

FACILITY PERMIT TO OPERATE MM LOPEZ ENERGY, LLC

Facility Equipment and Requirements (Section D)

This section consists of a table listing all permitted equipment at the facility, facility wide requirements, all individual Permits to 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. Also included are the rule origin and authority of each emission limit and permit condition.

FACILITY PERMIT TO OPERATE MM LOPEZ ENERGY, LLC

PERMITTED EQUIPMENT LIST

THE FOLLOWING IS A LIST OF ALL PERMITS TO OPERATE AT THIS FACILITY:

Application Number	Permit to Operate Number	Equipment Description	Page Number
323139	F99613	ICE (>500 HP) LANDFILL GAS	3
323140	F99614	ICE (>500 HP) LANDFILL GAS	7
495796	TBD-will supersede F99614	ICE (>500 HP) LANDFILL GAS	11
495797	TBD-will supersede F99613	ICE (>500 HP) LANDFILL GAS	15

NOTE: ANY APPLICATIONS THAT ARE STILL BEING PROCESSED AND HAVE NOT BEEN ISSUED PERMITS TO CONSTRUCT OR PERMITS TO OPERATE WILL NOT BE FOUND IN THIS TITLE V PERMIT.

FACILITY PERMIT TO OPERATE MM LOPEZ ENERGY, LLC

PERMIT TO OPERATE

Permit No. TBD
A/N 495796

Equipment Description:

LANDFILL GAS CONTROL SYSTEM (NO. 2) CONSISTING OF:

1. INLET GAS SCRUBBER, COMMON TO ENGINE NO. 1.
2. TWO GAS COMPRESSORS, VILTER MODEL VSS1801, 200 HP EACH, COMMON TO ENGINE NO. 1.
3. HEAT EXCHANGER, GAS-TO-GAS REHEAT, KETEMA, COMMON TO ENGINE NO. 1.
4. GAS COOLER, AIR-X-CHANGERS AERIAL COOLER, COMMON TO ENGINE NO. 1.
5. COALESCING FILTER, 0.5 MICRON FILTERING, COMMON TO ENGINE NO. 1.
6. INTERNAL COMBUSTION ENGINE (NO. 2), CATERPILLAR, MODEL G3616, LANDFILL GAS FIRED, 16 CYLINDERS, LEAN BURN, TURBOCHARGED, AFTERCOOLED, 4235 BHP, WITH 3050 KW 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) A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS (IN SCFM) BEING BURNED.
[RULE 1303(b)(2)-OFFSET]
- 5) A SAMPLING PORT SHALL BE INSTALLED AT THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A LANDFILL GAS SAMPLE.
[RULE 217, 431.1, 1150.1]

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- 6) TWO SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED IN THE ENGINE EXHAUST 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AT 90 DEGREES APART, AND SHALL CONSIST OF TWO 2-1/2 INCH WELDED NIPPLES WITH CAPS. AN EQUIVALENT METHOD FOR EMISSIONS SAMPLING MAY BE USED UPON APPROVAL OF THE SCAQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE PROVIDED.
[RULE 217]
- 7) THE HEAT INPUT RATE FOR THE LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 35 MILLION BTU'S PER HOUR. A LOG SHALL BE KEPT INDICATING THE AVERAGE HOURLY LANDFILL GAS FLOW RATE, % METHANE, AND HIGH HEATING VALUE (HHV) DETERMINED BASED ON ALL READINGS TAKEN EVERY 15-MINUTE INTERVAL. HOURLY AVERAGE HEAT INPUT RATE (BTU/HR) SHALL BE CALCULATED BASED ON AVERAGE HOURLY L LFG FLOW RATE (SCFM), % METHANE AND HHV VALUES.
[RULE 1303(b) (2)-OFFSET]
- 8) READINGS FOR THE BTU CONTENT OF THE LANDFILL GAS, AT THE INLET TO THE ENGINE SHALL BE TAKEN EVERY 15- MINUTE, USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 1303(b) (2)-OFFSET]
- 9) ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY.
[RULE 1303(b) (2)-OFFSET]
- 10) OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF TOXICS AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, 430, 1150.1]
- 11) THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO INTERFERE WITH THE ABILITY OF THE LANDFILL OPERATOR/OWNER TO COMPLY WITH SCAQMD RULE 1150.1 OR ANY OTHER DISTRICT, STATE OR FEDERAL RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

