

[RULE 204, RULE 217, RULE 1303(b)(2)-Offsets, RULE 1401]

14. THE PERFORMANCE TESTS FOR THE MICROTURBINE SHALL INCLUDE, BUT MAY NOT BE LIMITED TO:

A. CARBON MONOXIDE (EXHAUST ONLY).
B. OXIDES OF NITROGEN (EXHAUST ONLY).
C. TOTAL NON-METHANE ORGANICS.
D. TOTAL (PM10) PARTICULATES (EXHAUST ONLY).
E. SPECIATED ORGANICS.
F. AMMONIA.
G. TOTAL SULFUR COMPOUNDS AS H2S.
H. OXYGEN.
I. NITROGEN.

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

J. MOISTURE CONTENT.
K. TEMPERATURE.
L. BTU VALUE OF DIGESTER GAS.
M. THE SCFM AND ACFM AT THE OUTLET OF THE MICROTURBINE.
N. THE FUEL TYPE AND CONSUMPTION RATE, IN STANDARD CUBIC FEET PER HOUR, DURING THE TESTING PERIOD.

ALL COMPOUNDS SHALL BE TESTED AND RESULTS REPORTED IN UNITS OF PPMV AND LBS/HR, UNLESS OTHERWISE NOTED.
[RULE 204, RULE 1303(b)(2)-Offsets, RULE 1401]

15. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THIS EQUIPMENT IS NOT COMPLETE WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

16. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

Emissions and Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO: 10 PPMV @15% O2, DRY, FOR NATURAL GAS, RULE 1303(a)(1)-LAER/BACT
CO: 130 PPMV @15% O2, DRY, FOR DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT
NOx: 9 PPMV @15% O2, DRY, FOR NATURAL GAS AND DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT
VOC: 7 PPMV @15% O2, DRY, FOR NATURAL GAS AND DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO CONSTRUCT

A/N 535804
Granted TBD

Equipment Description:

MICROTURBINE SYSTEM, NO. 2, CONSISTING OF:

1. DIGESTER GAS FUEL TREATMENT SYSTEM (COMMON TO MICROTURBINE SYSTEM NOS. 1, 3, 4, AND 5), CONSISTING OF:
   A. SILOXANE REMOVAL VESSELS.
   B. NATURAL GAS FUEL BLENDING SYSTEM.
   C. GAS COMPRESSORS.
   D. AFTERCOOLER.

2. GAS MICROTURBINE, CAPSTONE, MODEL CR200, 2,280,000 BTU PER HOUR, DIGESTER GAS, DIGESTER GAS/NATURAL GAS BLEND, OR NATURAL GAS FIRED, DRIVING A 200 KW ELECTRICAL GENERATOR.

3. HEAT RECOVERY UNIT.

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 EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
   [RULE 204]

4. THIS EQUIPMENT SHALL BE FIRED ON DIGESTER GAS, DIGESTER GAS/NATURAL GAS BLEND, OR NATURAL GAS.
   [RULE 204, RULE 1303(a)(1)-BACT]

5. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULE 431.1.
   [RULE 431.1]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

6. SAMPLING PORTS SHALL BE PROVIDED IN THE MICROTURBINE HEAT RECOVERY UNIT EXHAUST STACK, 8-10 DUCT DIAMETERS DOWNSTREAM AND 2 DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, TWO SAMPLING PORTS AT 90 DEGREES APART SHALL BE PROVIDED AND SHALL CONSIST OF TWO WELDED NIPPLES WITH CAPS. THE OWNER/OPERATOR SHALL PROVIDE ADEQUATE AND SAFE ACCESS TO THE TEST PORTS.
[RULE 204, RULE 217]

7. A NON-RESETTABLE, OPERATIONAL TOTALIZING FUEL INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN EACH FUEL SUPPLY LINE (DIGESTER GAS AND NATURAL GAS LINES) TO THIS SYSTEM TO INDICATE AND RECORD THE FUEL USAGE IN CUBIC FEET. ONCE INSTALLED READINGS SHALL BE RECORDED AT LEAST MONTHLY.
[RULE 204, RULE 1303(b)(2)-Offsets]

8. A SAMPLING PORT SHALL BE INSTALLED AND MAINTAINED AT THE INLET DIGESTER GAS SUPPLY LINE TO THE MICROTURBINE TO ALLOW THE COLLECTION OF A DIGESTER GAS SAMPLE AND FOR FLOW RATE TESTING.
[RULE 204, RULE 217]

9. TOTAL HEAT INPUT OF FUEL GAS COMBUSTED IN THE MICROTURBINE SHALL NOT EXCEED 2.28 MILLION BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS COMBUSTED IN THE MICROTURBINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST WEEKLY BTU CONTENT READING.
[RULE 1303(a)(1)-BACT, RULE 1303(b)-Modeling and Offsets]

10. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY.
[RULE 204]

11. WEEKLY READINGS OF THE BTU CONTENT OF THE DIGESTER GAS SUPPLY LINE TO THE MICROTURBINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE, 204, RULE 1303(b)(2)-Offsets]

12. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR OF OCCURRENCE OR WITHIN ONE HOUR THE OWNER/OPERATOR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS BEING RELEASED INTO THE ATMOSPHERE.
[RULE 430]

13. THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT PERFORMANCE TESTS FOR THE MICROTURBINE WITHIN 180 DAYS OF INITIAL OPERATION, OR AS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, UNDER THIS PERMIT UNDER THE FOLLOWING CONDITIONS:

    A. A TEST PROTOCOL SHALL BE SUBMITTED TO SCAQMD NO LATER THAN 60 DAYS BEFORE THE PROPOSED TEST DATE AND SHALL BE APPROVED BY SCAQMD BEFORE THE TEST COMMENCES. AT A MINIMUM, THE TEST PROTOCOL SHOULD INCLUDE THE FOLLOWING:

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

I. A DESCRIPTION OF THE EQUIPMENT TESTED INCLUDE A PROCESS SCHEMATIC INDICATING SAMPLING LOCATIONS/PORTS, SAMPLING DUCT/STACK DIMENSIONS ALONG WITH UPSTREAM AND DOWNSTREAM FLOW DISTURBANCES (E.G. ELBOWS, TEES AND FANS).

II. A BRIEF PROCESS DESCRIPTION.

III. OPERATING CONDITIONS UNDER WHICH THE TEST WILL BE PERFORMED.

IV. A DESCRIPTION OF THE SAMPLING AND ANALYTICAL METHODS FOR EACH CONSTITUENT MEASURED.

V. COMPLETE CALCULATIONS FOR FLOW RATES, CONCENTRATIONS, EMISSION RATES AND EFFICIENCIES.

VI. A DESCRIPTION OF THE CALIBRATION AND QUALITY ASSURANCE PROCEDURES.

VII. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.

VIII. TEMPORARY ENCLOSURES FOR SOURCE TESTING PURPOSES SHALL BE CONSTRUCTED FOR THE EQUIPMENT AS NEEDED.

IX. A STATEMENT DETERMINING THAT THE TESTING LABORATORY QUALIFIES AS AN "INDEPENDENT TESTING LABORATORY" UNDER RULE 304 (NO CONFLICT OF INTEREST) AND SIGNED BY THE RESPONSIBLE AUTHORITY.

B. THE SCAQMD SHALL BE NOTIFIED OF THE DATE AND THE TIME OF THE TEST AT LEAST 10 CALENDAR DAYS PRIOR TO THE TEST OR WITHIN THE TIME PERIOD AGREED UPON BY THE DISTRICT ENGINEER, SO THAT AN OBSERVER MAY BE PRESENT.

C. THE COMPLETE WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE FURNISHED TO THE SCAQMD WITHIN SIXTY (60) DAYS AFTER TESTING IS COMPLETED.

[RULE 204, RULE 217, RULE 1303(b)(2)-Offsets, RULE 1401]

14. THE PERFORMANCE TESTS FOR THE MICROTURBINE SHALL INCLUDE, BUT MAY NOT BE LIMITED TO:

A. CARBON MONOXIDE (EXHAUST ONLY).
B. OXIDES OF NITROGEN (EXHAUST ONLY).
C. TOTAL NON-METHANE ORGANICS.
D. TOTAL (PM10) PARTICULATES (EXHAUST ONLY).
E. SPECIATED ORGANICS.
F. AMMONIA.
G. TOTAL SULFUR COMPOUNDS AS H2S.
H. OXYGEN.
I. NITROGEN.

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

J. MOISTURE CONTENT.
K. TEMPERATURE.
L. BTU VALUE OF DIGESTER GAS.
M. THE SCFM AND ACFM AT THE OUTLET OF THE MICROTURBINE.
N. THE FUEL TYPE AND CONSUMPTION RATE, IN STANDARD CUBIC FEET PER HOUR, DURING THE TESTING PERIOD.

ALL COMPOUNDS SHALL BE TESTED AND RESULTS REPORTED IN UNITS OF PPMV AND LBS/HR, UNLESS OTHERWISE NOTED.
[RULE 204, RULE 1303(b)(2)-Offsets, RULE 1401]

15. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THIS EQUIPMENT IS NOT COMPLETE WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

16. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

Emissions and Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO: 10 PPMV @15% O2, DRY, FOR NATURAL GAS, RULE 1303(a)(1)-LAER/BACT
CO: 130 PPMV @15% O2, DRY, FOR DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT
NOx: 9 PPMV @15% O2, DRY, FOR NATURAL GAS AND DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT
VOC: 7 PPMV @15% O2, DRY, FOR NATURAL GAS AND DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO CONSTRUCT

A/N 535805
Granted TBD

Equipment Description:

MICROTURBINE SYSTEM, NO. 3, CONSISTING OF:

1. DIGESTER GAS FUEL TREATMENT SYSTEM (COMMON TO MICROTURBINE SYSTEM NOS. 1, 2, 4, AND 5), CONSISTING OF:
   A. SILOXANE REMOVAL VESSELS.
   B. NATURAL GAS FUEL BLENDING SYSTEM.
   C. GAS COMPRESSORS.
   D. AFTERCOOLER.

2. GAS MICROTURBINE, CAPSTONE, MODEL CR200, 2,280,000 BTU PER HOUR, DIGESTER GAS, DIGESTER GAS/NATURAL GAS BLEND, OR NATURAL GAS FIRED, DRIVING A 200 KW ELECTRICAL GENERATOR.

3. HEAT RECOVERY UNIT.

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 EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
   [RULE 204]

4. THIS EQUIPMENT SHALL BE FIRED ON DIGESTER GAS, DIGESTER GAS/NATURAL GAS BLEND, OR NATURAL GAS.
   [RULE 204, RULE 1303(a)(1)-BACT]

5. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULE 431.1.
   [RULE 431.1]

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

6. SAMPLING PORTS SHALL BE PROVIDED IN THE MICROTURBINE HEAT RECOVERY UNIT EXHAUST STACK, 8-10 DUCT DIAMETERS DOWNSTREAM AND 2 DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, TWO SAMPLING PORTS AT 90 DEGREES APART SHALL BE PROVIDED AND SHALL CONSIST OF TWO WELDED NIPPLES WITH CAPS. THE OWNER/OPERATOR SHALL PROVIDE ADEQUATE AND SAFE ACCESS TO THE TEST PORTS. [RULE 204, RULE 217]

7. A NON-RESETTABLE, OPERATIONAL TOTALIZING FUEL INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN EACH FUEL SUPPLY LINE (DIGESTER GAS AND NATURAL GAS LINES) TO THIS SYSTEM TO INDICATE AND RECORD THE FUEL USAGE IN CUBIC FEET. ONCE INSTALLED READINGS SHALL BE RECORDED AT LEAST MONTHLY. [RULE 204, RULE 1303(b)(2)-Offsets]

8. A SAMPLING PORT SHALL BE INSTALLED AND MAINTAINED AT THE INLET DIGESTER GAS SUPPLY LINE TO THE MICROTURBINE TO ALLOW THE COLLECTION OF A DIGESTER GAS SAMPLE AND FOR FLOW RATE TESTING. [RULE 204, RULE 217]

9. TOTAL HEAT INPUT OF FUEL GAS COMBUSTED IN THE MICROTURBINE SHALL NOT EXCEED 2.28 MILLION BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS COMBUSTED IN THE MICROTURBINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST WEEKLY BTU CONTENT READING. [RULE 1303(a)(1)-BACT, RULE 1303(b)-Modeling and Offsets]

10. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY. [RULE 204]

11. WEEKLY READINGS OF THE BTU CONTENT OF THE DIGESTER GAS SUPPLY LINE TO THE MICROTURBINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED. [RULE, 204, RULE 1303(b)(2)-Offsets]

12. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR OF OCCURRENCE OR WITHIN ONE HOUR THE OWNER/OPERATOR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS BEING RELEASED INTO THE ATMOSPHERE. [RULE 430]

13. THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT PERFORMANCE TESTS FOR THE MICROTURBINE WITHIN 180 DAYS OF INITIAL OPERATION, OR AS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, UNDER THIS PERMIT UNDER THE FOLLOWING CONDITIONS:

    A. A TEST PROTOCOL SHALL BE SUBMITTED TO SCAQMD NO LATER THAN 60 DAYS BEFORE THE PROPOSED TEST DATE AND SHALL BE APPROVED BY SCAQMD BEFORE THE TEST COMMENCES. AT A MINIMUM, THE TEST PROTOCOL SHOULD INCLUDE THE FOLLOWING:

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

I. A DESCRIPTION OF THE EQUIPMENT TESTED INCLUDE A PROCESS SCHEMATIC INDICATING SAMPLING LOCATIONS/PORTS, SAMPLING DUCT/STACK DIMENSIONS ALONG WITH UPSTREAM AND DOWNSTREAM FLOW DISTURBANCES (E.G. ELBOWS, TEES AND FANS).

II. A BRIEF PROCESS DESCRIPTION.

III. OPERATING CONDITIONS UNDER WHICH THE TEST WILL BE PERFORMED.

IV. A DESCRIPTION OF THE SAMPLING AND ANALYTICAL METHODS FOR EACH CONSTITUENT MEASURED.

V. COMPLETE CALCULATIONS FOR FLOW RATES, CONCENTRATIONS, EMISSION RATES AND EFFICIENCIES.

VI. A DESCRIPTION OF THE CALIBRATION AND QUALITY ASSURANCE PROCEDURES.

VII. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.

VIII. TEMPORARY ENCLOSURES FOR SOURCE TESTING PURPOSES SHALL BE CONSTRUCTED FOR THE EQUIPMENT AS NEEDED.

IX. A STATEMENT DETERMINING THAT THE TESTING LABORATORY QUALIFIES AS AN "INDEPENDENT TESTING LABORATORY" UNDER RULE 304 (NO CONFLICT OF INTEREST) AND SIGNED BY THE RESPONSIBLE AUTHORITY.

B. THE SCAQMD SHALL BE NOTIFIED OF THE DATE AND THE TIME OF THE TEST AT LEAST 10 CALENDAR DAYS PRIOR TO THE TEST OR WITHIN THE TIME PERIOD AGREED UPON BY THE DISTRICT ENGINEER, SO THAT AN OBSERVER MAY BE PRESENT.

C. THE COMPLETE WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE FURNISHED TO THE SCAQMD WITHIN SIXTY (60) DAYS AFTER TESTING IS COMPLETED.

[RULE 204, RULE 217, RULE 1303(b)(2)-Offsets, RULE 1401]

14. THE PERFORMANCE TESTS FOR THE MICROTURBINE SHALL INCLUDE, BUT MAY NOT BE LIMITED TO:

A. CARBON MONOXIDE (EXHAUST ONLY).
B. OXIDES OF NITROGEN (EXHAUST ONLY).
C. TOTAL NON-METHANE ORGANICS.
D. TOTAL (PM10) PARTICULATES (EXHAUST ONLY).
E. SPECIATED ORGANICS.
F. AMMONIA.
G. TOTAL SULFUR COMPOUNDS AS H2S.
H. OXYGEN.
I. NITROGEN.

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

J. MOISTURE CONTENT.
K. TEMPERATURE.
L. BTU VALUE OF DIGESTER GAS.
M. THE SCFM AND ACFM AT THE OUTLET OF THE MICROTURBINE.
N. THE FUEL TYPE AND CONSUMPTION RATE, IN STANDARD CUBIC FEET PER HOUR, DURING THE TESTING PERIOD.

ALL COMPOUNDS SHALL BE TESTED AND RESULTS REPORTED IN UNITS OF PPMV AND LBS/HR, UNLESS OTHERWISE NOTED.
[RULE 204, RULE 1303(b)(2)-Offsets, RULE 1401]

15. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THIS EQUIPMENT IS NOT COMPLETE WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

16. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

Emissions and Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO: 10 PPMV @15% O2, DRY, FOR NATURAL GAS, RULE 1303(a)(1)-LAER/BACT
CO: 130 PPMV @15% O2, DRY, FOR DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT
NOx: 9 PPMV @15% O2, DRY, FOR NATURAL GAS AND DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT
VOC: 7 PPMV @15% O2, DRY, FOR NATURAL GAS AND DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO CONSTRUCT

A/N 535806
Granted TBD

Equipment Description:

MICROTURBINE SYSTEM, NO. 4, CONSISTING OF:

1. DIGESTER GAS FUEL TREATMENT SYSTEM (COMMON TO MICROTURBINE SYSTEM NOS. 1, 2, 3, AND 5), CONSISTING OF:
   A. SILOXANE REMOVAL VESSELS.
   B. NATURAL GAS FUEL BLENDING SYSTEM.
   C. GAS COMPRESSORS.
   D. AFTERCOOLER.

2. GAS MICROTURBINE, CAPSTONE, MODEL CR200, 2,280,000 BTU PER HOUR, DIGESTER GAS, DIGESTER GAS/NATURAL GAS BLEND, OR NATURAL GAS FIRED, DRIVING A 200 KW ELECTRICAL GENERATOR.

3. HEAT RECOVERY UNIT.

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 EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
   [RULE 204]

4. THIS EQUIPMENT SHALL BE FIRED ON DIGESTER GAS, DIGESTER GAS/NATURAL GAS BLEND, OR NATURAL GAS.
   [RULE 204, RULE 1303(a)(1)-BACT]

5. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULE 431.1.
   [RULE 431.1]

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6. SAMPLING PORTS SHALL BE PROVIDED IN THE MICROTURBINE HEAT RECOVERY UNIT EXHAUST STACK, 8-10 DUCT DIAMETERS DOWNSTREAM AND 2 DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, TWO SAMPLING PORTS AT 90 DEGREES APART SHALL BE PROVIDED AND SHALL CONSIST OF TWO WELDED NIPPLES WITH CAPS. THE OWNER/OPERATOR SHALL PROVIDE ADEQUATE AND SAFE ACCESS TO THE TEST PORTS. [RULE 204, RULE 217]

7. A NON-RESETTABLE, OPERATIONAL TOTALIZING FUEL INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN EACH FUEL SUPPLY LINE (DIGESTER GAS AND NATURAL GAS LINES) TO THIS SYSTEM TO INDICATE AND RECORD THE FUEL USAGE IN CUBIC FEET. ONCE INSTALLED READINGS SHALL BE RECORDED AT LEAST MONTHLY. [RULE 204, RULE 1303(b)(2)-Offsets]

8. A SAMPLING PORT SHALL BE INSTALLED AND MAINTAINED AT THE INLET DIGESTER GAS SUPPLY LINE TO THE MICROTURBINE TO ALLOW THE COLLECTION OF A DIGESTER GAS SAMPLE AND FOR FLOW RATE TESTING. [RULE 204, RULE 217]

9. TOTAL HEAT INPUT OF FUEL GAS COMBUSTED IN THE MICROTURBINE SHALL NOT EXCEED 2.28 MILLION BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS COMBUSTED IN THE MICROTURBINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST WEEKLY BTU CONTENT READING. [RULE 1303(a)(1)-BACT, RULE 1303(b)-Modeling and Offsets]

10. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY. [RULE 204]

11. WEEKLY READINGS OF THE BTU CONTENT OF THE DIGESTER GAS SUPPLY LINE TO THE MICROTURBINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED. [RULE, 204, RULE 1303(b)(2)-Offsets]

12. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR OF OCCURRENCE OR WITHIN ONE HOUR THE OWNER/OPERATOR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS BEING RELEASED INTO THE ATMOSPHERE. [RULE 430]

13. THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT PERFORMANCE TESTS FOR THE MICROTURBINE WITHIN 180 DAYS OF INITIAL OPERATION, OR AS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, UNDER THIS PERMIT UNDER THE FOLLOWING CONDITIONS:

    A. A TEST PROTOCOL SHALL BE SUBMITTED TO SCAQMD NO LATER THAN 60 DAYS BEFORE THE PROPOSED TEST DATE AND SHALL BE APPROVED BY SCAQMD BEFORE THE TEST COMMENCES. AT A MINIMUM, THE TEST PROTOCOL SHOULD INCLUDE THE FOLLOWING:

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I. A DESCRIPTION OF THE EQUIPMENT TESTED INCLUDE A PROCESS SCHEMATIC INDICATING SAMPLING LOCATIONS/PORTS, SAMPLING DUCT/STACK DIMENSIONS ALONG WITH UPSTREAM AND DOWNSTREAM FLOW DISTURBANCES (E.G. ELBOWS, TEES AND FANS).

