

FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DISTRICT

PERMIT TO CONSTRUCT

GRANTED AS OF: TBD
A/N R-503050

Equipment Description:

BOILER, 5.3 MMBTU PER HOUR, DIGESTER GAS FIRED, WITH ULTRA LOW NO_x BURNER.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT TO CONSTRUCT 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. EASTERN MUNICIPAL WATER DISTRICT SHALL INSTALL, A JOHNSTON BOILER MODEL 509, 5.3 MMBTU/HR, DIGESTER GAS FIRED, WITH ULTRA-LOW NO_x BURNER; OR A HURST BOILER, SERIES 500, 5.3 MMBTU/HR, DIGESTER GAS FIRED, WITH ULTRA-LOW NO_x BURNER; OR AN EQUIVALENT BOILER.
[RULE 204]
4. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO SCAQMD FOR APPROVAL, THE FINAL BOILER DESIGN DRAWINGS, P&I DIAGRAMS, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, DIMENSIONS, SIZE AND MAXIMUM CAPACITY) AND MANUFACTURER'S EMISSION CERTIFICATION, PRIOR TO INSTALLATION OF THE EQUIPMENT.
[RULE 204]
5. THIS BOILER SHALL BE FIRED PRIMARILY ON DIGESTER GAS. NATURAL GAS MAY BE USED AS A STANDBY FUEL AS ALLOWED PER RULE 1146.
[RULE 204, 1146]
6. NON-RESETTABLE, TOTALIZING FUEL METERS SHALL BE INSTALLED AND MAINTAINED IN EACH FUEL SUPPLY LINE TO MEASURE AND RECORD THE AMOUNT OF FUEL BURNED.
RULE 1303(b)(1), 1303(b)(2) – MODELING & OFFSET]
7. WHEN IN OPERATION, TOTAL HEAT INPUT FOR THIS EQUIPMENT SHALL NOT EXCEED 5.3 MMBTU/HR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE (BTU/SCF) OF FUEL GAS BURNED IN THIS EQUIPMENT BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
[RULE 1303(b)(1), 1303(b)(2) – MODELING & OFFSET]

FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DISTRICT

8. THIS EQUIPMENT SHALL BE EQUIPPED WITH A CONTROL SYSTEM TO REGULATE AUTOMATICALLY 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]

9. EMISSIONS SHALL NOT EXCEED THE FOLLOWING LIMITS AND SHALL BE MEASURED BY VOLUME AT 3% O₂, DRY BASIS.

FUEL USED	NOX AS NO ₂	CO
DIGESTER GAS	30 PPMV	<100 PPMV
NATURAL GAS	12 PPMV	<50 PPMV

[RULE 1146, RULE 1303(a)(1) – BACT/LAER]

10. ON AND AFTER JANUARY 1, 2015, EMISSIONS OF NOX SHALL NOT EXCEED 15 PPMV (CORRECTED TO 3% O₂, DRY) WHILE FIRING ON DIGESTER GAS.
[RULE 1146]

11. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT AN INITIAL SOURCE TEST, AND SUBSEQUENT SOURCE TESTS ONCE EVERY FIVE YEARS THEREAFTER, 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 DISTRICT RULE 304 (NO CONFLICT OF INTEREST).
- B. A SOURCE TEST PROTOCOL SHALL BE SUBMITTED TO AQMD WITHIN 30 DAYS OF INITIAL START UP AND SHALL BE APPROVED BY AQMD 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 CONDUCTED WITHIN 60 CALENDAR DAYS AFTER NORMAL OPERATION OF THE EQUIPMENT HAS BEEN ESTABLISHED, BUT NO LATER THAN 180 DAYS AFTER INITIAL START UP.
- D. SOURCE TESTS SHALL BE PERFORMED 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.
- E. TWO COPIES OF THE SOURCE TEST RESULTS SHALL BE SUBMITTED TO AQMD 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. METHANE CONTENT FOR DIGESTER GAS

FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DISTRICT

- IV. TOTAL NON-METHANE ORGANICS FOR DIGESTER GAS AND EXHAUST GAS
 - V. SPECIATED TRACE ORGANICS FOR DIGESTER GAS AND EXHAUST GAS
 - VI. TOTAL PARTICULATES OF EXHAUST GAS
 - VII. OXIDES OF NITROGEN FOR EXHAUST GAS
 - VIII. CARBON MONOXIDE FOR EXHAUST GAS
 - IX. OXYGEN FOR EXHAUST GAS
 - X. HIGHER HEATING VALUE FOR DIGESTER GAS
 - XI. TOTAL SULFUR CONTENT, AS H₂S, PPMV FOR DIGESTER GAS
- [RULE 217, RULE 404, RULE 1146, RULE 1303(a)(1), 1303(b)(1), 1303(b)(2)-BACT, MODELING AND OFFSET, RULE 1401]

12. EMISSIONS FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

POLLUTANT	POUNDS PER HOUR
CO	0.41 (0.2 FOR NATURAL GAS)
NOX	0.20 (0.19 FOR NATURAL GAS)
PM10	0.06
ROG	0.047
SOX	0.095

[RULE 1303(a)(1)-BACT, RULE 1303(b)(2)-OFFSET]

13. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH APPLICABLE REQUIREMENTS OF 40 CFR 63 SUBPART DDDDD.
 [40 CFR 63 SUBPART DDDDD]
14. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
 [RULE 3004(A)(1)]

Periodic Monitoring:

15. THE OPERATOR SHALL DETERMINE COMPLIANCE WITH THE EMISSION LIMITS IN CONDITION NO. 12, AT LEAST ONCE EVERY FIVE YEARS USING AQMD-APPROVED TEST METHODS. THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS. THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING AND RECORDKEEPING REQUIREMENTS IN SECTION E AND K OF THIS PERMIT.

Emissions And Requirements:

16. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULE AND REGULATIONS:
- CO: 2000 PPMV, RULE 407
 - CO: 400 PPMV @ 3% O₂, DRY BASIS, RULE 1146
 - PM: 0.1 GR/SCF, RULE 409