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- 12) THE APPLICANT SHALL CONDUCT ANNUAL PERFORMANCE TESTS (NO LATER THAN 45 DAYS OF ANNIVERSARY OF INITIAL TEST) IN ACCORDANCE WITH SCAQMD APPROVED TEST PROCEDURES AND FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 60 DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD 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 30 DAYS PRIOR TO START OF TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET FUEL GAS TO THE ENGINE AND THE ENGINE EXHAUST FOR:

- A. METHANE
- B. TOTAL NON-METHANE ORGANICS
- C. OXIDES OF NITROGEN (EXHAUST ONLY)
- D. CARBON MONOXIDE (EXHAUST ONLY)
- E. TOTAL PARTICULATES (EXHAUST ONLY)
- F. HYDROGEN SULFIDE (INLET ONLY)
- G. C1 THROUGH C3 SULFUR COMPOUNDS (SPECIATED, INLET ONLY)
- H. CARBON DIOXIDE
- I. ALDEHYDES (EXHAUST ONLY)
- J. RULE 1150.1 TABLE 1 COMPOUNDS
- K. OXYGEN
- L. NITROGEN
- M. MOISTURE CONTENT
- N. TEMPERATURE
- O. FLOW RATE
- P. BTU CONTENT (INLET ONLY)

[RULE 1150.1, 1303(a)(1)-BACT, 1303(b)(2)-OFFSET, 1401]

- 13) EMISSIONS RESULTING FROM THE ENGINE EXHAUST SHALL NOT EXCEED THE FOLLOWING:

POLLUTANT	LBS./DAY
NOX, AS NO2	107.5
SOX, AS SO2	6
CO	571
PM10	26
NMHC	45.6

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

- 14) OXIDES OF NITROGEN EMISSIONS SHALL NOT EXCEED 36 PPMV, AT 15% O2.
[RULE 1303(a)(1)-BACT]

- 15) CARBON MONOXIDE EMISSIONS SHALL NOT EXCEED 265 PPMV, AT 15% O2.
[RULE 1303(a)(1)-BACT]

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- 16) A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) SHALL BE INSTALLED AND OPERATED TO MEASURE THE ENGINE EXHAUST STACK CONCENTRATION FOR NOX AND O₂, ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NOX CONCENTRATION TO A CORRECTED NOX CONCENTRATION AT 15% O₂ AND CONTINUOUSLY RECORD THE STACK NOX CONCENTRATION, STACK O₂ CONCENTRATION AND CORRECTED NOX CONCENTRATION AT 15% O₂. THIS MONITORING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF SCAQMD RULE 218. PRIOR TO INSTALLATION, THIS MONITORING SYSTEM SHALL BE APPROVED IN WRITING BY THE EXECUTIVE OFFICER.
[RULE 218, 1110.2]
- 17) THIS EQUIPMENT SHALL ONLY BURN LANDFILL GAS.
[RULE 1303(b)(2)-OFFSET]
- 18) ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 3004(a)(4)]
- 19) THE OPERATOR SHALL COMPLY WITH THE APPLICABLE AREA SOURCE REQUIREMENTS FOR EXISTING STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES OF 40 CFR PART 63 SUBPART ZZZZ – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR RECIPROCATING INTERNAL COMBUSTION ENGINES.

Emissions and Requirements:

- 20) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NMOC: 20 PPMV OR 98 WEIGHT PERCENT REDUCTION, RULE 1150.1, 40 CFR PART 60 SUBPART WWW, 40 CFR PART 63 SUBPART AAAA
CO: 2000 PPMV @15% OXYGEN, RULE 1110.2
NOX: 36 PPMV @15% OXYGEN, RULE 1110.2, ECF = 1
ROG: 40 PPMV @15% OXYGEN, RULE 1110.2, ECF = 1
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

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