II. A BRIEF PROCESS DESCRIPTION.

III. OPERATING CONDITIONS UNDER WHICH THE TEST WILL BE PERFORMED.

IV. A DESCRIPTION OF THE SAMPLING AND ANALYTICAL METHODS FOR EACH CONSTITUENT MEASURED.

V. COMPLETE CALCULATIONS FOR FLOW RATES, CONCENTRATIONS, EMISSION RATES AND EFFICIENCIES.

VI. A DESCRIPTION OF THE CALIBRATION AND QUALITY ASSURANCE PROCEDURES.

VII. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.

VIII. TEMPORARY ENCLOSURES FOR SOURCE TESTING PURPOSES SHALL BE CONSTRUCTED FOR THE EQUIPMENT AS NEEDED.

IX. A STATEMENT DETERMINING THAT THE TESTING LABORATORY QUALIFIES AS AN "INDEPENDENT TESTING LABORATORY" UNDER RULE 304 (NO CONFLICT OF INTEREST) AND SIGNED BY THE RESPONSIBLE AUTHORITY.

B. THE SCAQMD SHALL BE NOTIFIED OF THE DATE AND THE TIME OF THE TEST AT LEAST 10 CALENDAR DAYS PRIOR TO THE TEST OR WITHIN THE TIME PERIOD AGREED UPON BY THE DISTRICT ENGINEER, SO THAT AN OBSERVER MAY BE PRESENT.

C. THE COMPLETE WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE FURNISHED TO THE SCAQMD WITHIN SIXTY (60) DAYS AFTER TESTING IS COMPLETED.

[RULE 204, RULE 217, RULE 1303(b)(2)-Offsets, RULE 1401]

14. THE PERFORMANCE TESTS FOR THE MICROTURBINE SHALL INCLUDE, BUT MAY NOT BE LIMITED TO:

A. CARBON MONOXIDE (EXHAUST ONLY).
B. OXIDES OF NITROGEN (EXHAUST ONLY).
C. TOTAL NON-METHANE ORGANICS.
D. TOTAL (PM10) PARTICULATES (EXHAUST ONLY).
E. SPECIATED ORGANICS.
F. AMMONIA.
G. TOTAL SULFUR COMPOUNDS AS H2S.
H. OXYGEN.
I. NITROGEN.

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J. MOISTURE CONTENT.
K. TEMPERATURE.
L. BTU VALUE OF DIGESTER GAS.
M. THE SCFM AND ACFM AT THE OUTLET OF THE MICROTURBINE.
N. THE FUEL TYPE AND CONSUMPTION RATE, IN STANDARD CUBIC FEET PER HOUR, DURING THE TESTING PERIOD.

ALL COMPOUNDS SHALL BE TESTED AND RESULTS REPORTED IN UNITS OF PPMV AND LBS/HR, UNLESS OTHERWISE NOTED.
[RULE 204, RULE 1303(b)(2)-Offsets, RULE 1401]

15. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THIS EQUIPMENT IS NOT COMPLETE WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

16. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

Emissions and Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO: 10 PPMV @15% O2, DRY, FOR NATURAL GAS, RULE 1303(a)(1)-LAER/BACT
CO: 130 PPMV @15% O2, DRY, FOR DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT
NOx: 9 PPMV @15% O2, DRY, FOR NATURAL GAS AND DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT
VOC: 7 PPMV @15% O2, DRY, FOR NATURAL GAS AND DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO CONSTRUCT

A/N 535809
Granted TBD

Equipment Description:

BOILER, NO. 1, SUPERIOR, FIRETUBE TYPE, MODEL SEMINOLE 6-5-1000-W100-STJ-G/DG, 8.4 MMBTU PER HOUR, DIGESTER OR NATURAL GAS FIRED, WITH A LOW NOX BURNER, ST. JOHNSON, MODEL NM200A10V.

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 CONDITIONS AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. THIS EQUIPMENT SHALL BE FIRED ON DIGESTER GAS OR NATURAL GAS ONLY.
[RULE 204, RULE 1146, RULE 1303(a)(1)-BACT, RULE 1303(b)(2)-Offsets]

5. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF RULE 431.1 AND RULE 1146.
[RULE 431.1, RULE 1146]

6. A NON-RESETTABLE, TOTALIZING FUEL METER SHALL BE INSTALLED AND MAINTAINED IN THE FUEL SUPPLY LINE TO MEASURE AND RECORD THE FUEL USAGE IN CUBIC FEET, FOR EACH TYPE OF FUEL USED.
[RULE 204, RULE 1303(b)(2)-Offsets]

7. WHEN IN OPERATION, TOTAL HEAT INPUT FOR THIS EQUIPMENT SHALL NOT EXCEED 8.4 MMBTU/HR. A MONTHLY LOG SHALL BE KEPT INDICATING THE TOTAL HOURS OF OPERATION AND THE TOTAL HEATING VALUE (BTU) OF FUEL GAS BURNED IN THIS EQUIPMENT BASED ON THE RECORDED TOTALIZED FLOW (SCF) AND THE BTU CONTENT OF THE FUEL.
[RULE 1146, RULE 1303(a)(1)-BACT, RULE 1303(b)-Modeling and Offsets]

8. THIS EQUIPMENT SHALL BE EQUIPPED WITH A CONTROL SYSTEM TO AUTOMATICALLY REGULATE THE COMBUSTION AIR AND FUEL RATE AS THE BOILER LOAD VARIES. THIS AUTOMATIC CONTROL SYSTEM SHALL BE ADJUSTED AND TUNED PERIODICALLY, ACCORDING TO ATTACHMENT I OF RULE 1146.
[RULE 1146]

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9. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR OF OCCURRENCE OR WITHIN ONE HOUR THE OWNER/OPERATOR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS BEING RELEASED INTO THE ATMOSPHERE.
[RULE 430]

10. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT AN INITIAL SOURCE TEST AND SUBSEQUENT SOURCE TEST EVERY FIVE YEARS UNDER THE FOLLOWING CONDITIONS AND PER RULE 1146:

A. TESTING SHALL BE CONDUCTED BY AN APPROVED CONTRACTOR UNDER THE SCAQMD LABORATORY APPROVAL PROGRAM AND IN COMPLIANCE WITH SCAQMD RULE 304 (NO CONFLICT OF INTEREST).

B. A SOURCE TEST PROTOCOL SHALL BE SUBMITTED TO SCAQMD AND SHALL BE APPROVED BY SCAQMD BEFORE THE TEST COMMENCES. THE PROTOCOL SHALL INCLUDE PROPOSED OPERATING CONDITIONS OF THE EQUIPMENT DURING THE TEST AND DESCRIPTIONS OF ALL SAMPLING AND ANALYTICAL PROCEDURES TO BE USED.

C. SOURCE TESTS SHALL BE PERFORMED AS FOLLOWS:
   I. THE INITIAL SOURCE TEST SHALL BE PERFORMED NO LATER THAN 180 DAYS AFTER INITIAL START-UP, UNLESS OTHERWISE APPROVED THE EXECUTIVE OFFICER, WHEN THE BOILER IS OPERATING AT MAXIMUM, MINIMUM AND AVERAGE LOADS FOR EACH FUEL (DIGESTER GAS AND NATURAL GAS). THE SAMPLING TIME AT EACH LOAD SHALL BE FOR A MINIMUM OF 15 CONSECUTIVE MINUTES.
   II. SUBSEQUENT SOURCE TESTS SHALL BE PERFORMED IN AS-FOUND OPERATING CONDITION OF THE BOILER, EXCEPT DURING START-UP, SHUTDOWN, OR UNDER BREAKDOWN CONDITIONS. THE SAMPLING TIME SHALL BE FOR A MINIMUM OF 15 CONSECUTIVE MINUTES.

D. TWO COPIES OF THE SOURCE TEST RESULTS SHALL BE SUBMITTED TO SCAQMD WITHIN 60 DAYS OF TESTING. THE REPORT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
   I. FUEL FLOW RATE FOR EACH FUEL.
   II. FLUE GAS FLOW RATE FOR EACH FUEL.
   III. DIGESTER GAS ANALYSIS INCLUDING:
      a. METHANE CONTENT.
      b. HIGHER HEATING VALUE.
      c. TOTAL SULFUR CONTENT, AS H2S, PPMV.
   IV. TOTAL NON-METHANE ORGANICS OF EXHAUST GAS WHILE FIRED ON DIGESTER GAS (MAX LOAD INITIAL TEST ONLY).
   V. SPECIATED TRACE ORGANICS OF EXHAUST GAS WHILE FIRED ON DIGESTER GAS (MAX LOAD INITIAL TEST ONLY).
   VI. OXIDES OF NITROGEN OF EXHAUST GAS.
   VII. CARBON MONOXIDE OF EXHAUST GAS.

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VIII. CARBON DIOXIDE CONTENT OF EXHAUST GAS.
IX. OXYGEN CONTENT OF EXHAUST GAS.
[RULE 204, RULE 1146, RULE 1303(b)(2)-Offsets, RULE 1401]

11. THE OWNER OR OPERATOR SHALL CHECK NOX AND CO EMISSIONS WITH A PORTABLE NOX, CO AND O2 ANALYZER ACCORDING TO THE SCAQMD APPROVED PROTOCOL FOR RULE 1146 BY A DISTRICT APPROVED TRAINED AND CERTIFIED PERSON AT LEAST MONTHLY OR EVERY 750 UNIT OPERATING HOURS, WHICHEVER OCCURS LATER. IF A UNIT IS IN COMPLIANCE FOR THREE CONSECUTIVE REQUIRED EMISSION CHECKS, WITHOUT ANY ADJUSTMENTS TO THE OXYGEN SENSOR SET POINTS, THEN THE UNIT SHALL BE CHECKED QUARTERLY OR EVERY 2,000 UNIT OPERATING HOURS, WHICHEVER OCCURS LATER, UNTIL THERE IS AN EMISSION CHECK INDICATING NONCOMPLIANCE.
[RULE 1146]

12. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 1146, RULE 3004(a)]

13. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THIS EQUIPMENT IS NOT COMPLETE WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

Emissions and Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.1 GRAIN/SCF @ 12% CO2, RULE 409, RULE 1303(a)(1)-BACT
CO: 400 PPM @ 3% O2, DRY, RULE 1146
NOx: 15 PPM@ 3% O2, DRY, DIGESTER GAS FIRING, RULE 1146
NOx: 9 PPM@ 3% O2, DRY OR 0.011 LBS/MMBTU, NATURAL GAS FIRING, RULE 1146
CO: 100 PPMV @ 3% O2, DRY, DIGESTER GAS FIRING, RULE 1303(a)(1)-BACT
CO: 50 PPMV @ 3% O2, DRY, NATURAL GAS FIRING, RULE 1303(a)(1)-BACT
NOx: 30 PPMV @ 3% O2, DRY, DIGESTER GAS FIRING, RULE 1303(a)(1)-BACT
NOx: 12 PPMV @ 3% O2, DRY, NATURAL GAS FIRING, RULE 1303(a)(1)-BACT

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO CONSTRUCT

A/N 535810
Granted TBD

Equipment Description:

BOILER, NO. 2, SUPERIOR, FIRETUBE TYPE, MODEL SEMINOLE 6-5-1000-W100-STJ-G/DG, 8.4 MMBTU PER HOUR, DIGESTER OR NATURAL GAS FIRED, WITH A LOW NOX BURNER, ST. JOHNSON, MODEL NM200A10V.

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 CONDITIONS AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. THIS EQUIPMENT SHALL BE FIRED ON DIGESTER GAS OR NATURAL GAS ONLY.
[RULE 204, RULE 1146, RULE 1303(a)(1)-BACT, RULE 1303(b)(2)-Offsets]

5. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF RULE 431.1 AND RULE 1146.
[RULE 431.1, RULE 1146]

6. A NON-RESETTABLE, TOTALIZING FUEL METER SHALL BE INSTALLED AND MAINTAINED IN THE FUEL SUPPLY LINE TO MEASURE AND RECORD THE FUEL USAGE IN CUBIC FEET, FOR EACH TYPE OF FUEL USED.
[RULE 204, RULE 1303(b)(2)-Offsets]

7. WHEN IN OPERATION, TOTAL HEAT INPUT FOR THIS EQUIPMENT SHALL NOT EXCEED 8.4 MMBTU/HR. A MONTHLY LOG SHALL BE KEPT INDICATING THE TOTAL HOURS OF OPERATION AND THE TOTAL HEATING VALUE (BTU) OF FUEL GAS BURNED IN THIS EQUIPMENT BASED ON THE RECORDED TOTALIZED FLOW (SCF) AND THE BTU CONTENT OF THE FUEL.
[RULE 1146, RULE 1303(a)(1)-BACT, RULE 1303(b)-Modeling and Offsets]

8. THIS EQUIPMENT SHALL BE EQUIPPED WITH A CONTROL SYSTEM TO AUTOMATICALLY REGULATE THE COMBUSTION AIR AND FUEL RATE AS THE BOILER LOAD VARIES. THIS AUTOMATIC CONTROL SYSTEM SHALL BE ADJUSTED AND TUNED PERIODICALLY, ACCORDING TO ATTACHMENT I OF RULE 1146.
[RULE 1146]

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9. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR OF OCCURRENCE OR WITHIN ONE HOUR THE OWNER/OPERATOR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS BEING RELEASED INTO THE ATMOSPHERE.
[RULE 430]

10. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT AN INITIAL SOURCE TEST AND SUBSEQUENT SOURCE TEST EVERY FIVE YEARS UNDER THE FOLLOWING CONDITIONS AND PER RULE 1146:

A. TESTING SHALL BE CONDUCTED BY AN APPROVED CONTRACTOR UNDER THE SCAQMD LABORATORY APPROVAL PROGRAM AND IN COMPLIANCE WITH SCAQMD RULE 304 (NO CONFLICT OF INTEREST).

B. A SOURCE TEST PROTOCOL SHALL BE SUBMITTED TO SCAQMD AND SHALL BE APPROVED BY SCAQMD BEFORE THE TEST COMMENCES. THE PROTOCOL SHALL INCLUDE PROPOSED OPERATING CONDITIONS OF THE EQUIPMENT DURING THE TEST AND DESCRIPTIONS OF ALL SAMPLING AND ANALYTICAL PROCEDURES TO BE USED.

C. SOURCE TESTS SHALL BE PERFORMED AS FOLLOWS:
   I. THE INITIAL SOURCE TEST SHALL BE PERFORMED NO LATER THAN 180 DAYS AFTER INITIAL START-UP, UNLESS OTHERWISE APPROVED THE EXECUTIVE OFFICER, WHEN THE BOILER IS OPERATING AT MAXIMUM, MINIMUM AND AVERAGE LOADS FOR EACH FUEL (DIGESTER GAS AND NATURAL GAS). THE SAMPLING TIME AT EACH LOAD SHALL BE FOR A MINIMUM OF 15 CONSECUTIVE MINUTES.
   II. SUBSEQUENT SOURCE TESTS SHALL BE PERFORMED IN AS-FOUND OPERATING CONDITION OF THE BOILER, EXCEPT DURING START-UP, SHUTDOWN, OR UNDER BREAKDOWN CONDITIONS. THE SAMPLING TIME SHALL BE FOR A MINIMUM OF 15 CONSECUTIVE MINUTES.

D. TWO COPIES OF THE SOURCE TEST RESULTS SHALL BE SUBMITTED TO SCAQMD WITHIN 60 DAYS OF TESTING. THE REPORT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
   I. FUEL FLOW RATE FOR EACH FUEL.
   II. FLUE GAS FLOW RATE FOR EACH FUEL.
   III. DIGESTER GAS ANALYSIS INCLUDING:
      a. METHANE CONTENT.
      b. HIGHER HEATING VALUE.
      c. TOTAL SULFUR CONTENT, AS H2S, PPMV.
   IV. TOTAL NON-METHANE ORGANICS OF EXHAUST GAS WHILE FIRED ON DIGESTER GAS (MAX LOAD INITIAL TEST ONLY).
   V. SPECIATED TRACE ORGANICS OF EXHAUST GAS WHILE FIRED ON DIGESTER GAS (MAX LOAD INITIAL TEST ONLY).
   VI. OXIDES OF NITROGEN OF EXHAUST GAS.
   VII. CARBON MONOXIDE OF EXHAUST GAS.

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IRVINE RANCH WATER DISTRICT

VIII. CARBON DIOXIDE CONTENT OF EXHAUST GAS.
IX. OXYGEN CONTENT OF EXHAUST GAS.
[RULE 204, RULE 1146, RULE 1303(b)(2)-Offsets, RULE 1401]

11. THE OWNER OR OPERATOR SHALL CHECK NOX AND CO EMISSIONS WITH A PORTABLE NOX, CO AND O2 ANALYZER ACCORDING TO THE SCAQMD APPROVED PROTOCOL FOR RULE 1146 BY A DISTRICT APPROVED TRAINED AND CERTIFIED PERSON AT LEAST MONTHLY OR EVERY 750 UNIT OPERATING HOURS, WHICHEVER OCCURS LATER. IF A UNIT IS IN COMPLIANCE FOR THREE CONSECUTIVE REQUIRED EMISSION CHECKS, WITHOUT ANY ADJUSTMENTS TO THE OXYGEN SENSOR SET POINTS, THEN THE UNIT SHALL BE CHECKED QUARTERLY OR EVERY 2,000 UNIT OPERATING HOURS, WHICHEVER OCCURS LATER, UNTIL THERE IS AN EMISSION CHECK INDICATING NONCOMPLIANCE.
[RULE 1146]

12. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 1146, RULE 3004(a)]

13. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THIS EQUIPMENT IS NOT COMPLETE WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

Emissions and Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.1 GRAIN/SCF @ 12% CO2, RULE 409, RULE 1303(a)(1)-BACT
CO: 400 PPM @ 3% O2, DRY, RULE 1146
NOx: 15 PPM@ 3% O2, DRY, DIGESTER GAS FIRING, RULE 1146
NOx: 9 PPM@ 3% O2, DRY OR 0.011 LBS/MMBTU, NATURAL GAS FIRING, RULE 1146
CO: 100 PPMV @ 3% O2, DRY, DIGESTER GAS FIRING, RULE 1303(a)(1)-BACT
CO: 50 PPMV @ 3% O2, DRY, NATURAL GAS FIRING, RULE 1303(a)(1)-BACT
NOx: 30 PPMV @ 3% O2, DRY, DIGESTER GAS FIRING, RULE 1303(a)(1)-BACT
NOx: 12 PPMV @ 3% O2, DRY, NATURAL GAS FIRING, RULE 1303(a)(1)-BACT

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DISTRICT

PERMIT TO CONSTRUCT

A/N 535812
Granted TBD

Equipment Description:

ENCLOSED FLARE, 41 MMBTU/HR MAXIMUM HEAT INPUT, 4'-8" W. X 6'-5" L. X 23'-3" H, AEREON, MODEL CEB1200, WITH 20 HP COMBUSTION BLOWER, AUTOMATIC AIR CONTROL SYSTEM, DIGESTER GAS FIRED, WITH NATURAL GAS PILOT, TEMPERATURE CONTROLLER, AUTOMATIC FLARE SHUT DOWN SYSTEM, FLARE FAILURE ALARM, AUTOMATIC RESTART.

