

FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DISTRICT

PERMIT TO CONSTRUCT

GRANTED AS OF: TBD
A/N 517632

Equipment Description:

ALTERATION OF:

INTERNAL COMBUSTION ENGINE, ENGINE NO. 113, CATERPILLAR, MODEL NO. G379 SI-NA-HCR, RICH BURN, FOUR-STROKE CYCLE, 8 CYLINDER, 330 B.H.P., NATURAL GAS FIRED, WITH AN AIR TO FUEL RATIO CONTROLLER, ALTRONIC EPC-100, AND JOHNSON MATTHEY NON-SELECTIVE CATALYTIC REACTOR, MODEL MX-40, DRIVING AN AERATION BLOWER.

BY ADDITION OF:

SPARK IGNITION
MIRATECH NON-SELECTIVE CATALYTIC CONVERTER, MODEL SP-IQS-16X3-08X10-EC2

BY REMOVAL OF:

JOHNSON MATTHEY NON-SELECTIVE CATALYTIC REACTOR, MODEL MX-40

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 ONLY BE FIRED ON NATURAL GAS.
[RULE 204, RULE 1110.2]
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 204]
5. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF RULE 1110.2, RULE 431.1, AND 40 CFR 63 SUBPART ZZZZ.
[RULE 1110.2, RULE 431.1, 40CFR63 SUBPART ZZZZ]

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6. A NON-RESETTABLE OPERATIONAL TOTALIZING TIMER SHALL BE INSTALLED AND MAINTAINED TO INDICATE, IN CUMULATIVE HOURS, THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2, 40 CFR 63 SUBPART ZZZZ]
7. A FUEL METER SHALL BE INSTALLED AND MAINTAINED IN THE FUEL SUPPLY LINE TO THE ENGINE TO INDICATE THE FUEL USAGE IN CUBIC FEET, FOR EACH TYPE OF FUEL USED, AND FUEL USAGE SHALL BE RECORDED.
[RULE 1110.2, RULE 3004(a)(4)]
8. THE ENGINE SHALL OPERATE BETWEEN 1044 AND 1276 RPM, EXCEPT DURING START-UP OR SHUT-DOWN OPERATION WHICH DOES NOT EXCEED 30 MINUTES PER EVENT.
[RULE 1110.2]
9. THE OPERATOR SHALL MAINTAIN AND IMPLEMENT AN INSPECTION AND MONITORING (I&M) PLAN, BASED ON EQUIPMENT AS DESCRIBED IN THIS PERMIT IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF RULE 1110.2(f)(1)(D).
[RULE 1110.2]
10. THE CONCENTRATION OF THE FOLLOWING COMPOUNDS MEASURED AT THE OUTLET OF THE ENGINE SHALL NOT EXCEED THE FOLLOWING EFFECTIVE JULY 1, 2011, EXCEPT DURING COLD START WHICH SHALL NOT EXCEED 30 MINUTES, UNLESS OTHERWISE APPROVED BY SCAQMD:

NOX: 11 PPMVD AT 15% O₂
VOC: 30 PPMVD AT 15% O₂
CO: 250 PPMVD AT 15% O₂
[RULE 1110.2]
11. THIS ENGINE SHALL BE EQUIPPED WITH AN OXYGEN SENSOR AT THE EXHAUST OF THE ENGINE WITH FEEDBACK CONTROL.
[RULE 1110.2]
12. THE OPERATOR SHALL CHANGE OIL AND FILTER, INSPECT SPARK PLUGS, HOSES, AND BELTS AND REPLACE WHEN NECESSARY, EVERY 1440 HOURS OR OPERATION OR ANNUALLY, WHICHEVER COMES FIRST.
[40 CFR 63 SUBPART ZZZZ]

Periodic Monitoring:

13. THE OPERATOR SHALL DETERMINE COMPLIANCE WITH THE CO, NOX, AND VOC EMISSION LIMITS BY CONDUCTING A SOURCE TEST AT LEAST ONCE EVERY 2 YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. THE SOURCE TEST FREQUENCY MAY BE REDUCED TO ONCE EVERY THREE YEARS IF THE ENGINE HAS OPERATED LESS THAN 2,000 HOURS SINCE THE LAST SOURCE TEST. THE TEST SHALL BE CONDUCTED USING THE TEST METHOD AS STATED IN RULE 1110.2. THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS TO DEMONSTRATE COMPLIANCE WITH RULE 1110.2 CONCENTRATION LIMITS. THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.
[RULE, 1110.2, RULE 3004 (a)(4)]

