

**FACILITY PERMIT TO OPERATE  
RIVERSIDE COUNTY WASTE MANAGEMENT DEPARTMENT**

**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

This section consists of a table listing all equipment with Permits to Construct and copies of all individual Permits to Construct 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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### PERMIT TO CONSTRUCT

**A/N 509914**  
**Granted as of ---TBD**

**Equipment Description:**

LANDFILL GAS CONTROL SYSTEM CONSISTING OF:

1. ONE (1) SKID MOUNTED HDPE MOISTURE SEPARATOR, ZMS, WITH DEMISTER PAD ELEMENT FOR MOISTURE COLLECTION.
2. TWO BLOWERS (ONE STAND-BY), HOUSTON SERVICES, MODEL 8602, EACH WITH A 40 HP MOTOR, A VFD AND PRESSURE TRANSMITTER FOR VFD VACUUM CONTROL, AND ONE COMMON INSERTION TYPE THERMAL MASS FLOW METER, VENTING LANDFILL GAS FROM COLLECTION WELLS AND TRENCHES.
3. COMBUSTION AIR BLOWER, NEW YORK BLOWER, HIGH PRESSURE MODEL 361, MAX AIR FLOW 14500 SCFM WITH A COMBUSTION AIR BLOWER VFD, AND AN INSERTION TYPE THERMAL MASS FLOW METER.
4. ONE (1) 10" DIAMETER, ENARDO, FLARE INLET FLAME ARRESTOR.
5. FLARE, JOHN ZINK, MODEL ZULE, 9'-0" DIA. X 40'-0" H., RATED AT 2000 SCFM CAPACITY, 54.6 MMBTU PER HOUR, TWO COMBUSTION AIR DAMPERS, FLARE ALARM SYSTEM, AUTOMATED IGNITION SYSTEM WITH PROPANE GAS PILOT ASSEMBLY, ONE (1) SELF CHECKING ULTRAVIOLET FLAME SCANNER, ONE (1) HIGH TEMPERATURE SHUTDOWN THERMOCOUPLE, THREE (3) BURNER THERMOCOUPLES, FOUR (4) FLARE TEMPERATURE MONITORING THERMOCOUPLES AT DIFFERENT ELEVATIONS, IGNITION TRANSFORMER, AND TWO 5 GALLON CAPACITY PROPANE TANKS.

**Conditions:**

1. CONSTRUCTION AND 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]

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3. THIS EQUIPMENT SHALL BE OPERATED AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.  
[RULE 204]
4. FOUR SAMPLING PORTS SHALL BE MAINTAINED IN THE FLARE STACK AT LEAST (5) FEET UPSTREAM OF THE FLARE OUTLET. EACH SAMPLING PORT SHALL CONSIST OF A FOUR INCH COUPLING WITH PLUG. ALL PORTS SHALL BE PROPERLY CENTERED. AN EQUIVALENT METHOD FOR EMISSIONS SAMPLING MAY BE USED UPON APPROVAL OF THE SCAQMD. ADEQUATE AND SAFE ACCESS TO ALL TEST PORTS SHALL BE PROVIDED.  
[RULE 217]
5. A SAMPLING PORT SHALL BE INSTALLED AND MAINTAINED AT THE INLET GAS LINE TO THE FLARE STATION TO ALLOW THE COLLECTION OF A LANDFILL GAS SAMPLE.  
[RULE 217, 431.1, 1150.1]
6. 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 ABOVE THE FLAME ZONE, AT LEAST 0.6 SECOND DOWNSTREAM OF THE BURNER AND NOT LESS THAN FIVE (5) FEET FROM THE TOP OF THE STACK.  
[RULE 1303(a)(1)-BACT, 1150.1, 1714, 3004 (a) (4)]
7. WHENEVER THE FLARE IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1400 DEGREES F, 15 MINUTE AVERAGE, AS MEASURED BY THE TEMPERATURE INDICATOR AND RECORDER SHALL BE MAINTAINED EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN. STARTUP IS DEFINED AS THE PERIOD FROM FLARE IGNITION TO THE TIME WHEN 1400 DEGREES F IS ACHIEVED, NOT TO EXCEED 30 MINUTES. SHUTDOWN IS THE PERIOD FROM WHEN THE GAS VALVE BEGINS TO BE SHUT AND COMPLETELY SHUTS OFF, NOT TO EXCEED 30 MINUTES.  
[RULE 1303(a) (1)-BACT, 1714]
8. A FLOW INDICATOR AND RECORDING DEVICE SHALL BE MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO FLARE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS (IN SCFM) BEING SENT TO FLARE.  
[RULE 1150.1, 1714]
9. A FLOW INDICATOR AND RECORDING DEVICE SHALL BE MAINTAINED IN THE COMBUSTION AIR LINE TO FLARE TO MEASURE AND RECORD THE QUANTITY OF AIR FLOW (IN SCFM) BEING SENT TO FLARE. 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 DROP READING.  
[RULE 1150.1, 1714]
10. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH SCAQMD RULE 1150.1.  
[RULE 1150.1]