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 EQUIPMENT SHALL BE OPERATED AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. PRIOR TO BURNING DIGESTER GAS IN THIS EQUIPMENT, THE DIGESTER GAS SHALL FIRST BE TREATED THROUGH A PERMITTED KNOCKOUT VESSEL/GAS-LIQUID SEPARATOR WITH A DEMISTER OR EQUIVALENT.
[RULE 1303(a)(1)-BACT]

5. AT LEAST TWO (2) SAMPLING PORTS SHALL BE PROVIDED IN THE FLARE STACK AT LEAST ONE-HALF DUCT DIAMETER UPSTREAM OF THE FLARE OUTLET, 90 DEGREES APART. EACH SAMPLING PORT SHALL CONSIST OF A FOUR-INCH COUPLING WITH PLUG. ALL PORTS SHALL BE PROPERLY CENTERED. AN EQUIVALENT METHOD OF EMISSION SAMPLING MAY BE USED UPON APPROVAL BY THE EXECUTIVE OFFICER. ADEQUATE AND SAFE ACCESS TO ALL SOURCE TEST PORTS SHALL BE PROVIDED WITHIN 48 HOURS NOTICE BY SCAQMD.
[RULE 204, RULE 217]

6. A SAMPLING PORT SHALL BE INSTALLED DOWNSTREAM OF THE SULFUR REMOVAL SYSTEM AND UPSTREAM OF THE INLET GAS LINE TO THE FLARE TO ALLOW THE COLLECTION OF A DIGESTER GAS SAMPLE.
[RULE 204, RULE 217]

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7. THE FLARE SHALL BE EQUIPPED WITH AT LEAST ONE TEMPERATURE INDICATOR AND A RECORDING DEVICE WHICH MEASURES AND RECORDS THE GAS TEMPERATURE IN THE FLARE STACK. THE TEMPERATURE INDICATOR AND RECORDING DEVICE SHALL OPERATE WHENEVER THE FLARE IS IN OPERATION. THE TEMPERATURE SHALL BE MEASURED AT A LOCATION THAT IS AT LEAST 0.6 SECONDS DOWNSTREAM OF THE BURNER.
[RULE 1303(a)(1)-BACT]

8. WHENEVER THE FLARE IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1600 DEGREES FAHRENHEIT, AVERAGED OVER 15 MINUTES, AS MEASURED BY AN APPROVED TEMPERATURE INDICATOR, SHALL BE MAINTAINED IN THE FLARE STACK, EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN, UNLESS OTHERWISE APPROVED. STARTUP IS DEFINED AS THE PERIOD FROM FLARE IGNITION TO THE TIME WHEN 1600 DEGREES FAHRENHEIT IS ACHIEVED, NOT TO EXCEED 30 MINUTES. SHUTDOWN IS THE PERIOD BEGINNING WHEN THE GAS VALVE BEGINS TO CLOSE AND ENDING WHEN THE GAS VALVE COMPLETELY SHUTS OFF, NOT TO EXCEED 30 MINUTES.
[RULE 204, RULE 1303(a)(1)-BACT]

9. THE FLARE SHALL BE DESIGNED AND OPERATED SO THAT THE FLAME IN THE FLARE REMAINS BELOW THE HEIGHT OF THE FLARES OPERATING THERMOCOUPLE AT ALL TIMES.
[RULE 204]

10. THE FLARE SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT-DOWN SYSTEM WITH A FAILURE ALARM, WHICH HAS BEEN APPROVED BY THE SCAQMD, TO AUTOMATICALLY ISOLATE THE FLARE FROM THE DIGESTER GAS SUPPLY LINE, SHUT OFF THE BLOWER AND IMMEDIATELY NOTIFY A RESPONSIBLE PARTY OF THE SHUT-DOWN.
[RULE 204, RULE 1303(a)(1)-BACT]

11. THE AUTOMATIC SHUT-DOWN SAFETY SYSTEM SHALL BE TESTED MONTHLY FOR PROPER OPERATION AND THE RESULTS RECORDED.
[RULE 204, RULE 1303(a)(1)-BACT]

12. A NON-RESETTABLE, OPERATIONAL TOTALIZING FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE DIGESTER GAS SUPPLY LINE TO THE FLARE TO MEASURE AND RECORD THE QUANTITY OF DIGESTER GAS (IN SCF) BEING COMBUSTED IN THE FLARE.
[RULE 204, RULE 1303(b)(2)-Offsets]

13. THE HEAT INPUT THROUGH THE FLARE SHALL NOT EXCEED 41 MILLION BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF DIGESTER GAS COMBUSTED IN THE FLARE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST WEEKLY BTU CONTENT READING.
[RULE 1303(b)(2)-Offsets]

14. WEEKLY READINGS OF BTU CONTENT OF THE DIGESTER GAS DOWNSTREAM OF THE SULFUR REMOVAL SYSTEM AND UPSTREAM OF THE INLET GAS LINE TO THE FLARE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE, 204, RULE 1303(b)(2)-Offsets]

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15. ALL DIGESTER GAS COLLECTED SHALL BE DIRECTED EITHER TO THE FLARE FOR COMBUSTION OR TO OTHER EQUIPMENT WHICH HAS A VALID PERMIT TO CONSTRUCT OR OPERATE OR DOES NOT REQUIRE A WRITTEN PERMIT PER SCAQMD RULE 219. [RULE 1303(a)(1)-BACT]

16. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY. [RULE 204]

17. THE MAXIMUM FLARE SKIN TEMPERATURE AT ANY LOCATION SHALL NOT EXCEED 250 DEGREES FAHRENHEIT. [RULE 217]

18. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR OF OCCURRENCE OR WITHIN ONE HOUR THE OWNER/OPERATOR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS BEING RELEASED INTO THE ATMOSPHERE. [RULE 430]

19. WITHIN 180 DAYS OF INITIAL START-UP UNLESS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, THE APPLICANT SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH SCAQMD APPROVED TEST PROCEDURES AND FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN SIXTY (60) DAYS AFTER TESTING. WRITTEN NOTICE OF THE TEST SHALL BE PROVIDED TO THE SCAQMD TEN (10) DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE SCAQMD FOR APPROVAL AT LEAST SIXTY (60) DAYS PRIOR TO START OF TEST.

    THE TEST SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET GAS TO THE FLARE AND THE FLARE EXHAUST FOR:

    A. METHANE.
    B. TOTAL NON-METHANE ORGANICS.
    C. OXIDES OF NITROGEN (EXHAUST ONLY).
    D. CARBON MONOXIDE (EXHAUST ONLY).
    E. TOTAL (PM10) PARTICULATES (EXHAUST ONLY).
    F. OXIDES OF SULFUR (EXHAUST ONLY).
    G. HYDROGEN SULFIDE (INLET ONLY).
    H. C1 THROUGH C3 SULFUR COMPOUNDS (SPECIATED)(INLET ONLY).
    I. CARBON DIOXIDE.
    J. TOXIC AIR CONTAMINANTS INCLUDING, BUT NOT LIMITED TO ACROLEIN, BENZENE, BENZYL CHLORIDE, CARBON TETRACHLORIDE, CHLOROBENZENE, CHLOROFORM, 1,2-DIBROMOETHANE, DICHLOROBENZENE, 1,1-DICHLOROETHANE, 1,2-DICHLOROETHANE, FORMALDEHYDE, METHYLENE CHLORIDE, TETRACHLOROETHYLENE, TOLUENE, 1,1,1-TRICHLOROETHANE, TRICHLOROETHYLENE, VINYL CHLORIDE, AND XYLENE ISOMERS (EXHAUST ONLY).
    K. OXYGEN (EXHAUST ONLY).
    L. NITROGEN (EXHAUST ONLY).

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M. MOISTURE CONTENT (EXHAUST ONLY).
N. TEMPERATURE (EXHAUST ONLY).
O. BTU VALUE (INLET ONLY).
[RULE 204, RULE 1303(b)(2)-Offsets, RULE 1401]

20. APPLICANT SHALL PERFORM A FULL RISK ASSESSMENT ON THE EMISSIONS FROM THE FLARE WITHIN NINETY (90) DAYS AFTER REQUEST FROM THE SCAQMD IF THE SOURCE TEST RESULTS SHOW THE EMISSIONS ARE GREATER THAN THAT CALCULATED UNDER THE PERMIT TO CONSTRUCT EVALUATION.
[RULE 204, RULE 1401]

21. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THIS EQUIPMENT IS NOT COMPLETE WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

22. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

Emissions and Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO: 0.06 LBS/MMBTU, RULE 1303(a)(1)-LAER/BACT
NOx: 0.025 LBS/MMBTU, RULE 1303(a)(1)-LAER/BACT
VOC: 0.038 LBS/MMBTU, RULE 1303(a)(1)-LAER/BACT

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PERMIT TO CONSTRUCT

A/N 544709
Granted 1/10/2013

Equipment Description:

AIR POLLUTION CONTROL (APC) SYSTEM CONSISTING OF:

1. SCRUBBER, SIEMENS, MODEL LO/PRO LP-5500, TWO STAGE, VERTICAL COUNTER CURRENT FLOW WET PACKED TYPE, 13'-9" L. X 8'-0" W. X 17'-9" H. X, WITH A MINIMUM DEPTH OF 10 FEET OF LANTEC PRODUCTS PROPYLENE PACKING MEDIA OR EQUIVALENT AND MIST ELIMINATOR, WITH TWO 230-GPM RECIRCULATION PUMPS.

2. STORAGE TANK, SODIUM HYDROXIDE, 1,616 GALLONS, WITH ASSOCIATED PUMPS.

3. STORAGE TANK, SODIUM HYPOCHLORITE, 2,160 GALLONS, WITH ASSOCIATED PUMPS.

4. EXHAUST SYSTEM WITH A 30 H.P. BLOWER, 13,500 CFM CAPACITY, VENTING THE HEADWORKS AND PRIMARY SEDIMENTATION TANKS.

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 EQUIPMENT SHALL BE OPERATED WHENEVER THE HEADWORKS OR PRIMARY SEDIMENTATION TANKS ARE IN OPERATION, HOWEVER, THIS EQUIPMENT MAY BE SHUT DOWN FOR A PERIOD NOT EXCEEDING 96 HOURS FOR MAINTENANCE. EACH SHUTDOWN MUST BE RECORDED WITH DATE, TIME, DURATION AND PURPOSE OF THE SHUTDOWN.
[RULE 204, RULE 1303(a)(1)-BACT]

4. WHEN THE EQUIPMENT IS SHUT DOWN FOR MAINTENANCE, PERIMETER MONITORING SHALL BE PERFORMED DOWN WIND OF THE SCRUBBER AND IN THE DIRECTION OF THE RESIDENTIAL AREAS AT LEAST ONCE EVERY 4 HOURS FROM 6:30 A.M. TO 4 P.M. UNTIL THE SCRUBBER IS IN OPERATION.
[RULE 402]

5. THE CONCENTRATION OF SULFUR COMPOUNDS MEASURED AS HYDROGEN SULFIDE (H2S) AT THE OUTLET OF THIS AIR POLLUTION CONTROL SYSTEM SHALL NOT EXCEED 1.0 PARTS PER MILLION VOLUME.
[RULE 402]

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6. A FLOW INDICATING DEVICE SHALL BE INSTALLED AND MAINTAINED INDICATING GALLONS PER MINUTE (GPM) IN EACH SCRUBBER SOLUTION RECIRCULATION LINE. NOT LESS THAN 230 GALLONS PER MINUTE OF SOLUTION SHALL BE RECIRCULATED THROUGH EACH RECIRCULATION LINE THROUGH THE SCRUBBER WHEN THE SCRUBBER IS IN OPERATION. IN CASE A PRESSURE SENSOR DEVICE IS USED IN PLACE OF A FLOW INDICATOR, A CONVERSION CHART SHALL BE POSTED ON THE EQUIPMENT TO INDICATE THE FLOW RATE (GPM) CORRESPONDING TO THE PRESSURE READING. THE FLOW RATE SHALL BE MEASURED AND RECORDED AT EACH MONITORING EVENT, UNLESS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER.
[RULE 204]

7. SODIUM HYDROXIDE AND SODIUM HYPOCHLORITE USAGE SHALL BE MAINTAINED. STORAGE TANK FILLING LOGS OR PURCHASE ORDERS FOR THE TANK SOLUTIONS MAY BE USED TO ESTIMATE THE HOURLY USAGE.
[RULE 204]

8. A PH INDICATING DEVICE SHALL BE INSTALLED IN EACH SCRUBBER SOLUTION RECIRCULATION TANK TO MONITOR THE SCRUBBER SOLUTION. THE PH OF THE SCRUBBER SOLUTION SHALL NOT BE LESS THAN 9.0 WHEN THE SCRUBBER IS IN OPERATION.
[RULE 204]

9. THE CONCENTRATION OF HYDROGEN SULFIDE (H2S) AT THE OUTLET OF THE AIR POLLUTION CONTROL SYSTEM SHALL BE MEASURED AND RECORDED WEEKLY, USING DRAEGER TEST TUBES OR ANOTHER TEST METHOD APPROVED BY THE SCAQMD.
[RULE 204]

10. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THE EQUIPMENT IS NOT COMPLETED WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

11. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

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PERMIT TO CONSTRUCT

A/N 552110
Granted TBD

Equipment Description:

MICROTURBINE SYSTEM, NO. 5, CONSISTING OF:

1. DIGESTER GAS FUEL TREATMENT SYSTEM (COMMON TO MICROTURBINE SYSTEM NOS. 1, 2, 3, AND 4), CONSISTING OF:
   A. SILOXANE REMOVAL VESSELS.
   B. NATURAL GAS FUEL BLENDING SYSTEM.
   C. GAS COMPRESSORS.
   D. AFTERCOOLER.

2. GAS MICROTURBINE, CAPSTONE, MODEL CR200, 2,280,000 BTU PER HOUR, DIGESTER GAS, DIGESTER GAS/NATURAL GAS BLEND, OR NATURAL GAS FIRED, DRIVING A 200 KW ELECTRICAL GENERATOR.

3. HEAT RECOVERY UNIT.

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 EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
   [RULE 204]

4. THIS EQUIPMENT SHALL BE FIRED ON DIGESTER GAS, DIGESTER GAS/NATURAL GAS BLEND, OR NATURAL GAS.
   [RULE 204, RULE 1303(a)(1)-BACT]

5. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULE 431.1.
   [RULE 431.1]

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6. SAMPLING PORTS SHALL BE PROVIDED IN THE MICROTURBINE HEAT RECOVERY UNIT EXHAUST STACK, 8-10 DUCT DIAMETERS DOWNSTREAM AND 2 DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, TWO SAMPLING PORTS AT 90 DEGREES APART SHALL BE PROVIDED AND SHALL CONSIST OF TWO WELDED NIPPLES WITH CAPS. THE OWNER/OPERATOR SHALL PROVIDE ADEQUATE AND SAFE ACCESS TO THE TEST PORTS. [RULE 204, RULE 217]

7. A NON-RESETTABLE, OPERATIONAL TOTALIZING FUEL INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN EACH FUEL SUPPLY LINE (DIGESTER GAS AND NATURAL GAS LINES) TO THIS SYSTEM TO INDICATE AND RECORD THE FUEL USAGE IN CUBIC FEET. ONCE INSTALLED READINGS SHALL BE RECORDED AT LEAST MONTHLY. [RULE 204, RULE 1303(b)(2)-Offsets]

8. A SAMPLING PORT SHALL BE INSTALLED AND MAINTAINED AT THE INLET DIGESTER GAS SUPPLY LINE TO THE MICROTURBINE TO ALLOW THE COLLECTION OF A DIGESTER GAS SAMPLE AND FOR FLOW RATE TESTING. [RULE 204, RULE 217]

9. TOTAL HEAT INPUT OF FUEL GAS COMBUSTED IN THE MICROTURBINE SHALL NOT EXCEED 2.28 MILLION BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS COMBUSTED IN THE MICROTURBINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST WEEKLY BTU CONTENT READING. [RULE 1303(a)(1)-BACT, RULE 1303(b)-Modeling and Offsets]

10. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY. [RULE 204]

11. WEEKLY READINGS OF THE BTU CONTENT OF THE DIGESTER GAS SUPPLY LINE TO THE MICROTURBINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED. [RULE, 204, RULE 1303(b)(2)-Offsets]

12. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR OF OCCURRENCE OR WITHIN ONE HOUR THE OWNER/OPERATOR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS BEING RELEASED INTO THE ATMOSPHERE. [RULE 430]

13. THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT PERFORMANCE TESTS FOR THE MICROTURBINE WITHIN 180 DAYS OF INITIAL OPERATION, OR AS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, UNDER THIS PERMIT UNDER THE FOLLOWING CONDITIONS:

    A. A TEST PROTOCOL SHALL BE SUBMITTED TO SCAQMD NO LATER THAN 60 DAYS BEFORE THE PROPOSED TEST DATE AND SHALL BE APPROVED BY SCAQMD BEFORE THE TEST COMMENCES. AT A MINIMUM, THE TEST PROTOCOL SHOULD INCLUDE THE FOLLOWING:

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I. A DESCRIPTION OF THE EQUIPMENT TESTED INCLUDE A PROCESS SCHEMATIC INDICATING SAMPLING LOCATIONS/PORTS, SAMPLING DUCT/STACK DIMENSIONS ALONG WITH UPSTREAM AND DOWNSTREAM FLOW DISTURBANCES (E.G. ELBOWS, TEES AND FANS).

II. A BRIEF PROCESS DESCRIPTION.

III. OPERATING CONDITIONS UNDER WHICH THE TEST WILL BE PERFORMED.

IV. A DESCRIPTION OF THE SAMPLING AND ANALYTICAL METHODS FOR EACH CONSTITUENT MEASURED.

V. COMPLETE CALCULATIONS FOR FLOW RATES, CONCENTRATIONS, EMISSION RATES AND EFFICIENCIES.

VI. A DESCRIPTION OF THE CALIBRATION AND QUALITY ASSURANCE PROCEDURES.

VII. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.

VIII. TEMPORARY ENCLOSURES FOR SOURCE TESTING PURPOSES SHALL BE CONSTRUCTED FOR THE EQUIPMENT AS NEEDED.

IX. A STATEMENT DETERMINING THAT THE TESTING LABORATORY QUALIFIES AS AN "INDEPENDENT TESTING LABORATORY" UNDER RULE 304 (NO CONFLICT OF INTEREST) AND SIGNED BY THE RESPONSIBLE AUTHORITY.

B. THE SCAQMD SHALL BE NOTIFIED OF THE DATE AND THE TIME OF THE TEST AT LEAST 10 CALENDAR DAYS PRIOR TO THE TEST OR WITHIN THE TIME PERIOD AGREED UPON BY THE DISTRICT ENGINEER, SO THAT AN OBSERVER MAY BE PRESENT.

C. THE COMPLETE WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE FURNISHED TO THE SCAQMD WITHIN SIXTY (60) DAYS AFTER TESTING IS COMPLETED.

[RULE 204, RULE 217, RULE 1303(b)(2)-Offsets, RULE 1401]

14. THE PERFORMANCE TESTS FOR THE MICROTURBINE SHALL INCLUDE, BUT MAY NOT BE LIMITED TO:

A. CARBON MONOXIDE (EXHAUST ONLY).
B. OXIDES OF NITROGEN (EXHAUST ONLY).
C. TOTAL NON-METHANE ORGANICS.
D. TOTAL (PM10) PARTICULATES (EXHAUST ONLY).
E. SPECIATED ORGANICS.
F. AMMONIA.
G. TOTAL SULFUR COMPOUNDS AS H2S.
H. OXYGEN.
I. NITROGEN.

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J. MOISTURE CONTENT.
K. TEMPERATURE.
L. BTU VALUE OF DIGESTER GAS.
M. THE SCFM AND ACFM AT THE OUTLET OF THE MICROTURBINE.
N. THE FUEL TYPE AND CONSUMPTION RATE, IN STANDARD CUBIC FEET PER HOUR, DURING THE TESTING PERIOD.

ALL COMPOUNDS SHALL BE TESTED AND RESULTS REPORTED IN UNITS OF PPMV AND LBS/HR, UNLESS OTHERWISE NOTED.
[RULE 204, RULE 1303(b)(2)-Offsets, RULE 1401]

15. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THIS EQUIPMENT IS NOT COMPLETE WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]

16. ALL RECORDS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 3004(a)]

Emissions and Requirements:

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

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
CO: 10 PPMV @15% O2, DRY, FOR NATURAL GAS, RULE 1303(a)(1)-LAER/BACT
CO: 130 PPMV @15% O2, DRY, FOR DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT
NOx: 9 PPMV @15% O2, DRY, FOR NATURAL GAS AND DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT
VOC: 7 PPMV @15% O2, DRY, FOR NATURAL GAS AND DIGESTER GAS, RULE 1303(a)(1)-LAER/BACT

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SECTION I: PLANS AND SCHEDULES

This section lists all plans approved by AQMD for the purposes of meeting the requirements of applicable AQMD rules specified below. The operator shall comply with all conditions specified in the approval of these plans.

Documents pertaining to the plan applications listed below are available for public review at AQMD Headquarters. Any changes to plan applications will require permit modification in accordance with Title V permit revision procedures.

List of approved plans:

Application	Rule
558759	1110.2
564175	3003

NOTE: This section does not list compliance schedules pursuant to the requirements of Regulation XXX – Title V Permits; Rule 3004(a)(10)(C). For equipment subject to a variance, order for abatement, or alternative operation condition granted pursuant to Rule 518.2, equipment specific conditions are added to the equipment in Section D or H of the permit.

I&M Plan Clarification IRWD MWRP.pdf Received via email 3-6-2015

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1. Type of oxygen sensor used in each AFRC: Unheated Narrow Band (EGO), heated narrow band (HEGO), universal wideband (UEGO), or specify the type, if none of the above.
   The oxygen sensors are a two-wire element and heated type.