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14. THIS ENGINE SHALL NOT BE OPERATED WITHOUT THE USE OF AN AUTOMATIC AIR TO FUEL RATIO CONTROLLER WHICH SHALL BE MAINTAINED AND KEPT IN PROPER OPERATING CONDITIONS AT ALL TIMES AS SPECIFIED BY THE MANUFACTURER.
[RULE 1110.2, RULE 3004(a)(4)]
15. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2(f)(1)(H)(i) THROUGH (iii) – AMENDED 7/9/2010, PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.
[RULE 1110.2, RULE 3004(a)(4)]
16. 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. THE NUMBER OF HOURS THE ENGINE IS OPERATED ON SPECIFIC FUEL OR FUEL BLENDS USED AND THE FUEL USED.
 - C. FUEL CONSUMPTION OF EACH FUEL TYPE.
 - D. CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST.[RULE 1110.2, RULE 3004(a)(4)]
17. 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, RULE 3004(a)(4)]
18. THE OPERATOR SHALL INSTALL AND MAINTAIN A TEMPERATURE GAUGE AND RECORDING SYSTEM TO INDICATE ACCURATELY THE TEMPERATURE AT THE INLET OF THE CATALYST.
[RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
19. THE OPERATOR SHALL INSTALL AND MAINTAIN A TEMPERATURE GAUGE AND RECORDING SYSTEM TO INDICATE ACCURATELY THE TEMPERATURE AT THE OUTLET OF THE CATALYST.
[RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
20. THE TEMPERATURE AT THE OUTLET OF THE CATALYST SHALL NOT EXCEED 1350 DEGREES FAHRENHEIT.
[RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
21. THE TEMPERATURE OF THE EXHAUST GAS ENTERING THE CATALYST SHALL BE MAINTAINED BETWEEN 600 DEGREES F AND 1250 DEGREES F., EXCEPT DURING START-UP OR SHUT-DOWN OPERATION WHICH DOES NOT EXCEED 30 MINUTES PER EVENT.
[RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
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 AQMD PERSONNEL UPON REQUEST.
[RULE 1110.2, RULE 3004(a)(4)]

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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: 0.60 G/BHP-HR, RULE 1303-BACT
 - CO: 2000 PPMVD AT 15% O₂, RULE 1110.2
 - NOX: 0.15 G/BHP-HR, RULE 1303-BACT
 - NOX: 45 PPMVD AT 15% O₂, RULE 1110.2
 - VOC: 0.15 G/BHP-HR, RULE 1303-BACT
 - VOC: 250 PPMVD AT 15% O₂, RULE 1110.2

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PERMIT TO CONSTRUCT

GRANTED AS OF: TBD
A/N 517633

Equipment Description:

ALTERATION OF:

INTERNAL COMBUSTION ENGINE, ENGINE NO. 33, CATERPILLAR, MODEL NO. G379, SERIAL NO. 72B456, EIGHT CYLINDERS, SPARK IGNITION, 330 BHP, NATURALLY ASPIRATED, NATURAL GAS FIRED, WITH A MIRATECH EQUINOX CATALYTIC SILENCER MODEL E1300-6-D, AN AIR/FUEL RATIO CONTROLLER, ALTRONIC EPC-100, AND A WASTE HEAT RECOVERY SYSTEM, DRIVING AN AIR BLOWER.

BY ADDITION OF:

RICH BURN
MIRATECH NON-SELECTIVE CATALYTIC CONVERTER, MODEL SP-IQS-16X3-08X10-EC2

BY REMOVAL OF:

SERIAL NO. 72B456
MIRATECH EQUINOX CATALYTIC SILENCER MODEL E1300-6-D

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]
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[RULE 204]
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[RULE 1110.2, 40 CFR 63 SUBPART ZZZZ]
7. A FUEL METER SHALL BE INSTALLED AND MAINTAINED IN THE FUEL SUPPLY LINE TO THE ENGINE TO INDICATE THE FUEL USAGE IN CUBIC FEET, FOR EACH TYPE OF FUEL USED, AND FUEL USAGE SHALL BE RECORDED.
[RULE 1110.2, RULE 3004(a)(4)]
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NOX: 11 PPMVD AT 15% O₂
VOC: 30 PPMVD AT 15% O₂
CO: 250 PPMVD AT 15% O₂
[RULE 1110.2]
11. THIS ENGINE SHALL BE EQUIPPED WITH AN OXYGEN SENSOR AT THE EXHAUST OF THE ENGINE WITH FEEDBACK CONTROL.
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 - NOX: 45 PPMVD AT 15% O₂, RULE 1110.2
 - VOC: 250 PPMVD AT 15% O₂, RULE 1110.2