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11. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO TIME OF THE DAY.  
[RULE 204]
12. THE TOTAL VOLUME OF LANDFILL GAS BURNED IN THIS FLARE SHALL NOT EXCEED 2000 STANDARD CUBIC FEET PER MINUTE (SCFM).  
[RULE 1303(b) (1) AND (b) (2)–MODELING AND OFFSET, 1401, 1714]
13. THE MAXIMUM HEAT INPUT RATE TO FLARE SHALL NOT EXCEED 54.6 MMBTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF LANDFILL GAS BURNED IN EACH FLARE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST WEEKLY BTU CONTENT (BTU/SCF) READING.  
[RULE 1303(b) (1) AND (b) (2)–MODELING AND OFFSET, 1401, 1714]
14. 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 LANDFILL GAS SUPPLY LINE, SHUT OFF THE BLOWER AND IMMEDIATELY NOTIFY A RESPONSIBLE PARTY OF THE SHUT-DOWN.  
[RULE 1303 (a) (1) – BACT, 1714]
15. THE AUTOMATIC SHUTDOWN SAFETY SYSTEM SHALL BE TESTED MONTHLY FOR PROPER OPERATION OF EACH FLARE AND THE RESULTS RECORDED.  
[RULE 1303(a) (1)-BACT]
16. THE OPERATOR SHALL CONDUCT AN INITIAL SOURCE TEST ON THE FLARE NOT LATER THAN 180 DAYS AFTER INITIAL STARTUP, IN ACCORDANCE WITH AQMD APPROVED SOURCE TEST PROCEDURES. A SOURCE TEST PROTOCOL SHALL BE PROVIDED TO THE AQMD FOR APPROVAL AT LEAST 30 DAYS PRIOR TO THE SCHEDULED TESTING. WRITTEN NOTIFICATION OF THE SCHEDULED TEST DATE SHALL BE PROVIDED TO THE SCAQMD AT LEAST SEVEN (7) DAYS PRIOR TO THE DATE SO THAT THE TESTING MAY BE OBSERVED BY SCAQMD PERSONNEL. THE TESTING SHALL BE CONDUCTED WHEN THE EQUIPMENT IS IN FULL OPERATION, AND SHALL INCLUDE, BUT NOT LIMITED TO, A TEST OF THE INLET TO THE FLARE AND THE FLARE EXHAUST FOR:
  - A. METHANE
  - B. TOTAL NON-METHANE ORGANIC COMPOUNDS (TNMOC)
  - C. TOXIC AIR CONTAMINANTS (INLET AND EXHAUST) INCLUDING, BUT NOT LIMITED TO, ACROLEIN, ACETALDEHYDE, FORMALDEHYDE, BENZENE, CHLOROBENZENE, 1, 2-DICHLOROETHANE, 1,1-DICHOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1,1,1-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS.
  - D. NOX, AS NO2 (EXHAUST ONLY)
  - E. SOX, AS S02 (EXHAUST ONLY)
  - F. CO (EXHAUST ONLY)
  - G. PM10 (EXHAUST ONLY)
  - H. OXYGEN
  - I. MOISTURE CONTENT
  - J. TEMPERATURE

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- K. FLOWRATE  
[RULE 1150.1, 1303(b) (1) AND (b) (2)–MODELING AND OFFSET, 1401, 3004 (a) (4), 40 CFR PART 60 SUBPART WWW]
17. THE SOURCE TEST REPORT, FOR THE FLARE SHALL INCLUDE;
- A. EMISSIONS OF CO, NO<sub>x</sub>, TNMOCs, PM10, AND SO<sub>x</sub>, IN UNITS OF LBS/HR AND PPMV (EXCEPT PM10), OVERALL TNMOC DESTRUCTION EFFICIENCY (WT%), METHANE DESTRUCTION EFFICIENCY (WT%), FORMALDEHYDE, AND TNMOC EMISSIONS (PPMV), DRY BASIS, AS HEXANE AT 3% OXYGEN.
- B. THE TEST SHALL BE PERFORMED BY A TESTING LABORATORY CERTIFIED TO MEET THE CRITERIA IN AQMD RULE 304(1) (CONFLICT OF INTEREST).
- C. SAMPLING FACILITIES SHALL COMPLY WITH AQMD "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES" PURSUANT TO RULE 217.  
[RULE 204, 217, RULE 1150.1, 40CFR60 SUBPART WWW]
18. THE OPERATOR SHALL CONDUCT A SOURCE TEST ANNUALLY (WITHIN 12 MONTHS OF THE PRIOR SOURCE TEST) IN ACCORDANCE WITH AQMD APPROVED SOURCE TEST PROCEDURES. WRITTEN NOTIFICATION OF THE SCHEDULED TEST DATE SHALL BE PROVIDED TO THE AQMD AT LEAST SEVEN (7) DAYS PRIOR TO THE DATE SO THAT THE TESTING MAY BE OBSERVED BY WITHIN 45 DAYS AFTER THE TESTING. THE TESTING SHALL BE CONDUCTED WHEN THE EQUIPMENT IS IN FULL OPERATION, AND SHALL INCLUDE, BUT NOT LIMITED TO, A TEST OF THE INLET TO THE FLARE AND THE FLARE EXHAUST FOR:
- A. METHANE  
B. TOTAL NON-METHANE HYDROCARBONS  
C. TOXIC CONTAMINANTS (RULE 1150.1 CORE LIST)  
D. NO<sub>x</sub>, AS NO<sub>2</sub> (EXHAUST ONLY)  
E. SO<sub>x</sub>, AS S<sub>02</sub> (EXHAUST ONLY)  
F. CO (EXHAUST ONLY)  
G. PM10 (EXHAUST ONLY)  
H. OXYGEN  
I. MOISTURE CONTENT  
J. TEMPERATURE  
K. FLOWRATE  
[RULE 1150.1, 1303(b) (2)-OFFSET 1401, 3004 (a) 4]
19. THE FLARE SHALL BE EQUIPPED WITH A SUFFICIENT NUMBER OF VIEW PORTS TO ALLOW VISUAL INSPECTION OF THE FLAME HEIGHT WITHIN THE FLARE AT ALL TIMES. THE VIEW PORTS SHALL BE LOCATED AT THE ELEVATION OF THE TEMPERATURE SENSOR LOCATIONS. SAFE AND ADEQUATE ACCESS SHALL BE PROVIDED FOR ALL VIEW PORTS UPON REQUEST BY SCAQMD PERSONNEL.  
[RULE (1303) (a)(1)-BACT]