2. Location of the oxygen sensor relative to the catalyst for each engine.
   The oxygen sensor is located prior to the catalyst.

3. Indicate whether the PAs used by IRWD measures both NO and NO2, or just NO; and if only NO, then provide test data that shows the NO2 emissions are less than 10% of total NOx emissions.
   IRWD uses a portable analyzer that can measure both NO and NO_2. For periodic portable testing, the portable analyzers used by IRWD staff are not calibrated for NO_2 because in rich-burn engines they emit a small fraction of NO_2.

   Attached is the portable analyzer monitoring report for the pump engines (1 and 2) with total NO_x values that include both NO and NO_2 values. The data confirms that NO_2 in the total NO_x is less than 10%.

4. The I&M plan indicates maximum and minimum catalyst temperatures (inlet & outlet) that differ from the permit conditions (three pump driving engines). Could you please provide the catalyst manufacturer specifications concerning max and min catalyst temperatures?
   The catalyst specification is attached. The catalyst inlet temperature will be maintained at 750°F. The catalyst specification sheet is attached. In addition, each engine is equipped with a device to shut down the engine if the catalyst inlet temperature exceeds 1250°F.

5. Indicate the set procedure for alerting the operator of:
   IRWD utilizes an Excel-based electronic recordkeeping log to demonstrate compliance with Rule 1110.2. The Excel spreadsheet is embedded with equations with conditional formatting that changes color if the values exceed the set point.

   - Deviations to the acceptable operating temperature range for the catalyst.
     During daily recordkeeping, the operator/mechanic collects the readings of various engine parameters. The catalyst inlet/outlet temperatures are recorded and entered in the Excel sheet. If the temperatures are outside of the range limits, the entire row will change color, alerting the operator.

   - When the catalyst requires cleaning or replacement.
     IRWD staff clean or replace the catalyst elements if the portable analyzer check cannot demonstrate compliance. After documenting noncompliance, IRWD staff make AFRC adjustments to achieve compliance. If the AFRC adjustment can't control both NO_x and CO, then IRWD staff inspect the catalyst element for cleaning or replacement.

   - When AFRC set points need to be reestablished.
     IRWD staff reestablish the AFRC set point after replacing the oxygen sensor.

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- When the facility is unmanned vs. manned
  IRWD facilities are manned. An operator will notice alarms during their daily visits. For unmanned/after-hour response, each engine is remotely connected to the control room via SCADA. The mechanic is dispatched for further investigation and troubleshooting.

6. Verify that three pump driving engines have variable set points and provide the procedure for establishing the optimum (25%, 60%, and 95% load or actual min, mid, max). If these engines only have one set point (as indicated in the I&M plan), then the engines should operate under a single load, and a Change of Condition application shall be necessary for each applicable engine to impose a single operating load condition on the permits. Also indicate how engine load is determined.

   The pump-driving engines operate at 50% and 100% load. After replacing the O_2 sensor, the mechanic sets up the AFRC at 100% and 50% using a portable analyzer. Revised AFRC tables are shown below.

Table -1: AFRC Example Set Point Table (Pump 1, FPS-II)

RPM	Load, % (±10%)	O_2, V (±10%)
1800	100	0.5-0.95
1800-1100	100-50	0.5-0.95
1100	50	0.5-0.95

Table -2: AFRC Example Set Point Table (Pump 2, FPS-II)

RPM	Load, % (±10%)	O_2, V (±10%)
1800	100	0.5-0.95
1800-1100	100-50	0.5-0.95
1100	50	0.5-0.95

Table -3: AFRC Example Set Point Table (Pump 3, FPS-II)

RPM	Load, % (±10%)	O_2, V (±10%)
1800	100	0.5.-0.95
1800-1100	100-50	0.5-0.95
1100	50	0.5-0.95

Engine load is determined by recording RPM.

7. Indicate how the operator will respond to, diagnose, and correct breakdowns, faults, malfunctions, alarms, and emission checks with emission in excess of rule or permit limits.

   IRWD will undertake procedures outlined in Section 2.5 of the I&M Plan to address faults, malfunctions, alarms, and emission checks with emissions in excess of the rule or permit limits.

8. Provide the schedules for preventative and corrective maintenance include the engine and control system (eg: O2 sensor replacement, catalyst cleaning and replacement, engine tune ups, spark plug replacement, etc.)

   IRWD undertakes preventive and corrective maintenance activities every 1,440 hours for engine tune-ups, spark plug replacement, and other items. An O_2 sensor may be replaced sooner if it becomes defective or the O_2 sensor replacement warning is received. Catalyst cleaning and replacement will be carried out if the portable analyzer documents a steady rise in emissions, documenting noncompliance. Preventive maintenance will be carried out following Section 2.6 of the I&M Plan Rev. 3.

9. List of in-house personnel and/or contractor and contractor's personnel who is/are responsible for engine and control system maintenance.

   In-house IRWD staff who will perform maintenance activities include:

   Jim Dowling – Senior Maintenance Mechanic
   David Batten – Maintenance Mechanic
   Jared Pennington – Maintenance Mechanic

   In addition, outside engine overhauls will be performed by Exterran, Inc. located in Bakersfield, CA.

10. Verify that the engines will be monitored daily, including weekends and holidays and indicate whether it is monitored either remotely or in person, or a combination of the two.

    The engine records will be monitored by IRWD staff on a daily basis including weekends and holidays in person. The operator collects a daily reading for each engine regardless of engine operating status. In the future IRWD may elect to integrate daily recordkeeping using SCADA system.

11. Indicate which in-house personnel or outside contractors will conduct daily monitoring.

    Weekly/monthly monitoring will be performed by the in-house staff listed in Item #9.

12. Provide an updated the daily monitoring report/log that includes a field for the name of the person conducting the monitoring (if not remote) and date/time of the monitoring.

    Monitoring for IRWD pump station engines and generators will be carried out by IRWD in-house technicians. The staff responsible for performing the in-house tests are:

    Jim Dowling – Senior Maintenance Mechanic
    David Batten – Maintenance Mechanic
    Jared Pennington – Maintenance Mechanic

    Excel logs are attached.

13. Provide procedures for recordkeeping (eg: what format are records in, retention, etc.). Also indicate the contact information for an alternative contact than yourself regarding the I&M plan

    The engine records are retained electronically at the MWRP headquarters. In addition to the electronic recordkeeping, the operator also keeps a hard copy of the log at the pump site. The alternative contact person regarding the I&M Plan is Mr. Richard Lao, IRWD.

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FORM 1: Linearity and Interference Tests Recordkeeping Form For Portable Analyzers

SCAQMD RULE 1110.2 Emissions from Gaseous and Liquid-Fueled Engines

DATE: 12/17/2014 **TIME (start/stop):** **NAME: Irvine Ranch Water district**

ANALYZER (Make/Model): ECOM J2KN **Analyzer SN: 2977 OCVNX**

OPERATOR:

Dates of Last Cell Replacements: **CO:Dec-2014** **NO:Feb-2013** **NO_2:Sept-2013** **O2:Feb-2013**

Linearity Check

Date of Last Linearity Check: 9/23/2013

Requirements:

* Linearity less than or equal to 3% of the mid span gas concentration
* Linearity check must be conducted within 12 months of the test date and when an electrochemical cell is replaced.

Interference Check

Date of Last Interference Check: 9/23/2013

Requirements:

* Interference response less than or equal to 5% of span gas concentrations
* Interference check must be conducted within 12 months of the test date and when an electrochemical cell is replaced.

Date of Linearity Check:12/17/2014

Constituent	CO (ppm)	NO (ppm)	NO_2 (ppm)	O_2 (%)
Zero Gas	0	0	0	21.00%
Mid Span Gas	500	254	155	10.01%
High Span Gas	1005	483	293	0.00%
Reading, Zero	0	0	0	21.00%
Reading, Mid	506	260	159	10.01%
Reading, High	1005	483	293	0.00%
Linearity, E_{LIN}, %	1.20%	2.36%	2.58%	0.00%
Slope =	N/A	N/A	N/A	N/A
Calculated Mid	N/A	N/A	N/A	N/A

Calculations for Linearity are described in Section 16 of the Periodic Monitoring Protocol

Date of CO Interference Check:12/17/2014

Constituent	CO (ppm)	NO (ppm)	NO_2 (ppm)
Interferent Span Gas Value, C_{NOG} & C_{NO2G}		483	293
CO Response to NO, R_{CO-NO}	0		
CO Response to NO_2, R_{CO-NO2}	0		
CO Interference I_{CO} %	0.00%		

$I_{CO} = [(R_{CO-NO} / C_{NOG}) + (R_{CO-NO2} / C_{NO2G})] \times 100$

where: I_{CO} = CO interference response (percent)

R_{CO-NO} = CO response to NO span gas (ppm CO)

C_{NOG} = concentration of NO span gas (ppm NO)

R_{CO-NO2} = CO response to NO_2 span gas (ppm CO)

C_{NO2G} = concentration of NO_2 span gas (ppm NO_2)

CERTIFICATION: Based on the information and belief formed after reasonable inquiry, I certify that the statements and information contained in this report are true, accurate, and complete.

Bryan Fultz
Test Conducted By

Signature

Technician
Title

12/17/2014
Date

Rev 1/21/08

☐ Pre-Test Calibration Date 2/19/2015

FORM 2: Calibration Recordkeeping For Portable Analyzers

☐ Post-Test Calibration Date 2/19/2015

DATE: 2/19/2015 TIME (start/stop): 11:00 AM 12:30 PM NAME: Jared Pennington

MONITOR: J2K(N) 02977

Gas Constituent	Cylinder	Expiration Date	Cylinder Conc.	reading zero	Reading 1*	Reading 2*	Reading 3*	Reading 4*	Final Value	Response Time ** (seconds)
Pre CO	CC150051	7/30/2015	1004.00	0.00	1004	1004	1004	1004	1004	45
Pre NO	CC150051	7/30/2015	50.00	0.00	50	50	50	50	50	60
Pre NO2	CC122821	8/9/2015	31.06	0.00	31	31	31	31	31	180
Pre O2	**Ambient Air **	No Expiration	20.90	0.00	21	21	21	21	21.0	25
Post CO	CC150051	7/30/2015	1004.00	0.00	1004	1004	1004	1004	1004	55
Post NO	CC150051	7/30/2015	50.00	0	50	50	50	50	50	50
Post NO2	CC122821	8/9/2015	31.06	0	31	31	31	31	31	150
Post O2	**Ambient Air **	No Expiration	20.90	0	21	21	21	21	21	20

*If the reading is re-calibrated, then put an "R" next to it in the box

** The NO and CO response times are the time required to respond to 95% of a step change in the analyzer response to the span gases. For NO2 it is the time required to respond to 90% of a step change.

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FORM 2: Calibration Recordkeeping For Portable Analyzers

☐ Pre-Test Calibration Date 2/24/2015

☐ Post-Test Calibration Date 2/25/2015

DATE: 2/24/2015 TIME (start/stop): 7:00 AM 8:00 AM NAME: Jared Pennington

MONITOR: J2K(N) 02977

Gas Constituent	Cylinder	Expiration Date	Cylinder Conc.	reading zero	Reading 1*	Reading 2*	Reading 3*	Reading 4*	Final Value	Response Time ** (seconds)
Pre CO	CC150051	7/30/2015	812.80	0.00	824	824	824	824	824	45
Pre NO	CC150051	7/30/2015	50.00	0.00	50	50	50	50	50	60
Pre NO2	CC122821	8/9/2015	31.06	0.00	29	30	31	31	31	180
Pre O2	**Ambient Air **	No Expiration	20.90	0.00	20.9	20.9	20.9	20.9	20.9	25
Post CO	CC150051	7/30/2015	812.80	0.00	785	785	785	785	785	55
Post NO	CC150051	7/30/2015	50.00	0	50	50	50	50	50	50
Post NO2	CC122821	8/9/2015	31.06	0	28	29	30	31	30	150
Post O2	**Ambient Air **	No Expiration	20.90	0	20.9	20.9	20.9	20.9	20.9	20

*If the reading is re-calibrated, then put an "R" next to it in the box

** The NO and CO response times are the time required to respond to 95% of a step change in the analyzer response to the span gases. For NO2, it is the time required to respond to 90% of a step change

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FORM 3: Periodic Monitoring Recordkeeping Form For Portable Analyzers

SCAQMD RULE 1110.2 Emissions of Oxides of Nitrogen, Carbon Monoxide and Oxygen Emissions From Stationary Engines

DATE:	1/0/1900	TIME (start/stop):	12:00 AM 12:00 AM	NAME:	Jared Pennington
FACILITY NAME:	Irvine Ranch Water District			ANALYZER (Make/model):	ECOM J2K(N)
Facility ID Number	3513			Analyzer S/N:	02977
Engine Name	Pump No. 2			Date of Last Stability Check[1]:	12/14/2014
Permit to Operate	G5854			Date of Last Linearity Check[2]:	12/14/2014
Application No.	466394			1. Stability check must be conducted within 12 months of test date 2. Linearity check must be conducted within 12 months of test date	

"As Found" Test Results

Time Start:	8:03 A.M.	Date:	2/24/2015
Time End	8:18 AM	Ambient Temperature (°F):	65
		Engine Run Hour	19,057

Constituent	CO (ppm)	NO (ppm)	NO_2 (ppm)	O_2 (%)
Measured, C_{MEAS}	138.62	2.97	0.00	0.01
Cal Adjusted, C_{CORR}	140.05	2.97	0.00	0.01

Example Calculation $C_{ADJ} = (C_{MEAS} - C_{ZT}) \times \left(\frac{C_{CAL}}{C_{CM} - C_{ZT}}\right)$

Engine Operating Conditions:

Constituent	CO (ppm)	NO_x (ppm)			
C_{ADJ} @ 15% O_2, N	40	1	RPM	1,550	RPM
Compliance Limit	75	11	O_2	0.685	mV
Compliant	[redacted]		Catalyst, Inlet	1,007	°F
			Catalyst, Outlet	1,057	°F

Calibration Results

Date of Pre-Test Calibration:	2/24/2015
Date of Post-Test Calibration	2/25/2015

Constituent	CO (ppm)	NO (ppm)	NO_2 (ppm)	O_2 (%)
Pre-Test Zero	0.00	0.00	0.00	0.00
Post-Test Zero	0	0	0	0
Mean Zero, C_{ZZ}	0.00	0.00	0.00	0.00
Span Gas, C_{CAL}	812.80	50.00	31.06	20.90
Pre-Test Span	824	50	31	20.90
Post-Test Span	785	50	30	20.9
Mean Span, C_{CM}	804.5	50	30.5	20.9
Drift %	-4.73%	0.00%	-3.23%	0.00%

Drift Calculation is Listed in Section 3.6, Periodic Monitoring Protocol

"As Left" Test Results (if applicable)

Time Start:	8:03 A.M.	Ambient Temperature (°F)	65
Time End:	8:18 A.M.	Engine Run Hour	19867

Constituent	CO (ppm)	NO (ppm)	NO_2 (ppm)	O_2 (%)
Measured, C_{MEAS}	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Cal Adjusted, C_{ADJ}	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Constituent	CO (ppm)	NO_x (ppm)	Engine Operating Conditions:		
C_{ADJ} @ 15% O_2, N	#DIV/0!	#DIV/0!	RPM	1,550	RPM
Compliance Limit	75.0	11	O_2	0.685	mV
Difference	#DIV/0!	#DIV/0!	Cat. Temp	0.685	°F

Describe any boiler or control system maintenance or tuning conducted after the "As Found" Test to bring the boiler into compliance (attach additional documentation as necessary)

** Attach printouts from the portable analyzer or the manual record of constituent concentrations during the test.*

CERTIFICATION Based on the calibrations and measurements performed in accordance with this protocol, I certify that the statements and information contained in this report are true, accurate, complete and representative of the emissions from this source at the time of this test.

Jared Pennington
Test Conducted By

Signature

Maintenance Mechanic
Title

2-24-15
Date

Rev 3/2008

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15 - Minute- Raw Data Transfer Page - (as Found)						
Number	Date	Time	O_2	CO	NO	NO_2
			[%]	[ppm]	[ppm NO]	[ppm NO_2]
1	2/24/2015	08:03:17	0.1	78	3	0
2	2/24/2015	08:03:32	0.1	66	3	0
3	2/24/2015	08:03:47	0.1	85	3	0
4	2/24/2015	08:04:02	0	56	4	0
5	2/24/2015	08:04:17	0	78	3	0
6	2/24/2015	08:04:32	0	97	3	0
7	2/24/2015	08:04:47	0	93	3	0
8	2/24/2015	08:05:02	0	83	3	0
9	2/24/2015	08:05:17	0.1	89	3	0
10	2/24/2015	08:05:32	0	66	3	0
11	2/24/2015	08:05:47	0	77	3	0
12	2/24/2015	08:06:02	0	80	3	0
13	2/24/2015	08:06:17	0	116	3	0
14	2/24/2015	08:06:32	0	155	3	0
15	2/24/2015	08:06:47	0	149	3	0
16	2/24/2015	08:07:02	0	158	3	0
17	2/24/2015	08:07:17	0	117	3	0
18	2/24/2015	08:07:32	0	82	3	0
19	2/24/2015	08:07:47	0	101	3	0
20	2/24/2015	08:08:02	0	129	3	0
21	2/24/2015	08:08:17	0	150	3	0
22	2/24/2015	08:08:32	0	178	3	0
23	2/24/2015	08:08:47	0	173	3	0
24	2/24/2015	08:09:02	0	121	3	0
25	2/24/2015	08:09:17	0	138	3	0
26	2/24/2015	08:09:32	0	124	3	0
27	2/24/2015	08:09:47	0	192	3	0
28	2/24/2015	08:10:02	0	234	3	0
29	2/24/2015	08:10:17	0	180	3	0
30	2/24/2015	08:10:32	0	127	3	0
31	2/24/2015	08:10:47	0	87	3	0
32	2/24/2015	08:11:02	0	94	3	0
33	2/24/2015	08:11:17	0	89	3	0
34	2/24/2015	08:11:32	0	58	3	0
35	2/24/2015	08:11:47	0	101	3	0
36	2/24/2015	08:12:02	0	98	3	0
37	2/24/2015	08:12:17	0	128	3	0
38	2/24/2015	08:12:32	0	184	3	0
39	2/24/2015	08:12:47	0	245	3	0
40	2/24/2015	08:13:02	0	299	3	0
41	2/24/2015	08:13:17	0	225	3	0
42	2/24/2015	08:13:32	0	0	0	0
43	2/24/2015	08:13:47	0	167	3	0
44	2/24/2015	08:14:02	0	184	3	0
45	2/24/2015	08:14:17	0	155	3	0
46	2/24/2015	08:14:32	0	273	3	0
47	2/24/2015	08:14:47	0	218	3	0
48	2/24/2015	08:15:02	0	0	0	0
49	2/24/2015	08:15:17	0	326	3	0
50	2/24/2015	08:15:32	0	325	3	0
51	2/24/2015	08:15:47	0	229	3	0
52	2/24/2015	08:16:02	0	194	3	0
53	2/24/2015	08:16:17	0	231	3	0
54	2/24/2015	08:16:32	0	212	3	0
55	2/24/2015	08:16:47	0	97	4	0
56	2/24/2015	08:17:02	0	62	4	0
57	2/24/2015	08:17:17	0	133	3	0
58	2/24/2015	08:17:32	0	141	4	0
59	2/24/2015	08:17:47	0	93	3	0
60	2/24/2015	08:18:02	0	115	3	0
Average			0.01	138.92	2.97	0.00

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FORM 3: Periodic Monitoring Recordkeeping Form For Portable Analyzers

SCAQMD RULE 1110.2 Emissions of Oxides of Nitrogen, Carbon Monoxide and Oxygen Emissions From Stationary Engines

DATE:	2/19/2015 TIME (start/stop): 11:33:19 12:00 AM	NAME:	Jared Pennington
FACILITY NAME:	Irvine Ranch Water District	ANALYZER (Make/Model):	ECOM J2K(N)
Facility ID Number	3513	Analyzer S/N:	02977
Engine Name	Pump No. 1	Date of Last Stability Check[1]:	12/14/2014
Permit to Operate	G11944	Date of Last Linearity Check[2]:	12/14/2014
Application No.:	510239		

1. Stability check must be conducted within 12 months of first date
2. Linearity check must be conducted within 12 months of first date

"As Found" Test Results

Date: 2/19/2015

Time Start: 11:33:19

Ambient Temperature (°F): 78

Time End: 11:48 AM

Engine Run Hour: 6,134

Constituent	CO (ppm)	NO (ppm)	NO_2 (ppm)	O_2 (%)
Measured, C_{MEAS}	0.00	1985.93	9.82	0.03
Cal Adjusted, C_{CORR}	0.00	1985.93	9.84	0.03

Example Calculation: $C_{ADJ} = (C_{MEAS} - C_{ZZ}) \times \left(\frac{C_{CAL}}{C_{CM} - C_{ZZ}} \right)$

Engine Operating Conditions:

Constituent	CO (ppm)	NO_x (ppm)			
C_{ADJ} @ 15% O_2, N	0	564	RPM	1,450	RPM
Compliance Limit	64	10	O_2	0.646	mV
Complian:	[redacted]		Catalyst, Inlet	853	°F
			Catalyst, Outlet	872	°F

Calibration Results

Date of Pre-Test Calibration: 2/19/2015

Date of Post-Test Calibration: 2/19/2015

Constituent	CO (ppm)	NO (ppm)	NO_2 (ppm)	O_2 (%)
Pre-Test Zero	0.00	0.00	0.00	0.00
Post-Test Zero	0	0	0	0
Mean Zero, C_{ZZ}	0.00	0.00	0.00	0.00
Span Gas, C_{CAL}	1004.00	50.00	31.06	20.90
Pre-Test Span	1004	50	31	21.00
Post-Test Span	1004	50	31	21
Mean Span, C_{CM}	1004	50	31	21
Drift, %	0.00%	0.00%	0.00%	0.00%

Drift Calculation is listed in Section 3.6, Periodic Monitoring Protocol

"As Left" Test Results (if applicable)

Time Start: 12:07:56

Ambient Temperature (°F): 78

Time End: 12:22:41

Engine Run Hour: 6,135

Constituent	CO (ppm)	NO (ppm)	NO_2 (ppm)	O_2 (%)
Measured, C_{MEAS}	5.13	22.87	0.00	0.00
Cal Adjusted, C_{ADJ}	5.13	22.87	0.00	0.00

Engine Operating Conditions:

Constituent	CO (ppm)	NO_x (ppm)			
C_{ADJ} @ 15% O_2, N	1	6	RPM	1,450	RPM
Compliance Limit:	64.0	10	O_2	0.673	mV
Difference	[redacted]		Cat. Temp	865	°F

Describe any boiler or control system maintenance or tuning conducted after the "As Found" Test to bring the boiler into compliance (attach additional documentation as necessary):

As found emissions for carbon monoxide and oxides of nitrogen exceeded permit limit. An AFRC adjustment was made and Generator No. 2 demonstrated compliance.

** Attach printouts from the portable analyzer or the manual record of constituent concentrations during the test.*

CERTIFICATION: Based on the calibrations and measurements performed in accordance with this protocol, I certify that the statements and information contained in this report are true, accurate, complete and representative of the emissions from this source at the time of this test.

Jared Pennington
Test Conducted By

Signature

Maintenance Mechanic
Title

2-19-15
Date

10/19

15 - Minute- Raw Data Transfer Page - (as Found)						
Number	Date	Time	O_2 [%]	CO [ppm]	NO [ppm NO]	NO_2 [ppm NO_2]
1	2/19/2015	11:33:19	0.10	0	2256	20.0
2	2/19/2015	11:33:34	0.10	0	2265	19.0
3	2/19/2015	11:33:49	0.10	0	2250	18.0
4	2/19/2015	11:34:04	0.10	0	2220	18.0
5	2/19/2015	11:34:19	0.10	0	2036	16.0
6	2/19/2015	11:34:34	0.10	0	1942	13.0
7	2/19/2015	11:34:49	0.10	0	2150	13.0
8	2/19/2015	11:35:04	0.10	0	2128	14.0
9	2/19/2015	11:35:19	0.10	0	1939	13.0
10	2/19/2015	11:35:34	0.10	0	1971	12.0
11	2/19/2015	11:35:49	0.10	0	1971	12.0
12	2/19/2015	11:36:04	0.00	0	1611	11.0
13	2/19/2015	11:36:19	0.00	0	1939	9.0
14	2/19/2015	11:36:34	0.10	0	2110	11.0
15	2/19/2015	11:36:49	0.10	0	1993	12.0
16	2/19/2015	11:37:04	0.10	0	2134	12.0
17	2/19/2015	11:37:19	0.10	0	1915	12.0
18	2/19/2015	11:37:34	0.00	0	1918	11.0
19	2/19/2015	11:37:49	0.00	0	1760	10.0
20	2/19/2015	11:38:04	0.00	0	1898	9.0
21	2/19/2015	11:38:19	0.00	0	1922	9.0
22	2/19/2015	11:38:34	0.00	0	1688	9.0
23	2/19/2015	11:38:49	0.00	0	1810	8.0
24	2/19/2015	11:39:04	0.00	0	1706	8.0
25	2/19/2015	11:39:19	0.00	0	1673	7.0
26	2/19/2015	11:39:34	0.00	0	1678	7.0
27	2/19/2015	11:39:49	0.00	0	1637	7.0
28	2/19/2015	11:40:04	0.00	0	1899	7.0
29	2/19/2015	11:40:19	0.00	0	1769	7.0
30	2/19/2015	11:40:34	0.00	0	1963	7.0
31	2/19/2015	11:40:49	0.00	0	2085	8.0
32	2/19/2015	11:41:04	0.00	0	1888	8.0
33	2/19/2015	11:41:19	0.00	0	2055	9.0
34	2/19/2015	11:41:34	0.00	0	1784	8.0
35	2/19/2015	11:41:49	0.00	0	1963	8.0
36	2/19/2015	11:42:04	0.00	0	0	0.0
37	2/19/2015	11:42:19	0.00	0	2046	8.0
38	2/19/2015	11:42:34	0.10	0	2216	9.0
39	2/19/2015	11:42:49	0.00	0	2099	10.0
40	2/19/2015	11:43:04	0.00	0	2151	10.0
41	2/19/2015	11:43:19	0.00	0	2135	10.0
42	2/19/2015	11:43:34	0.00	0	2119	9.0
43	2/19/2015	11:43:49	0.00	0	1964	9.0
44	2/19/2015	11:44:04	0.00	0	1922	8.0
45	2/19/2015	11:44:19	0.00	0	2075	8.0
46	2/19/2015	11:44:34	0.00	0	2111	8.0
47	2/19/2015	11:44:49	0.00	0	2231	9.0
48	2/19/2015	11:45:04	0.00	0	2061	9.0
49	2/19/2015	11:45:19	0.00	0	2218	9.0
50	2/19/2015	11:45:34	0.00	0	2125	9.0
51	2/19/2015	11:45:49	0.00	0	2172	8.0
52	2/19/2015	11:46:04	0.00	0	2167	9.0
53	2/19/2015	11:46:19	0.00	0	2129	8.0
54	2/19/2015	11:46:34	0.10	0	2276	8.0
55	2/19/2015	11:46:49	0.00	0	2127	9.0
56	2/19/2015	11:47:04	0.00	0	2229	8.0
57	2/19/2015	11:47:19	0.00	0	2127	8.0
58	2/19/2015	11:47:34	0.00	0	2217	8.0
59	2/19/2015	11:47:49	0.00	0	2191	8.0
60	2/19/2015	11:48:04	0.00	0	2122	8.0
Average			**0.03**	**0.00**	**1985.93**	**9.82**

11/19

15 - Minute- Raw Data Transfer Page - (as Left)						
Number	Date	Time	O_2	CO	NO	NO_2
			[%]	[ppm]	[ppm NO]	[ppm NO_2]
1	2/19/2015	12:07:56	0.00	4	27	0.0
2	2/19/2015	12:08:11	0.00	5	27	0.0
3	2/19/2015	12:08:26	0.00	4	27	0.0
4	2/19/2015	12:08:41	0.00	4	27	0.0
5	2/19/2015	12:08:56	0.00	4	27	0.0
6	2/19/2015	12:09:11	0.00	4	26	0.0
7	2/19/2015	12:09:26	0.00	4	26	0.0
8	2/19/2015	12:09:41	0.00	4	26	0.0
9	2/19/2015	12:09:56	0.00	4	26	0.0
10	2/19/2015	12:10:11	0.00	3	25	0.0
11	2/19/2015	12:10:26	0.00	4	25	0.0
12	2/19/2015	12:10:41	0.00	5	25	0.0
13	2/19/2015	12:10:56	0.00	4	25	0.0
14	2/19/2015	12:11:11	0.00	4	25	0.0
15	2/19/2015	12:11:26	0.00	3	25	0.0
16	2/19/2015	12:11:41	0.00	3	24	0.0
17	2/19/2015	12:11:56	0.00	3	24	0.0
18	2/19/2015	12:12:11	0.00	4	24	0.0
19	2/19/2015	12:12:26	0.00	6	24	0.0
20	2/19/2015	12:12:41	0.00	8	24	0.0
21	2/19/2015	12:12:56	0.00	8	24	0.0
22	2/19/2015	12:13:11	0.00	6	24	0.0
23	2/19/2015	12:13:26	0.00	5	23	0.0
24	2/19/2015	12:13:41	0.00	8	23	0.0
25	2/19/2015	12:13:56	0.00	11	23	0.0
26	2/19/2015	12:14:11	0.00	14	23	0.0
27	2/19/2015	12:14:26	0.00	14	23	0.0
28	2/19/2015	12:14:41	0.00	9	23	0.0
29	2/19/2015	12:14:56	0.00	7	23	0.0
30	2/19/2015	12:15:11	0.00	5	23	0.0
31	2/19/2015	12:15:26	0.00	4	22	0.0
32	2/19/2015	12:15:41	0.00	5	22	0.0
33	2/19/2015	12:15:56	0.00	5	22	0.0
34	2/19/2015	12:16:11	0.00	5	22	0.0
35	2/19/2015	12:16:26	0.00	5	22	0.0
36	2/19/2015	12:16:41	0.00	5	22	0.0
37	2/19/2015	12:16:56	0.00	4	22	0.0
38	2/19/2015	12:17:11	0.00	4	22	0.0
39	2/19/2015	12:17:26	0.00	4	22	0.0
40	2/19/2015	12:17:41	0.00	4	21	0.0
41	2/19/2015	12:17:56	0.00	4	21	0.0
42	2/19/2015	12:18:11	0.00	4	21	0.0
43	2/19/2015	12:18:26	0.00	4	21	0.0
44	2/19/2015	12:18:41	0.00	5	21	0.0
45	2/19/2015	12:18:56	0.00	5	21	0.0
46	2/19/2015	12:19:11	0.00	5	21	0.0
47	2/19/2015	12:19:26	0.00	5	21	0.0
48	2/19/2015	12:19:41	0.00	5	21	0.0
49	2/19/2015	12:19:56	0.00	4	21	0.0
50	2/19/2015	12:20:11	0.00	4	21	0.0
51	2/19/2015	12:20:26	0.00	4	21	0.0
52	2/19/2015	12:20:41	0.00	4	21	0.0
53	2/19/2015	12:20:56	0.00	4	20	0.0
54	2/19/2015	12:21:11	0.00	4	20	0.0
55	2/19/2015	12:21:26	0.00	5	20	0.0
56	2/19/2015	12:21:41	0.00	5	20	0.0
57	2/19/2015	12:21:56	0.00	6	20	0.0
58	2/19/2015	12:22:11	0.00	5	20	0.0
59	2/19/2015	12:22:26	0.00	5	20	0.0
60	2/19/2015	12:22:41	0.00	5	20	0.0
Average			**0.00**	**5.13**	**22.87**	**0.00**

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MESA

CERTIFICATE OF ANALYSIS

Customer Name:	Irvine Ranch Water District	**Cylinder Number:**	JA02583
Stock/Analyzer Tag #:	N/A	**Product Class:**	Certified Standard
Customer Reference:	PO 514967	**Cylinder Contents:**	52 CF @ 2000 PSI
MESA Reference:	112174	**Cylinder CGA:**	A010-HP-660/SS
Date of Certification:	July 30, 2013	**Analysis Method:**	Process Analyzers
Recommended Shelf Life:	2 Years	**Preparation Method:**	Gravimetric

Component	Requested Concentration (2)	Reported Concentration (2,3)
Carbon Monoxide	1000 ppm	1004 ppm
Nitric Oxide	50 ppm	49.4 ppm
Nitrogen	Balance	Balance

RECEIVED
AUG 01 2013
By

Authorized Signature:

(1) The fill pressure shown on the COA is as originally quoted. The fill pressure measured by the customer may differ from the fill pressure originally quoted due to temperature effects, compressibility of the individual components when blended together in the cylinder, gauge accuracy or reduction in content volume before shipping as a result of samples withdrawn for laboratory QC necessary to ensure product quality.
(2) Unless otherwise stated, concentrations are given in molar units.
(3) Vapor pressure mixes are blended at a sufficiently low pressure so as to eliminate phase separation under most low temperature conditions encountered during transport or storage. However, it is generally recommended that cylinders containing vapor pressure restricted mixes be placed on the floor in a horizontal position and rolled back and forth to improve homogeneity of the gas phase mixture before being put into service.

Analytical Gas Standards are prepared and analyzed using combinations of NIST traceable weights, SRM's provided by NIST, or internal gas standards that have been verified for accuracy using procedures published by the US-EPA. Pure gases are analyzed and certified for purity using minor component Analytical Gas Standards prepared according to the methods specified above. Balances are calibrated to NIST test weights covered by NIST test number 822/278982-10, S/N 33071. Reference Certification #'s: 1072/U, 901V, 833/V, and 3280/E. Calibration methods are in conformance with MIL-STD 45662A.

MESA Specialty Gases & Equipment
division of MESA International Technologies, Inc.
2427 S. Anne St. • Santa Ana, California 92704 • USA
TEL: 714-434-7102 • FAX: 714-434-8006 • E-mail mail@mesagas.com
On-line Catalog at www.mesagas.com

13/19

Airgas

Airgas Specialty Gases
11711 South Alameda Street
Los Angeles, CA 90059
(323) 568-2203 Fax: (323) 567-3686
www.airgas.com

CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol

Part Number:	E04NI95E15A0006	Reference Number:	48-124322267-1
Cylinder Number:	CC122821	Cylinder Volume:	144.7 CF
Laboratory:	ASG - Los Angeles - CA	Cylinder Pressure:	2015 PSIG
PGVP Number:	B32012	Valve Outlet:	660
Gas Code:	CO,NO2,O2	Certification Date:	Aug 09, 2012

Expiration Date: Aug 09, 2015

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NITROGEN DIOXIDE	30.00 PPM	31.06 PPM	G1	+/- 2% NIST Traceable	07/30/2012, 08/09/2012
CARBON MONOXIDE	800.0 PPM	812.9 PPM	G1	+/- 1% NIST Traceable	07/30/2012, 08/09/2012
OXYGEN	4.000 %	4.021 %	G1	+/- 1% NIST Traceable	07/30/2012
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
GMIS	124219420109	CC315191	29.43 PPM NITROGEN DIOXIDE/NITROGEN	+/- 2.0%	Oct 11, 2013
NTRM	110603	CC153738	988.8 PPM CARBON MONOXIDE/NITROGEN	+/- 0.4%	Dec 13, 2016
NTRM	981204	CC59123	4.974 % OXYGEN/NITROGEN	+/- 0.9%	Jan 01, 2013

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
SIEMENS 6E CO HIGH	NDIR	Jul 14, 2012
Nicolet 6700 AHR0801551 NO2	FTIR	Jul 10, 2012
SIEMENS OXYMAT 6	PARAMAGNETIC	Jul 27, 2012

Triad Data Available Upon Request

Notes:

Approved for Release

14/19

FORM 4: Stability Check Recordkeeping Form For Portable Analyzers

SCAQMD RULE 1110.2 Emissions from Gaseous and Liquid-Fueled Engines

DATE: 12/17/2014 TIME (start/stop): **NAME: Irvine Ranch Water District**

ANALYZER(Make/Model): ECOM J2KN **Analyzer SN: 2977 _OCVNX**

OPERATOR:

Dates of Last Cell Replacements: Co:Dec-2014 No:Feb-2013 No2:Sept-2013 O2:Feb-2013

Date of Last Stability Check:9/23/2013

Requirements: * % Deviation either less than or equal to 1% of Span for 15 minutes or 2.5 % for 30 minutes
* Stability check must be conducted within 12 months of the test date and when an electrochemical cell is replaced.

Date of Stability Check: 12/17/2014

Elapsed Time (Minutes)	Analyzer Response CO (ppm)	NO (ppm)	NO_2 (ppm)
1	1011	490	304
2	1011	490	304
3	1011	490	304
4	1011	491	304
5	1011	491	305
6	1011	491	305
7	1011	492	305
8	1012	492	305
9	1012	492	305
10	1012	493	305
11	1011	493	306
12	1011	493	306
13	1011	493	306
14	1011	494	306
15	1011	494	306
16			

Elapsed Time (Minutes)	Analyzer Response CO (ppm)	NO (ppm)	NO_2 (ppm)
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			

		CO	NO	NO_2
Span Gas Concentration (ppm)		1005	483	293
15-Minute Stability Period	Maximum ppm	1012	494	306
	Minimum ppm	1011	490	304
	% Deviation*	0.10%	0.83%	0.68%
30-Minute Stability Period	Maximum ppm	1012	494	306
	Minimum ppm	1011	490	304
	% Deviation*	0.10%	0.83%	0.68%

* % Deviation = 100 x (Max. - Min.) / Span Gas Concentration

CERTIFICATION: Based on the information and belief formed after reasonable inquiry I certify that the statements and information contained in this report are true, accurate, and complete.

Bryan Fultz
Test Conducted By

Signature

Technician
Title

12/17/2014
Date

15/19

DCL America Inc.

1610 Woodstead Ct, Suite 245, The Woodlands, Texas 77380 USA
Tel: 877-965-8989 Fax: 281-605-5858 info@dcl-inc.com www.dcl-inc.com

To	Jim Dowling	Phone	
	IRWD	Fax	
Date	20 February 2015	Email	dowling@irwd.com

RE: EMISSIONS GUARANTEE

Jim,

We hereby guarantee that our MINE-X® Model 2-DC49-6 catalytic converter described below:

Catalyst model	2-DC49-6
Catalyst coating	NSCR, Y
Dimensions of catalyst substrate	14.5" O x 4"
No. of catalyst substrates	2
Cell Density	300 cpsi

and sized for the following engine:

Engine model	CAT G3306TA
Power	203 bhp @ 1800 rpm
Fuel	PQNG
Approx. Exhaust Flow	887 acfm
Approx. Exhaust Temperature*	1036° F

*750° F minimum, 1250° F max catalyst inlet, 1350° F max catalyst outlet

will perform as follows:

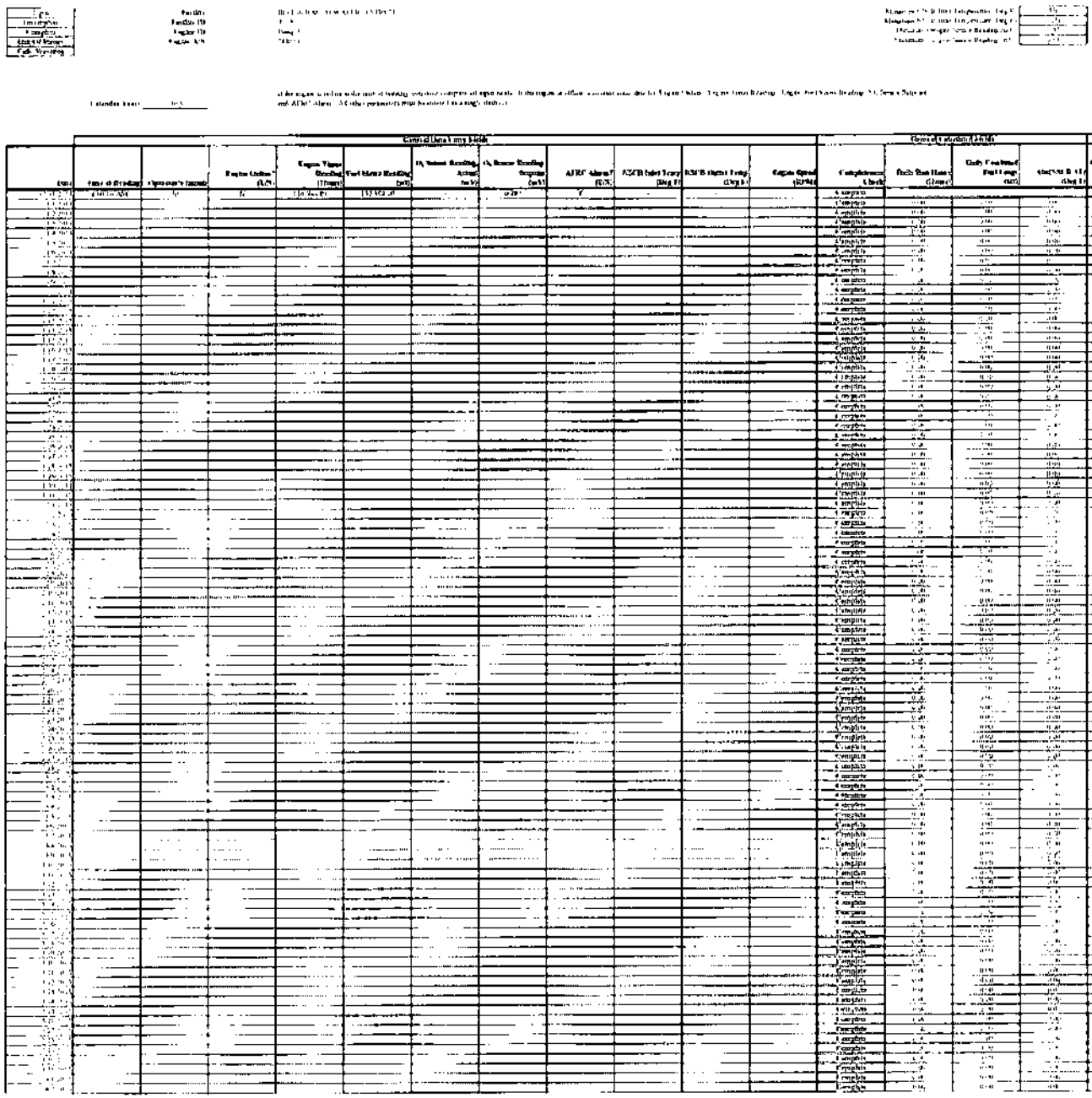
Exhaust Gas Component	Engine Output (g/bhp-hr)	Converter Output (ppmvd @ 15% O_2)
NOx	14.0	11
CO	14.0	56
VOC	2.0	30

for a period of 1 year or 8000 hours, whichever comes first, subject to all terms and conditions contained in the attached warranty document being respected and met.