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

21. ALL LANDFILL GAS COLLECTED SHALL BE DIRECTED TO THE FLARE STATION FOR COMBUSTION OR TO ANY OTHER COMBUSTION OR PROCESSING FACILITY WHICH IS IN FULL USE, CAN ADEQUATELY PROCESS THE VOLUME OF GAS COLLECTED AND HAS BEEN ISSUED A VALID PERMIT TO OPERATE/CONSTRUCT BY SCAQMD.  
[RULE 1150.1, 1303(a) (1)-BACT, 40CFR60 SUBPART WWW]

22. EMISSIONS FROM FLARE SHALL NOT EXCEED THE FOLLOWING:

POLLUTANT	LBS/HR
CO	3.27
NOX	1.36
PM10	1.20
ROG	1.21
SOX AS SO2	1.52

[RULE 1303(a) (1) -BACT, RULE 1303(b) (1) AND (b) (2)–MODELING AND OFFSET, 1401]

23. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION OF THIS EQUIPMENT RESULTING IN THE EMISSION OF RAW LANDFILL GAS SHALL BE REPORTED TO THE AQMD WITHIN TWENTY FOUR HOURS AFTER OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.  
[RULE 430, 1150.1, 1714, 40 CFR PART 60 SUBPART WWW]

24. THE APPLICANT SHALL CONDUCT A GAS LEAK DETECTION PROGRAM WITH A COMBUSTIBLE DETECTOR CALIBRATED FOR METHANE BY INSPECTING THE BLOWERS AND ALL EQUIPMENT DOWNSTREAM OF THE BLOWERS. THIS INSPECTION PROGRAM SHALL BE CONDUCTED ONCE A MONTH. ALL LEAKS DETECTED ABOVE 500 PPM SHALL BE REPORTED TO THE AQMD WITHIN 24 HOURS OF DETECTION AND REPAIRED WITHIN 3 WORKING DAYS OF DETECTION. A LOG SHOWING THE RESULTS OF EACH INSPECTION SHALL BE MAINTAINED AND SHALL BE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 1303(a) (1)-BACT, RULE 402]

25. ALL RECORDS SHALL BE KEPT AND MAINTAINED FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 1714, 3004 (a) (4)]

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26. THIS FLARE AND THE EXISTING FLARE PERMITTED UNDER A/N 472872 (P/N G5699) SHALL NOT BE OPERATED SIMULTANEOUSLY EXCEPT DURING START-UP, SHUTDOWN, AND MAINTENANCE OF THIS EQUIPMENT. FOR EXISTING AND THIS FLARE, RECORDS OF DATE, TIME, AND HOURS OF OPERATION SHALL BE MAINTAINED.  
[RULE 1303(b) (1) AND (b) (2)-MODELING AND OFFSET, 1401, 1714]

### **Emissions And Requirements:**

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

CO: 2000 PPMV, RULE 407  
CO: 0.06 LB/MMBTU HEAT INPUT – BACT (LAER)  
NOx: 0.025 LB/MMBTU HEAT INPUT- BACT (LAER)  
PM: RULE 404, SEE APPENDIX B FOR EMISSIONS LIMITS  
PM: 0.1 gr/scf, RULE 409  
NMOC: 98 WT % DESTRUCTION EFFICIENCY OR < 20 PPMV, HEXANE, 3% O2 DRY, RULE 1150.1,  
40 CFR PART 60 SUBPART WWW