Best regards,
DCL America, Inc.

William Casolara
Senior Sales Engineer
North American Industrial Catalyst Division

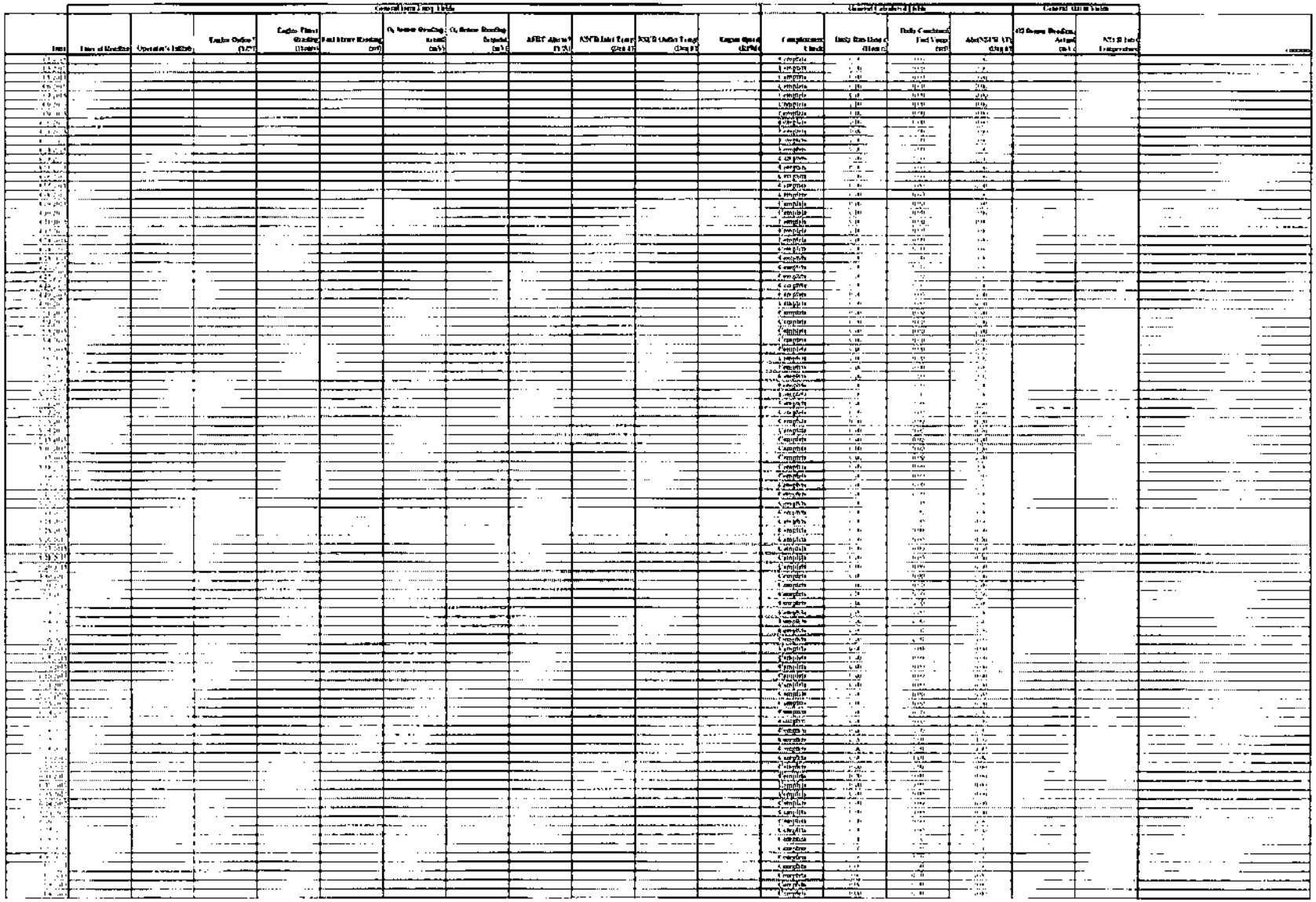
South Coast Air Quality Management District
Rule 1110.2 Compliance Tracking



Tenaska

South Coast Air Quality Management District
Rule 1110.2 Compliance Tracking

Calendar Year _____



South Coast Air Quality Management District
Rule 1110.2 Compliance Tracking

Inspector	
Inspection ID	
Permit ID	
Engine S/N	

Minimum [illegible] Temperature [deg F]	
Maximum [illegible] Temperature [deg F]	
Minimum Oxygen Rate – Reading [g/s]	
Maximum Oxygen Rate – Reading [g/s]	

Actual Test

In the space provided on the next page, you must complete all applicable items. If an engine is within [illegible] and the Engine Hours Engine Start Reading, Engine End Meter Reading, Engine Hours and All Alarms. All other parameters may be recorded on a single data [illegible]

General Data Entry Fields												General Calculated Fields				Optional Entry Fields		
Date	Time of Reading	Operator's Initial	Engine Status [1,0]	Engine Hours Reading [Hours]	Fuel Meter Reading [scf]	O2 Sensor Reading, Actual [mV]	O2 Sensor Reading, Setpoint [mV]	440% Alarm [1, 0]	NOx (Cold Start) [avg g/s]	NOx (Daily) [avg g/s]	Engine Speed [RPM]	Completeness Check	Daily Run Hours [Hours]	Daily Consumed Fuel Usage [scf]	Alarm [NOx, O2, Fuel]	O2 Sensor Reading [mV]	440% Alarm Frequency [%]	Comments

South Coast Air Quality Management District
Rule 1110.2 Compliance Tracking

Input
[illegible]
[illegible]
[illegible]
Fair Warning

Facility: IRVINE RANCH WATER DISTRICT
Facility ID: [illegible]
Engine ID: [illegible]
Engine S/N: [illegible]

Minimum NSCR Inlet Temperature (Deg F): [illegible]
Maximum NSCR Inlet Temperature (Deg F): [illegible]
Minimum Oxygen Sensor Reading (mV): [illegible]
Maximum Oxygen Sensor Reading (mV): [illegible]

Calendar Year: 2015

[illegible]

Date	Time of Reading	Operator's Initials	Engine Online? (Y/N)	Engine Timer Reading (Hours)	Fuel Meter Reading (scf)	O2 Sensor Reading, Actual (mV)	O2 Sensor Reading, Setpoint (mV)	AFRC Alarm? (Y/N)	NSCR Inlet Temp (Deg F)	NSCR Outlet Temp (Deg F)	Engine Speed (RPM)	Compliance Check	Daily Run Hours (Hours)	Daily Combined Fuel Usage (scf)	Abs(NSCR ΔT) (Deg F)	O2 Sensor Reading, Actual (mV)	NSCR Inlet Temperature	Comments
[illegible]												Complete	[illegible]	[illegible]	[illegible]			

29/29

Rule 1110.2
Inspection and Monitoring
(I&M) Plan
Rev. 003

Prepared for:
Irvine Ranch Water District
3512 Michelson Drive
Irvine, CA 92612-1799

Michelson Drive Pump Station
SCAQMD Facility ID: 03513

Facility Address:
3512 Michelson Drive
Irvine, CA 92620

Revision No. 003

December 31, 2013

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Permit G – 4635; A/N 464500

APPENDIX B – SCAQMD PLAN SUBMITTAL FORMS

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APPENDIX D – RECORDKEEPING FORMS

Portable Analyzer Forms
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Rule 1110.2 Quarterly Reports for Stationary Engines

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List of Acronyms and Abbreviations

AFRC	Air-to-Fuel Ratio Controller
A/N	Application Number
BHP	Brake Horsepower
CEMS	Continuous Emissions Monitoring System
CO	Carbon Monoxide
DAS	Data Acquisition System
°F	Degrees Fahrenheit
ICE	Internal Combustion Engine
I&M	Inspection and Monitoring
IRWD	Irvine Ranch Water District
MIL	Malfunction Indicator Light
MMscf	1 Million Standard Cubic Feet
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_x	Total Oxides of Nitrogen: NO Plus NO_2
O_2	Oxygen
RPM	Revolutions per Minute
SCAQMD	South Coast Air Quality Management District
SCR	Selective Catalytic Reduction
SOP	Standard Operating Policy

Record of Revisions

I&M Plan – Record of Plan Revisions

Rev. No.	Date	Sect.	Pages	Description
1	12/2009			Original I&M Plan.
2	1/31/2013	All	All	I&M Plan was revised to correct equipment description.
3	12/31/2013	All	All	Remove and Replace Pump No. 3 with new engine

Rule 1110.2 Inspection and Monitoring (I&M) Plan

1.0 INTRODUCTION

South Coast Air Quality Management District (SCAQMD) Rule 1110.2 requires facilities that operate non-emergency internal combustion engines (ICEs) conduct adequate inspection and monitoring to ensure that the air emissions meet the requirements of the rule. Larger engines may be required to install and operate a Continuous Emissions Monitoring System (CEMS) to measure the air emissions directly. For those engines subject to Rule 1110.2 that do not have a CEMS, an SCAQMD-approved Inspection and Monitoring (I&M) Plan is required for each facility to assure continued compliance of the engines between source tests. The I&M Plan includes the procedures for periodic monitoring using a portable analyzer to measure the exhaust emissions of NO_x and CO, as well as other monitoring, recordkeeping, and reporting procedures.

This facility has ICEs subject to the rule. The Irvine Ranch Water District (IRWD) submitted its original I&M Plan in December 2009. The plan is being submitted for amendment engine description as the facility recently removed engine driving Pump No. 3 at the FPS II facility with a new engine. The new engine is Caterpillar, Model No. G3306 TA, 203 BHP and identical to remaining two engines operating at this facility. A revision to the facility I&M Plan is necessary to maintain the updated permit requirements and records.

1.1 Plan Preparer

This I&M Plan was prepared by **Bipul Saraf** of Yorke Engineering, LLC. If there are technical questions regarding this plan, Bipul Saraf's contact information is shown below.

Table 1-1: Plan Preparer

Name:	Bipul K. Saraf
Title/Company:	Senior Engineer, Yorke Engineering, LLC
Phone:	(949) 248-8490
Fax:	(949) 248-8499
Cell:	(949) 444-8063
E-mail:	BSaraf@YorkeEngr.com

1.2 Facility Information

IRWD operates three (3) ICEs that drive domestic water pumps at its Michelson Drive facility located in Irvine, CA. In addition, IRWD also operates two (2) electrical generators at this facility. The engines pump water and the generators provide electricity to the plant operations. Both generators are restricted to operate a maximum of 1,000 hours annually. The facility information is noted below.

Table 1-2: Facility Information

Name of Facility:	Irvine Ranch Water District, Michelson Water Reclamation Plant
SCAQMD ID:	03513
Address:	3512 Michelson Drive, Irvine, CA

Facility Contact:	Ms. Lyndy Lewis
Phone:	(949) 453-5832
Title	Regulatory Compliance Manager
Fax:	(949) 476-1187
Cell:	(310) 892-9358
E-mail:	Lewis@IRWD.com

1.3 Equipment Description

IRWD operates three (3) ICEs that drive domestic water pumps and two (2) generators that produce electricity. The engines are identified as Pump 1, Pump 2, and Pump 3 and Generator 1 and Generator 2. The pump and generator engines are made by Caterpillar and Waukesha. Each engine is equipped with non-selective catalytic converters and air-to-fuel ratio controllers (AFRCs) that mitigate emissions and control engine operation.

Table 1-3: List of Engines

Engine ID	SCAQMD		Engine Description				
	A/N	Permit No.	Make	Model	Serial No.	BHP	Fuel
Pump 1, FPS-II	510239	G11944	Caterpillar	G3306TA	G6X06402	203	Natural Gas
Pump 2, FPS II	466394	G5854	Caterpillar	G3306TA	G6X02663	203	Natural Gas
Pump 3, FPS-II	557286	G28212	Caterpillar	G3306TA	R6S01029	203	Natural Gas
Generator No. 1	464501	G4636	Waukesha	L7044GSI	94185/2	1692	Natural Gas
Generator No. 2	464500	G4635	Waukesha	L7044GSI	94185/1	1692	Natural Gas

Table 1-4: Catalysts and AFRCs

Engine ID	Catalyst		AFRC	
	Make	Model	Make	Model
Pump 1, FPS-II	DCL	2 DC-49-6	Altronic	EPC 100-E
Pump 2, FPS-II	DCL	2 DC 49-6	Altronic	EPC 100-E
Pump 3, FPS-II	DCL	2 DC 49-6	Altronic	EPC 100-E
Generator No.1	DCL	2 DC 76-14	Waukesha	CEC P/N D740400
Generator No. 2	DCL	2 DC 76-14	Waukesha	CEC P/N D740400

2.0 PROCEDURES

2.1 Identification of Engine and Control Equipment Operating Parameters

This I&M Plan is required to include identification of engine and control equipment operating parameters necessary to maintain pollutant concentrations within the rule and permit limits.

2.1.1 Procedures for Using a Portable Analyzer to Establish AFRC Set Points

The portable analyzer is used to create an engine load map that correlates the oxygen sensor set point to the engine revolutions per minute (RPM) and load. The operator takes NO_x and CO readings while the engine is operated at the normal operating load range [203 brake horsepower (BHP) at 1800 RPM] and adjusts the AFRC set point so that the

emissions are in compliance. The five tables below show the AFRC set points, RPM, and O_2, mV for each engine.

Table 2-1: AFRC Example Set Point Table (Pump 1, FPS-II)

RPM	Load, % (±10%)	O_2, V (±10%)
1800	100	0.5-0.95

Table 2-2: AFRC Example Set Point Table (Pump 2, FPS-II)

RPM	Load, % (±10%)	O_2, V (±10%)
1800	100	0.5-0.95

Table 2-3: AFRC Example Set Point Table (Pump 3, FPS-II)

RPM	Load, % (±10%)	O_2, V (±10%)
1800	100	0.5.-0.95

Table 2-4: AFRC Example Set Point Table (Generator No. 1)

RPM	Load, % (±10%)	O_2, V (±10%)
1800	100	0.5-0.95

Table 2-5: AFRC Example Set Point Table (Generator No. 2)

RPM	Load, % (±10%)	O_2, V (±10%)
1800	100	0.5-0.95

2.1.2 Procedures for Verifying That the AFRC Is Controlling the Engine to the Set Points

Each weekday, the operator will monitor the engine and control system. The operator will identify which AFRC warning lights (lean or rich limit), alarms, and fault codes indicate that the AFRC is not properly controlling the air-to-fuel ratio. AFRCs will generally signal a fault and alarm if they are not able to adjust the air-to-fuel ratio to the proper set point, and operators can generally rely on the AFRC to detect this problem. Any faults or alarms recorded by the AFRC will be documented in the daily operating log.

2.1.3 Procedures for Reestablishing AFRC Set Points Using a Portable Analyzer

The AFRC set point must be readjusted within 24 hours of an oxygen sensor replacement and verified between 100-150 engine operating hours following an oxygen sensor replacement. The following procedure will be used to reestablish the AFRC set point after an oxygen sensor replacement. The engine load will be fixed at 100% (±10%). At 100% load point, the portable analyzer will be used to measure the NO_x and CO levels while the operator varies the set point around the previously established AFRC values. Once the optimum AFRC set point is determined, the value will be noted in the engine maintenance log book.

2.1.4 Maximum Catalyst Inlet Temperature

The temperature at the inlet to the catalyst bed surface shall not exceed 1,250°F (except during warm-up that is not to exceed 30 minutes). The inlet temperature will be monitored daily.

2.1.5 Minimum Catalyst Inlet Temperature

The temperature at the inlet to the catalyst bed surface shall be greater than 600°F (except during warm-up that is not to exceed 30 minutes). The inlet temperature will be monitored daily.

2.1.6 Lean-Burn with SCR Minimum Catalyst Inlet Temperature

This section does not apply because all five units are rich-burn engines.

2.2 Procedures for Alerting the Operator to Emission Control Malfunctions

A flashing malfunction indicator light (MIL) and audible alarm will notify the operator when the engine control system/AFRC is operating outside of the optimum set point. The operating range of the AFRC is defined below.

Table 2-6: AFRC Operating Range

AFRC, O_2 Setting (mV)	Condition	Alarm
0.50-0.950	Normal	No
<0.50	Abnormal	Yes
>0.950	Abnormal	Yes

2.3 Portable Analyzer Checks

2.3.1 Initial Checks Weekly or Every 150 Hours

IRWD mechanics are SCAQMD-certified and are proficient in using portable analyzers. The mechanics will conduct a NO_x, CO, and O_2 emission check at least weekly or every 150 engine operating hours, whichever occurs later, for the engines that are located on-site.

Portable analyzer test records will be stored in both electronic and hard copy formats at the main office of IRWD. The test results will be reported on the SCAQMD Periodic Monitoring Protocol Form (Form 3) (or the SCAQMD-approved form generated from the ECOM software) each time a portable analyzer test is conducted.

Portable analyzer monitoring will be carried out according to the procedures described in the publication *"Combustion Gas Periodic Monitoring Protocol for the Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and Oxygen from Combustion Sources Subject to Rules 1110.2, 1146, and 1146.1 (Version 0.00, May 1, 2009)"* (Reference 2).

2.3.2 Increase Check Interval to 750 Hours

If the engines at the facility are in compliance for three consecutive portable emission checks without any adjustments to the oxygen sensor/AFRC set points, the engine can be tested monthly or every 750 operating hours, whichever occurs later. Notwithstanding

this, the engines will be tested either weekly or every 150 hours, whichever comes later, if there is a non-complaint emission check, or for rich-burn engines such as the engines at Michelson Drive Pump Station, when the oxygen sensor is replaced, an AFRC set point adjustment is made, or a failed emission check is reported.

For engines operating under the monthly or every 750 hours monitoring schedule, readjustment of the AFRC set point for better emissions will not alter the monitoring schedule [Rule 1110.2 (f)(1)(D)(iii)(I)]. If the operator performs an emission check, makes an AFRC set point adjustment, and performs a second passing emission check, then the engine testing schedule can stay on monthly or 750 hours whichever comes later. A failed emission check and O_2 sensor replacement will revert the testing schedule back to weekly or every 150 hours, whichever comes later.

Generators No. 1 and 2 are not subject to the increased portable analyzer check schedule. The combined engine horsepower for Generators No. 1 and 2 exceed 1000 BHP and are subject to the requirements for CEMS. However, the requirements of CEMS don't apply to the generators because IRWD is a public agency and Rule 1110.2(f)(1)(A)(VI) exempts the operator from the requirements of CEMS. Both engines are limited to operate 1,000 hours annually. IRWD will conduct portable analyzer checks weekly or every 150 hours, whichever comes later.

2.3.3 Diesel and Other Lean-Burn Engines

This section does not apply because the sources are rich-burn engines.

2.3.4 No Tuning Within 72 Hours Prior to Emission Check

No engine or control system maintenance or tuning may be conducted within 72 hours prior to the emission check, unless it is an unscheduled, required repair. The following service items are permitted at any time:

- Oil filter change;
- Oil change;
- Water filter change; and
- Lube driveline U-joints, throttle linkage.

However, the following items are never permitted 72 hours prior to a scheduled periodic emissions test:

- Oxygen sensor adjustment/replacement;
- Catalyst maintenance;
- Spark plug change;
- Valve adjustment; and
- Ignition timing.

These above changes were approved by the SCAQMD Enforcement Department and this information was also presented at the Southern California Gas Company Seminar in September 2010.

2.3.5 Portable Analyzer Operation, Calibration, and Maintenance

The portable analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations, in addition to the publication "*Combustion Gas Periodic Monitoring Protocol for the Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and Oxygen from Combustion Sources Subject to Rules 1110.2, 1146, and 1146.1 (Version 0.00, May 1, 2009)*" (Reference 2). Any other protocol must be approved by the Environmental Protection Agency and Executive Officer of the SCAQMD.

2.4 Daily Monitoring, Inspection, and Recordkeeping

Daily weekday monitoring and recordkeeping, as required by the rule, will be performed by the operator. The operator will enter daily readings (see list below) into an Excel-based workbook set up with conditional formatting to alert the operator if any of the engine parameters exceed the range of acceptable values. Once an unacceptable parameter has been identified, the operator will remedy the situation to keep the engine in compliance with Rule 1110.2(f)(1)(D)(v)(II).

2.4.1 Engine Load or Fuel Flow Rate

The engine load and/or fuel flow rate are recorded by the operator in the log book. The Excel workbook will record the monthly fuel usage. For Pump No. 2 (FPS-2), the Excel workbook will alert if the monthly fuel consumption exceeds 1.28 MMscf/month.

2.4.2 AFRC Set Points

The AFRC set points are checked daily by the operator and noted in the log book.

The operator logs the AFRC set point parameters and compares them to the ranges listed in Section 2.1.1 to ensure that they are within specification.

2.4.3 Engine Elapsed Timer

The engine elapsed time information is used to indicate when the next portable analyzer monitoring event and the next source test are required.

2.4.4 Elapsed Time Since Last Emission Check

The operator keeps track of the hours that have elapsed since the last emission check. Subsequent emission checks are every 150/750 hours.

2.4.5 Catalyst Inlet and Exhaust Temperatures

For rich-burn engines with three-way catalysts, the operator logs the exhaust temperature at the inlet and outlet of the catalyst and calculates the difference (ΔT). There is no specified range for ΔT, but if there is a significant change in ΔT, the operator should conduct an emission check.

2.4.6 Engine Control System/AFRC Faults/Alarms

The operator logs any engine control system fault and/or AFRC system fault that could affect the engine's emissions.

2.5 Breakdown Procedures

The operator will consult the chart below in the event of an alarm or other indication that the system is not functioning properly. The operator will report the breakdown[1] to the SCAQMD, if required, and will take corrective action to remedy the problem.

When an excess emission check occurs, the mechanic will immediately troubleshoot the cause of the failure. The facility has 24 hours to troubleshoot the cause of the excess emissions. If the cause of the excess emissions can't be determined, the engine will be shut down by the end of the operating cycle or within 24 hours. The engine can't be operated for regular use until a passing test has been completed. The operator will log the time and date when the engine is being repaired. These incidents will be reported in the Rule 1110.2 quarterly report. If the cause of the excess emissions is due to the failure of equipment (electrical or mechanical), the facility shall report the event within 1 hour of discovery of the breakdown according to the breakdown reporting procedures in Section 2.8.

Table 2-7: Breakdown Procedures

Example Conditions	Fault Code	Probable Cause	Check Parameter	Example Corrective Actions
Ammonia Smell	Odor	Fuel Mixture Too Rich	Verify AFRC Set Point	Adjust AFRC
Black Smoke	Visible Plume	Dirty Air or Fuel Filter	Inspect Filters	Change Filters
Engine Knocking	RPM/Noise	Unequal Engine Speed	Verify Ignition Timing	Adjust Ignition Timing
O_2 Sensor Fault	O_2	AFRC Out-of-Range	Verify AFRC Set Point	Adjust AFRC or Replace O_2 Sensor

2.5.1 Rule or Permit Violation

If there is a breakdown that results in violation of a rule or permit condition, such as an emission check that finds excess emissions (averaged over 15 minutes), the operator is required to either correct the problem and demonstrate compliance by conducting another emission check within 24 hours or shut down the engine by the end of an operating cycle or within 24 hours from the time the operator knew or reasonably should have known, whichever is sooner.

2.5.2 Parameters Out-of-Range

For other problems, such as parameters out-of-range and AFRC alarms, an operator must correct the problem and demonstrate compliance with another emission check within 48 hours. Parameters out-of-range and AFRC alarms should be logged and reported on the quarterly report.

[1] IRWD has an internal standard operating policy (SOP) in place for the staff and contactors that provides specific guidance on how to deal with a breakdown incident. All breakdown incidents are reported per the IRWD Breakdown Reporting Policy.

2.5.3 Compliance with Breakdown Procedures and Reporting Not a Violation

An engine will not be considered operating in violation of Rule 1110.2 if the operator complies with these breakdown procedures and the reporting requirements of the rule. However, any emission check conducted by District staff that finds excess emissions will be considered a violation. Reporting of breakdowns is described in Section 2.8 below.

2.5.4 Malfunction Response Procedure

The operator will respond to a malfunction with the following:

1. Each AFRC shall have a malfunction indicator light and an audible alarm to alert the operator to emission control malfunctions;
2. Upon alarm, the operator/technician will investigate the cause of the malfunction;
3. The operator will determine the corrective action to be taken to bring the unit back within operating set points or parameter range and will determine whether the alarm indicated a breakdown or parameters out-of-range;
4. If a breakdown occurred, breakdown procedures will be followed, including calling the SCAQMD (1-800-CUT-SMOG, 1-800-288-7664) within 1 hour of discovery of the breakdown; and
5. The operator will complete the daily operating log for the malfunction response.

2.6 Preventive and Corrective Maintenance

Servicing of the various engine components will be carried out according to the manufacturer's recommendations. General maintenance on each engine is carried out according to IRWD's Preventative Maintenance Work Order document. IRWD will maintain an engine maintenance log for each engine that will include the date of the maintenance activity, the engine operating hours, and a brief explanation of the maintenance activity (i.e., what was done, when, and why).

2.7 Chain of Command and Duties of Responsible Personnel

IRWD operates and maintains the Michelson Drive facility. IRWD has designated technicians who are responsible for smooth operation and maintenance of the engines. IRWD designates the following personnel responsible for the pump station maintenance:

- Lead Technician; and
- Field Technician.

2.8 Reporting

The following are the procedures for reporting breakdowns and quarterly reports.

2.8.1 Phone-In Breakdown Report – Within 1 Hour

The operator shall report to the SCAQMD by telephone (1-800-CUT-SMOG or 1-800-288-7664) or other SCAQMD-approved method any breakdown resulting in emissions in excess of rule or permit emission limits within one (1) hour of such non-compliance or within 1 hour of the time the operator knew or reasonably should have known of its occurrence. Such report shall identify the time, specific location, equipment involved, responsible party to contact for further information, and to the extent known, the causes

of the non-compliance and the estimated time for repairs. The operator shall record the notification number provided by the SCAQMD.

2.8.2 Written Breakdown Report

Within seven (7) calendar days after the reported breakdown has been corrected, but no later than thirty (30) calendar days from the initial date of the breakdown, unless an extension has been approved in writing by the SCAQMD, the operator shall submit a written breakdown report to the SCAQMD (Attn: Compliance), which includes:

- Identification of the equipment involved in causing, suspected of having caused, or having been affected by the breakdown;
- The duration of the breakdown;
- The date of correction and information demonstrating that compliance is achieved;
- An identification of the types of excess emissions, if any, resulting from the breakdown;
- A quantification of the excess emissions, if any, resulting from the breakdown and the basis used to quantify the emissions;
- Information substantiating whether the breakdown resulted from operator error, neglect, or improper operation or maintenance procedures;
- Information substantiating that steps were immediately taken to correct the condition causing the breakdown and to minimize the emissions, if any, resulting from the breakdown;
- A description of the corrective measures undertaken and/or to be undertaken to avoid such a breakdown in the future; and
- Pictures of any equipment that failed, if available.

The requirements in Sections 2.8.1 and 2.8.2 duplicate the requirements of Rule 430 – Breakdown Provisions.

2.8.3 Quarterly Report for Stationary Engines

Within 15 days of the end of each calendar quarter, the operator shall submit to the SCAQMD (Attn: Compliance) a report that lists each occurrence of a breakdown, fault, malfunction, alarm, engine or control system operating parameter out of the acceptable range established by an I&M Plan or permit condition, or an emission check that finds excess emissions. Such report shall be in an SCAQMD-approved format and for each incident shall identify the time of the incident, the time the operator learned of the incident, specific location, equipment involved, responsible party to contact for further information, to the extent known the causes of the event, the time and description of corrective actions, including shutting an engine down, and the results of all portable analyzer NO_x and CO emission checks done before or after the corrective actions. The operator shall also report if no incidents occurred.

Rule 1110.2 quarterly reports are due by the dates listed below for each calendar year:

- April 15;
- July 15;
- October 15; and
- January 15.

2.9 Plan Revisions

IRWD submits I&M Plan Revision No. 003 for approval. Before any change in I&M Plan operations can be implemented, the revised I&M Plan will have to be submitted to and approved by the SCAQMD. The operator shall apply for a plan revision prior to any change in emission limits or control equipment. Note that changes to equipment may require submittal of a permit application.

3.0 REFERENCES

This section lists any reference documents not included in the appendices.

1. SCAQMD Rule 1110.2 (Amended September 7, 2012).
2. Combustion Gas Periodic Monitoring Protocol for the Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and Oxygen from Combustion Sources Subject to Rules 1110.2, 1146, and 1146.1 (Version 0.00, May 1, 2009).

FACILITY PERMIT TO OPERATE
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SECTION J: AIR TOXICS

Please refer to Section D and Section H for equipment specific requirements; and Section K for facility rules.

TITLE V PERMIT TO OPERATE
IRVINE RANCH WATER DIST

SECTION K: TITLE V Administration

GENERAL PROVISIONS

1. This permit may be revised, revoked, reopened and reissued, or terminated for cause, or for failure to comply with regulatory requirements, permit terms, or conditions. [3004(a)(7)(C)]

2. This permit does not convey any property rights of any sort or any exclusive privilege. [3004(a)(7)(E)]

Permit Renewal and Expiration

3. (A) Except for solid waste incineration facilities subject to standards under section 129(e) of the Clean Air Act, this permit shall expire five years from the date that this Title V permit is issued. The operator's right to operate under this permit terminates at midnight on this date, unless the facility is protected by an application shield in accordance with Rule 3002(b), due to the filing of a timely and complete application for a Title V permit renewal, consistent with Rule 3003. [3004(a)(2), 3004(f)]

   (B) A Title V permit for a solid waste incineration facility combusting municipal waste subject to standards under Section 129(e) of the Clean Air Act shall expire 12 years from the date of issuance unless such permit has been renewed pursuant to this regulation. These permits shall be reviewed by the Executive Officer at least every five years from the date of issuance. [3004(f)(2)]

4. To renew this permit, the operator shall submit to the Executive Officer an application for renewal at least 180 days, but not more than 545 days, prior to the expiration date of this permit. [3003(a)(6)]

Duty to Provide Information

5. The applicant for, or holder of, a Title V permit shall furnish, pursuant to Rule 3002(d) and (e), timely information and records to the Executive Officer or designee within a reasonable time as specified in writing by the Executive Officer or designee. [3004(a)(7)(F)]

Payment of Fees

6. The operator shall pay all required fees specified in Regulation III - Fees [3004(a)(7)(G)]

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Reopening for Cause

7. The Executive Officer will reopen and revise this permit if any of the following circumstances occur:

   (A) Additional regulatory requirements become applicable with a remaining permit term of three or more years. Reopening is not required if the effective date of the requirement is later than the expiration date of this permit, unless the permit or any of its terms and conditions has been extended pursuant to paragraph (f)(4) of Rule 3004.

   (B) The Executive Officer or EPA Administrator determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

   (C) The Executive Officer or EPA Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements. [3005(g)(1)]

COMPLIANCE PROVISIONS

8. The operator shall comply with all regulatory requirements, and all permit terms and conditions, except:

   (A) As provided for by the emergency provisions of condition no. 17 or condition no. 18, or

   (B) As provided by an alternative operating condition granted pursuant to a federally approved (SIP-approved) Rule 518.2.

   Any non-compliance with any federally enforceable permit condition constitutes a violation of the Federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or denial of a permit renewal application. Non-compliance may also be grounds for civil or criminal penalties under the California State Health and Safety Code. [3004(a)(7)(A)]

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9. The operator shall allow the Executive Officer or authorized representative, upon presentation of appropriate credentials to:

   (A) Enter the operator's premises where emission-related activities are conducted, or records are kept under the conditions of this permit;

   (B) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

   (C) Inspect at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

   (D) Sample or monitor at reasonable times, substances or parameters for the purpose of assuring compliance with the facility permit or regulatory requirements. [3004(a)(10)(B)]

10. All terms and conditions in this permit, including any provisions designed to limit a facility's potential to emit, are enforceable by the EPA Administrator and citizens under the federal Clean Air Act, unless the term or condition is designated as not federally enforceable. Each day during any portion of which a violation occurs is a separate offense. [3004(g)]

11. A challenge to any permit condition or requirement raised by EPA, the operator, or any other person, shall not invalidate or otherwise affect the remaining portions of this permit. [3007(b)]

12. The filing of any application for a permit revision, revocation, or termination, or a notification of planned changes or anticipated non-compliance does not stay any permit condition. [3004(a)(7)(D)]

13. It shall not be a defense for a person in an enforcement action, including those listed in Rule 3002(c)(2), that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit, except as provided for in "Emergency Provisions" of this section. [3004(a)(7)(H)]

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14. The operator shall not build, erect, install, or use any equipment, the use of which, without resulting in a reduction in the total release of air contaminants to atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Chapter 3 (commencing with Section 41700) of Part 4, of Division 26 of the California Health and Safety Code or of AQMD rules. This rule shall not apply to cases in which the only violation involved is of Section 41700 of the California Health and Safety Code, or Rule 402 of AQMD Rules. [408]

15. Nothing in this permit or in any permit shield can alter or affect:

    (A) Under Section 303 of the federal Clean Air Act, the provisions for emergency orders;

    (B) The liability of the operator for any violation of applicable requirements prior to or at the time of permit issuance;

    (C) The applicable requirements of the Acid Rain Program, Regulation XXXI;

    (D) The ability of EPA to obtain information from the operator pursuant to Section 114 of the federal Clean Air Act;

    (E) The applicability of state or local requirements that are not "applicable requirements", as defined in Rule 3000, at the time of permit issuance but which do apply to the facility, such as toxics requirements unique to the State; and

    (F) The applicability of regulatory requirements with compliance dates after the permit issuance date. [3004(c)(3)]

16. For any portable equipment that requires an AQMD or state permit or registration, excluding a) portable engines, b) military tactical support equipment and c) AQMD-permitted portable equipment that are not a major source, are not located at the facility for more than 12 consecutive months after commencing operation, and whose operation does not conflict with the terms or conditions of this Title V permit: 1) the facility operator shall keep a copy of the AQMD or state permit or registration; 2) the equipment operator shall comply with the conditions on the permit or registration and all other regulatory requirements; and 3) the facility operator shall treat the permit or registration as a part of its Title V permit, subject to recordkeeping, reporting and certification requirements. [3004(a)(1)]

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EMERGENCY PROVISIONS

17. An emergency[1] shall not be an affirmative defense to an action brought for noncompliance with a technology-based emission limit only if:

(A) Properly signed, contemporaneous operating records or other credible evidence demonstrate that:

(1) An emergency occurred and the operator can identify the cause(s) of the emergency;

(2) The facility was operated properly (i.e. operated and maintained in accordance with the manufacturer's specifications, and in compliance with all regulatory requirements or a compliance plan), before the emergency occurred;

(3) The operator took all reasonable steps to minimize levels of emissions that exceeded emissions standard, or other requirements in the permit; and,

(4) The operator submitted a written notice of the emergency to the AQMD within two working days of the time when the emissions limitations were exceeded due to the emergency. The notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken, and

(B) The operator complies with the breakdown provisions of Rule 430 – Breakdown Provisions, or subdivision (i) of Rule 2004 – Requirements, whichever is applicable. [3002(g), 430, 2004(i)]

18. The operator is excused from complying with any regulatory requirement that is suspended by the Executive Officer during a state of emergency or state of war emergency, in accordance with Rule 118 - Emergencies. [118]

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1 "Emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the operator, including acts of God, which: (A) requires immediate corrective action to restore normal operation; and (B) causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency; and (C) is not caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

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RECORDKEEPING PROVISIONS

19. In addition to any other recordkeeping requirements specified elsewhere in this permit, the operator shall keep records of required monitoring information, where applicable, that include:

    (A) The date, place as defined in the Title V permit, and time of sampling or measurements;

    (B) The date(s) analyses were performed;

    (C) The company or entity that performed the analyses;

    (D) The analytical techniques or methods used;

    (E) The results of such analyses; and

    (F) The operating conditions as existing at the time of sampling or measurement. [3004(a)(4)(B)]

20. The operator shall maintain records pursuant to Rule 109 and any applicable material safety data sheet (MSDS) for any equipment claimed to be exempt from a written permit by Rule 219 based on the information in those records. [219(t)]

21. The operator shall keep all records of monitoring data required by this permit or by regulatory requirements for a period of at least five years from the date of the monitoring sample, measurement, report, or application. [3004(a)(4)(E)]

REPORTING PROVISIONS

22. The operator shall comply with the following requirements for prompt reporting of deviations:

    (A) Breakdowns shall be reported as required by Rule 430 – Breakdown Provisions or subdivision (i) of Rule 2004 - Requirements, whichever is applicable.

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(B) [illegible] deviations from permit or applicable rule emission limitations, equipment operating conditions, or work practice standards, determined by observation or by [illegible] or testing required by the permit or applicable rules that result in emissions greater than those allowed by the permit or applicable rules shall be reported within 72 hours (unless a shorter reporting period is specified in an applicable State or Federal Regulation) of discovery of the deviation by contacting AQMD enforcement personnel assigned to this facility or otherwise calling (800) CUT-SMOG.

(C) A written report of such deviations reported pursuant to (B), and any corrective actions or preventative measures taken, shall be submitted to AQMD, in an AQMD approved format, within 14 days of discovery of the deviation.

(D) All other deviations shall be reported with the monitoring report required by condition no. 23. [3004(a)(5)]

23. Unless more frequent reporting of monitoring results are specified in other permit conditions or in regulatory requirements, the operator shall submit reports of any required monitoring to the AQMD at least twice per year. The report shall include a) a statement whether all monitoring required by the permit was conducted; and b) identification of all instances of deviations from permit or regulatory requirements. A report for the first six calendar months of the year is due by August 31 and a report for the last six calendar months of the year is due by February 28. [3004(a)(4)(F)]

24. The operator shall submit to the Executive Officer and to the Environmental Protection Agency (EPA), an annual compliance certification. For RECLAIM facilities, the certification is due when the Annual Permit Emissions Program (APEP) report is due and shall cover the same reporting period. For other facilities, the certification is due on March 1 for the previous calendar year. The certification need not include the period preceding the date the initial Title V permit was issued. Each compliance certification shall include:

(A) Identification of each permit term or condition that is the basis of the certification;

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(B) The [illegible] status during the reporting period;

(C) Whether compliance was continuous or intermittent,

(D) The method(s) used to determine compliance over the reporting period and currently, and

(E) Any other facts specifically required by the Executive Officer to determine compliance.

The EPA copy of the certification shall be sent to: Director of the Air Division Attn: Air-3 USEPA, Region IX 75 Hawthorne St. San Francisco, CA 94105 [3004(a)(10)(E)]

25. All records, reports, and documents required to be submitted by a Title V operator to AQMD or EPA shall contain a certification of accuracy consistent with Rule 3003(c)(7) by a responsible official (as defined in Rule 3000). [3004(a)(12)]

PERIODIC MONITORING

26. All periodic monitoring required by this permit pursuant to Rule 3004(a)(4)(c) is based on the requirements and justifications in the AQMD document "Periodic Monitoring Guidelines for Title V Facilities" or in case-by-case determinations documented in the TitleV application file. [3004(a)(4)]

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FACILITY RULES

This facility is subject to the following rules and regulations

With the exception of Rule 402, 473, 477, 1118 and Rules 1401 through 1420, the following rules that are designated as non-federally enforceable are pending EPA approval as part of the state implementation plan. Upon the effective date of that approval, the approved rule(s) will become federally enforceable, and any earlier versions of those rules will no longer be federally enforceable.

RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
RULE 104	1-9-1976	Federally enforceable
RULE 109	5-2-2003	Federally enforceable
RULE 1107	1-6-2006	Federally enforceable
RULE 1107	11-4-2005	Non federally enforceable
RULE 1110.2	2-1-2008	Federally enforceable
RULE 1110.2	9-7-2012	Non federally enforceable
RULE 1113	6-3-2011	Federally enforceable
RULE 1113	9-6-2013	Non federally enforceable
RULE 1122	10-1-2004	Federally enforceable
RULE 1122	5-1-2009	Non federally enforceable
RULE 1140	2-1-1980	Federally enforceable
RULE 1140	8-2-1985	Non federally enforceable
RULE 1146	11-1-2013	Federally enforceable
RULE 1146	9-5-2008	Non federally enforceable
RULE 1146.2	1-7-2005	Non federally enforceable
RULE 1146.2	5-5-2006	Federally enforceable
RULE 1147	9-9-2011	Non federally enforceable
RULE 1155	5-2-2014	Non federally enforceable
RULE 1168	1-7-2005	Federally enforceable
RULE 1171	2-1-2008	Federally enforceable
RULE 1171	5-1-2009	Non federally enforceable
RULE 1179	3-6-1992	Federally enforceable

IRVINE RANCH WATER DIST

SECTION K: TITLE V Administration

RULE	Adopted/Amended Date	FEDERAL Enforceability
RULE 118	12-7-1995	Non federally enforceable
RULE 1303	5-10-1996	Federally enforceable
RULE 1303(a)(1)-BACT	12-6-2002	Non federally enforceable
RULE 1303(a)(1)-BACT	5-10-1996	Federally enforceable
RULE 1303(b)(1)-Modeling	12-6-2002	Non federally enforceable
RULE 1303(b)(1)-Modeling	5-10-1996	Federally enforceable
RULE 1303(b)(2)-Offset	12-6-2002	Non federally enforceable
RULE 1303(b)(2)-Offset	5-10-1996	Federally enforceable
RULE 1304(a)-Modeling and Offset Exemption	6-14-1996	Federally enforceable
RULE 1304(c)-Offset Exemption	6-14-1996	Federally enforceable
RULE 1309.1	1-8-2010	Non federally enforceable
RULE 1309.1	5-3-2002	Federally enforceable
RULE 1401	9-10-2010	Non federally enforceable
RULE 1411	3-1-1991	Non federally enforceable
RULE 1415	12-3-2010	Non federally enforceable
RULE 1470	5-4-2012	Non federally enforceable
RULE 1472	3-7-2008	Non federally enforceable
RULE 204	10-8-1993	Federally enforceable
RULE 217	1-5-1990	Federally enforceable
RULE 219	5-3-2013	Non federally enforceable
RULE 219	9-4-1981	Federally enforceable
RULE 3002	11-14-1997	Federally enforceable
RULE 3002	11-5-2010	Non federally enforceable
RULE 3003	11-14-1997	Federally enforceable
RULE 3003	11-5-2010	Non federally enforceable
RULE 3004	12-12-1997	Federally enforceable
RULE 3004(a)(4)-Periodic Monitoring	12-12-1997	Federally enforceable
RULE 3005	11-14-1997	Federally enforceable
RULE 3005	11-5-2010	Non federally enforceable
RULE 3007	10-8-1993	Federally enforceable

[illegible]
[illegible] RANCH WATER DIST

SECTION K: TITLE V Administration

[illegible]	[illegible]	[illegible] Date	FEDERAL Enforceability
RULE [illegible]	6-6-2014		Non federally enforceable
[illegible]	[illegible]		Non federally enforceable
RULE 306	[illegible]		Non federally enforceable
RULE 401	11-9-2001		Non federally enforceable
RULE 401	3-2-1984		Federally enforceable
RULE 402	[illegible]		Non federally enforceable
RULE 403	6-3-2005		Federally enforceable
RULE 404	2-7-1986		Federally enforceable
RULE 405	2-7-1986		Federally enforceable
RULE 407	4-2-1982		Federally enforceable
RULE 408	5-7-1976		Federally enforceable
RULE 409	8-7-1981		Federally enforceable
RULE 429	12-21-1990		Non federally enforceable
RULE 430	7-12-1996		Non federally enforceable
RULE 431.1	6-12-1998		Federally enforceable
RULE 431.2	5-4-1990		Federally enforceable
RULE 431.2	9-15-2000		Non federally enforceable
RULE 442	12-15-2000		Federally enforceable
RULE 461	3-7-2008		Non federally enforceable
RULE 461	4-6-2012		Federally enforceable
RULE 480	10-7-1977		Federally enforceable
RULE 701	6-13-1997		Federally enforceable
40CFR 60 Subpart IIII	1-30-2013		Federally enforceable
40CFR 60 Subpart JJJJ	1-18-2008		Federally enforceable
40CFR 63 Subpart ZZZZ	1-30-2013		Federally enforceable
40CFR 63SubpartZZZZ	3-9-2011		Federally enforceable
40CFR 82 Subpart B	7-14-1992		Federally enforceable
40CFR 82 Subpart F	6-25-2013		Federally enforceable

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX A: NOX AND SOX EMITTING EQUIPMENT EXEMPT FROM WRITTEN PERMIT PURSUANT TO RULE 219

NONE

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 06-03-2011]

(1) Except as provided in paragraphs (c)(3), (c)(4), and designated coatings averaged under (c)(6) of Rule 1113, no person shall supply, sell, offer for sale, market, manufacture, blend, repackage, apply, store at a worksite, or solicit the application of any architectural coating within the District:

(A) That is listed in the Table of Standards 1 and contains VOC (excluding any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified; or

(B) That is not listed in the Table of Standards 1, and contains VOC (excluding any colorant added to tint bases) in excess of 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, until January 1, 2014, at which time the limit drops to 50 grams of VOC per liter of coating, less water, less exempt compounds (0.42 pounds per gallon).

(2) No person within the District shall add colorant at the point of sale that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding VOC limit specified in the Table of Standards 2, after the effective date specified.

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 06-03-2011]
TABLE OF STANDARDS 1
VOC LIMITS

Grams of VOC Per Liter of Coating, Less Water and Less Exempt Compounds

COATING CATEGORY	Ceiling Limit[1]	Current Limit[2]	Effective Date		
			7/1/08	1/1/12	1/1/14
Bond Breakers		350			
Clear Wood Finishes		275			
Varnish	350	275			
Sanding Sealers	350	275			
Lacquer		275			
Concrete-Curing Compounds		100			
Concrete-Curing Compounds For Roadways and Bridges[3]		350			
Concrete Surface Retarder		250			50
Driveway Sealer		100		50	
Dry-Fog Coatings		150			50
Faux Finishing Coatings					
Clear Topcoat		350		200	
Decorative Coatings		350			100
Glazes		350			
Japan		350			
Trowel Applied Coatings		350		150	50
Fire-Proofing Coatings		350			150
Flats	250	50	50		
Floor Coatings	100	50			
Form Release Compound		250			100
Graphic Arts (Sign) Coatings		500			150
Industrial Maintenance (IM) Coatings	420	100			
High Temperature IM Coatings		420			
Non-Sacrificial Anti-Graffiti Coatings		100			
Zinc-Rich IM Primers	340	100			
Magnesite Cement Coatings		450			
Mastic Coatings		300			100
Metallic Pigmented Coatings	500	500			150
Multi-Color Coatings		250			
Nonflat Coatings	150	50			
Pre-Treatment Wash Primers		420			
Primers, Sealers, and Undercoaters	200	100			
Reactive Penetrating Sealers		350			
Recycled Coatings		250			
Roof Coatings	250	50			
Roof Coatings, Aluminum		100			

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 06-03-2011]

Roof Primers, Bituminous	350	350			
Rust Preventative Coatings	400	100			
Stone Consolidant		450			
Sacrificial Anti-Graffiti Coatings		100		50	
Shellac					
Clear		730			
Pigmented		550			
Specialty Primers	350	100			
Stains		100			

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 06-03-2011]

COATING CATEGORY	Ceiling Limit[1]	Current Limit[2]	Effective Date		
			7/1/08	1/1/12	1/1/14
Stains, Interior	250	250			
Swimming Pool Coatings					
Repair		340			
Other		340			
Traffic Coatings		100			
Waterproofing Sealers	250	100			
Waterproofing Concrete/Masonry Sealers	400	100			
Wood Preservatives		350			

1. The specified ceiling limits are applicable to products sold under the Averaging Compliance Option.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards.
3. Does not include compounds used for curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas.

TABLE OF STANDARDS 1 (cont.)
VOC LIMITS

Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

TABLE OF STANDARDS 2
VOC LIMITS FOR COLORANTS

Grams of VOC Per Liter of Colorant
Less Water and Less Exempt Compounds

COLORANT	Limit[4]
Architectural Coatings, excluding IM Coatings	50
Solvent-Based IM	600
Waterborne IM	50

4. Effective January 1, 2014.

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 09-06-2013]

(1) Except as provided in paragraphs (c)(3), (c)(4), and designated coatings averaged under (c)(6), no person shall supply, sell, offer for sale, market, manufacture, blend, repackage, apply, store at a worksite, or solid the application of any architectural coating within in the District:

(A) That is listed in the Table of Standards 1 and contains VOC (exclusing any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified; or

(B) That is not listed in the Table of Standards 1, and contains VOC (excluding any colorant added to tint bases) in excess of 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, until January 1, 2014, at which time the limit drops to 50 grams of VOC per liter of coating, less water, less exempt compounds (0.42 pounds per gallon).

(2) No person within the District shall add colorant at the point of sale that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding VOC limit specified in the Table of Standards 2, after the effective date specified.

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
|RULE 1113 09-06-2013|
TABLE OF STANDARDS 1
VOC LIMITS

Grams of VOC Per Liter of Coating, Less Water and Less Exempt Compounds

COATING CATEGORY	Ceiling Limit[1]	Current Limit[2]	Effective Date		
			7/1/08	1/1/12	1/1/14
Bond Breakers		350			
Clear Wood Finishes		275			
Varnish	350	275			
Sanding Sealers	350	275			
Lacquer		275			
Concrete-Curing Compounds		100			
Concrete-Curing Compounds For Roadways and Bridges[3]		350			
Concrete Surface Retarder		250			50
Driveway Sealer		100		50	
Dry-Fog Coatings		150			50
Faux Finishing Coatings					
Clear Topcoat		350		200	100
Decorative Coatings		350			
Glazes		350			
Japan		350			
Trowel Applied Coatings		350		150	50
Fire-Proofing Coatings		350			150
Flats	250	50	50		
Floor Coatings	100	50			
Form Release Compound		250			100
Graphic Arts (Sign) Coatings		500			150
Industrial Maintenance (IM) Coatings	420	100			
High Temperature IM Coatings		420			
Non-SacrificialAnti-Graffiti Coatings		100			
Zinc-Rich IM Primers		100			
Magnesite Cement Coatings		450			
Mastic Coatings		300			100
Metallic Pigmented Coatings	500	500			150
Multi-Color Coatings		250			
Nonflat Coatings	150	50			
Pre-Treatment Wash Primers		420			
Primers, Sealers, and Undercoaters		100			
Reactive Penetrating Sealers		350			

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 09-06-2013]

Recycled Coatings		250			
Roof Coatings		50			
Roof Coatings, Aluminum		100			
Roof Primers, Bituminous		350			
Rust Preventative Coatings	400	100			
Sacrificial Anti-Graffiti Coatings		100		50	
Shellac					
Clear		730			

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 09-06-2013]

COATING CATEGORY	Ceiling Limit[1]	Current Limit[2]	Effective Date		
			7/1/08	1/1/12	1/1/14
Pigmented		550			
Specialty Primers		100			
Stains	350	100			
Stains, Interior	250	250			
Stone Consolidant		450			
Swimming Pool Coatings					
Repair		340			
Other		340			
Traffic Coatings		100			
Waterproofing Sealers		100			
Waterproofing Concrete/Masonry Sealers		100			
Wood Preservatives		350			

1 The specified ceiling limits are applicable to products sold under the Averaging Compliance Option.

2 The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards.

3. Does not include compounds used for curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas.

TABLE OF STANDARDS 1 (cont.)
VOC LIMITS

Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

TABLE OF STANDARDS 2
VOC LIMITS FOR COLORANTS

Grams of VOC Per Liter of Colorant
Less Water and Less Exempt Compounds

COLORANT ADDED TO	Limit[4]
Architectural Coatings, excluding IM Coatings	50
Solvent-Based IM	600
Waterborne IM	50

4. Effective January 1, 2014.

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1140 02-01-1980]

(1) The operator shall not, if he complies with an applicable performance standard in section (b)(4) of Rule 1140, discharge into the atmosphere from any abrasive blasting 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 as No. 2 on the Ringelmann 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 (1)(A).

(2) The operator shall not, if he is not complying with an applicable performance standard in section (b)(4) of Rule 1140, discharge into the atmosphere from any abrasive blasting 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 as No. 1 on the Ringelmann 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 (2)(A).

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1140 08-02-1985]

(1) The operator shall not, if he complies with an applicable performance standard in section (b)(4) of Rule 1140, discharge into the atmosphere from any abrasive blasting 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 as No. 2 on the Ringelmann 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 (1)(A).

(2) The operator shall not, if he is not complying with an applicable performance standard in section (b)(4) of Rule 1140, discharge into the atmosphere from any abrasive blasting 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 as No. 1 on the Ringelmann 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 (2)(A).

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 02-01-2008]

(1) Solvent Requirements

A person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

	CURRENT LIMITS*	EFFECTIVE 1/1/2008*	EFFECTIVE 1/1/2009
SOLVENT CLEANING ACTIVITY	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application			
(i) General	25 (0.21)		
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)		
(iii) Medical Devices & Pharmaceuticals	800 (6.7)		
(B) Repair and Maintenance Cleaning			
(i) General	25 (0.21)		
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)		

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 02-01-2008]

	CURRENT LIMITS*	EFFECTIVE 1/1/2008*	EFFECTIVE 1/1/2009
SOLVENT CLEANING ACTIVITY (cont.)	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**
(iii) Medical Devices & Pharmaceuticals			
(A) Tools, Equipment, & Machinery	800 (6.7)		
(B) General Work Surfaces	600 (5.0)		
(C) Cleaning of Coatings or Adhesives Application Equipment	25 (0.21)		
(D) Cleaning of Ink Application Equipment			
(i) General	25 (0.21)		
(ii) Flexographic Printing	25 (0.21)		
(iii) Gravure Printing			
(A) Publication	100 (0.83)		
(B) Packaging	25 (0.21)		
(iv) Lithographic (Offset) or Letter Press Printing			
(A) Roller Wash, Blanket Wash, & On-Press Components			
(I) Newsprint	100 (0.83)		

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 02-01-2008]

	CURRENT LIMITS*	EFFECTIVE 1/1/2008*	EFFECTIVE 1/1/2009
SOLVENT CLEANING ACTIVITY (cont.)	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**
(II) Other Substrates	500 (4.2)	100 (0.83)	
(B) Removable Press Components	25 (0.21)		
(v) Screen Printing	500 (4.2)	100 (0.83)	
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	650 (5.4)	650 (5.4)	100 (0.83)
(vii) Specialty Flexographic Printing	100 (0.83)		
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)		

* The specified limits remain in effect unless revised limits are listed in subsequent columns.

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 05-01-2009]

(1) Solvent Requirements

A person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	
(iii) Medical Devices & Pharmaceuticals	800 (6.7)	
(B) Repair and Maintenance Cleaning		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 05-01-2009]

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY (cont.)	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**
(iii) Medical Devices & Pharmaceuticals		
(A) Tools, Equipment, & Machinery	800 (6.7)	
(B) General Work Surfaces	600 (5.0)	
(C) Cleaning of Coatings or Adhesives Application Equipment	25 (0.21)	
(D) Cleaning of Ink Application Equipment		
(i) General	25 (0.21)	
(ii) Flexographic Printing	25 (0.21)	
(iii) Gravure Printing		
(A) Publication	100 (0.83)	
(B) Packaging	25 (0.21)	
(iv) Lithographic (Offset) or Letter Press Printing		
(A) Roller Wash, Blanket Wash, & On-Press Components	100 (0.83)	

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 05-01-2009]

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY (cont.)	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**
(B) Removable Press Components	25 (0.21)	
(v) Screen Printing	100 (0.83)	
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	650 (5.4)	100 (0.83)
(vii) Specialty Flexographic Printing	100 (0.83)	
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)	

* The specified limits remain in effect unless revised limits are listed in subsequent columns.

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 404 02-07-1986]

The operator shall not discharge into the atmosphere from this equipment, particulate matter in excess of the concentration at standard conditions, shown in Table 404(a). Where the volume discharged is between figures listed in the Table, the exact concentration permitted to be discharged shall be determined by linear interpolation.

For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.

TABLE 404(a)

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter" Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
25 or less	883 or less	450	0.196	900	31780	118	0.0515
30	1059	420	.183	1000	35310	113	.0493
35	1236	397	.173	1100	38850	109	.0476
40	1413	377	.165	1200	42380	106	.0463
45	1589	361	.158	1300	45910	102	.0445

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 404 02-07-1986]

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter" Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
50	1766	347	.152	1400	49440	100	.0437
60	2119	324	.141	1500	52970	97	.0424
70	2472	306	.134	1750	61800	92	.0402
80	2825	291	.127	2000	70630	87	.0380
90	3178	279	.122	2250	79460	83	.0362
100	3531	267	.117	2500	88290	80	.0349
125	4414	246	.107	3000	105900	75	.0327
150	5297	230	.100	4000	141300	67	.0293
175	6180	217	.0947	5000	176600	62	.0271
200	7063	206	.0900	6000	211900	58	.0253
250	8829	190	.0830	8000	282500	52	.0227
300	10590	177	.0773	10000	353100	48	.0210
350	12360	167	.0730	15000	529700	41	.0179
400	14130	159	.0694	20000	706300	37	.0162
450	15890	152	.0664	25000	882900	34	.0148

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 404 02-07-1986]

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter"Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
500	17660	146	.0637	30000	1059000	32	.0140
600	21190	137	.0598	40000	1413000	28	.0122
700	24720	129	.0563	50000	1766000	26	.0114
800	28250	123	.0537	70000 or more	2472000 or more	23	.0100

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 405 02-07-1986]

The operator shall not discharge into the atmosphere from this equipment, solid particulate matter including lead and lead compounds in excess of the rate shown in Table 405(a).

Where the process weight per hour is between figures listed in the table, the exact weight of permitted discharge shall be determined by linear interpolation.

For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.

TABLE 405(a)

Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All Points of Process		Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All points of Process	
Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour
100 or less	220 or less	0.450	0.99	9000	19840	5.308	11.7
150	331	0.585	1.29	10000	22050	5.440	12.0
200	441	0.703	1.55	12500	27560	5.732	12.6
250	551	0.804	1.77	15000	33070	5.982	13.2
300	661	0.897	1.98	17500	38580	6.202	13.7
350	772	0.983	2.17	20000	44090	6.399	14.1
400	882	1.063	2.34	25000	55120	6.743	14.9
450	992	1.138	2.51	30000	66140	7.037	15.5
500	1102	1.209	2.67	35000	77160	7.296	16.1
600	1323	1.340	2.95	40000	88180	7.527	16.6

FACILITY PERMIT TO OPERATE
IRVINE RANCH WATER DIST

APPENDIX B: RULE EMISSION LIMITS
[RULE 405 02-07-1986]

Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All Points of Process		Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All points of Process	
Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour
700	1543	1.461	3.22	45000	99210	7.738	17.1
800	1764	1.573	3.47	50000	110200	7.931	17.5
900	1984	1.678	3.70	60000	132300	8.277	18.2
1000	2205	1.777	3.92	70000	154300	8.582	18.9
1250	2756	2.003	4.42	80000	176400	8.854	19.5
1500	3307	2.206	4.86	90000	198400	9.102	20.1
1750	3858	2.392	5.27	100000	220500	9.329	20.6
2000	4409	2.563	5.65	125000	275600	9.830	21.7
2250	4960	2.723	6.00	150000	330700	10.26	22.6
2500	5512	2.874	6.34	175000	385800	10.64	23.5
2750	6063	3.016	6.65	200000	440900	10.97	24.2
3000	6614	3.151	6.95	225000	496000	11.28	24.9
3250	7165	3.280	7.23	250000	551200	11.56	25.5
3600	7716	3.404	7.50	275000	606300	11.82	26.1
4000	8818	3.637	8.02	300000	661400	12.07	26.6
4500	9921	3.855	8.50	325000	716500	12.30	27.1
5000	11020	4.059	8.95	350000	771600	12.51	27.6
6000	13230	4.434	9.78	400000	881800	12.91	28.5
7000	15430	4.775	10.5	450000	992100	13.27	29.3
8000	17640	5.089	11.2	500000 or more	1102000 or more	13.60	30.0