

## **FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC**

### **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, and Rule 219-exempt equipment subject to source-specific requirements. 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.



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

### FACILITY WIDE CONDITION (S)

**Condition(s):**

1. EXCEPT FOR OPEN ABRASIVE BLASTING OPERATIONS, THE OPERATOR SHALL NOT DISCHARGE INTO THE ATMOSPHERE FROM ANY SINGLE SOURCE OF EMISSIONS WHATSOEVER 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 NO. 1 ON THE RINGLEMANN 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 SUBPARAGRAPH (a) OF THIS CONDITION. [RULE 401]
2. THE OPERATOR SHALL NOT USE LANDFILL GAS (LFG) CONTAINING SULFUR COMPOUNDS IN EXCESS OF 150 PPMV CALCULATED AS HYDROGEN SULFIDE AVERAGED DAILY. [RULE 431.1]
3. ON OR AFTER JUNE 1, 2004, A PERSON SHALL NOT PURCHASE ANY DIESEL FUEL FOR STATIONARY SOURCE APPLICATION IN THE DISTRICT, 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]
4. UNLESS THE LFG TO ENERGY FACILITY HAS OBTAINED APPROVAL OF THE EPA FOR MEETING THE LFG TREATMENT DEFINITION AND EXEMPTION CRITERIA LISTED UNDER 40 CFR §60.751 AND AIR EMISSIONS STANDARDS UNDER 40 CFR §60.752(b)(2)(iii)(C), THE OWNER OR OPERATOR OF THE MUNICIPAL SOLID WASTE LANDFILL GAS (LFG) COLLECTION, CONTROL, OR TREATMENT SYSTEM SHALL OPERATE ALL STATIONARY EQUIPMENT IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF EPA 40 CFR PART 60, SUBPART WWW, SUCH AS DESIGN SPECIFICATIONS, EQUIPMENT PERFORMANCE, EMISSIONS STANDARDS, MONITORING OF OPERATIONS, REPORTING AND RECORD KEEPING REQUIREMENTS, ETC. [EPA RULE 40 CFR 60 SUBPART WWW]
5. THE OWNER OR OPERATOR OF THE MUNICIPAL SOLID WASTE LANDFILL GAS (LFG) COLLECTION, CONTROL, OR TREATMENT SYSTEM SHALL OPERATE ALL STATIONARY EQUIPMENT IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF EPA 40 CFR PART 63, SUBPART AAAA, SUCH AS DESIGN SPECIFICATIONS, EQUIPMENT PERFORMANCE, EMISSIONS STANDARDS, MONITORING OF OPERATIONS, REPORTING AND RECORD KEEPING REQUIREMENTS, ETC. [GASEOUS EMISSIONS 40 CFR 63 SUBPART AAAA]
6. THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE MITIGATION MEASURES STIPULATED IN THE STATEMENT OF FINDINGS, STATEMENT OF OVERRIDING CONSIDERATION, AND

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MITIGATION MONITORING PLAN DOCUMENT WHICH IS PART OF THE AQMD CERTIFIED FINAL ENVIRONMENTAL IMPACT REPORT FOR THIS FACILITY.

THIS CONDITION SHALL ONLY APPLY TO EQUIPMENT LISTED IN SECTION-H OF THIS FACILITY PERMIT.

[CA PRC CEQA, 11-23-1970]

7. THE TOTAL LANDFILL GAS PROCESSED AT THIS FACILITY SHALL NOT EXCEED 247 MMBTU/HR (24-HOUR AVG). THE OPERATOR SHALL DETERMINE THE TOTAL HEAT INPUT OF THE LANDFILL GAS AT LEAST ONCE EVERY EIGHT HOURS OF OPERATION, AND MONITOR THE FLOW RATE CONTINUOUSLY. THE OPERATOR SHALL MAINTAIN ADEQUATE RECORDS TO DEMONSTRATE COMPLIANCE WITH THIS CONDITION.  
[CA PRC CEQA, 11-23-1970]
8. THE OPERATOR SHALL MONITOR AND RECORD TOTAL VOLUME OF RAW LANDFILL GAS PROCESSED BY THE LFG TREATMENT AND COMPRESSION SYSTEM, AND MONTHLY AVERAGE H<sub>2</sub>S CONCENTRATION (PPMV) FOR THE LFG. THE OPERATOR SHALL CALCULATE FACILITY WIDE DAILY SO<sub>x</sub> (AS SO<sub>2</sub>) EMISSION RATE, USING LFG VOLUME PROCESSED AND H<sub>2</sub>S CONCENTRATION. ALL RECORDS REQUIRED SHALL BE KEPT ON FILE TO COMPLY WITH THIS CONDITION.  
[RULE 204]
9. THE FACILITY WIDE TOTAL SO<sub>x</sub> EMISSION, AS SO<sub>2</sub>, SHALL NOT EXCEED 375.1 LBS PER DAY.  
[RULE 204]

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

### PERMIT TO CONSTRUCT

A/N 571762  
Granted as of TBD

#### Equipment Description:

RESOURCE RECOVERY/LANDFILL GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.
2. GAS TURBINE, NO. 1, SOLAR, MERCURY 50, LANDFILL GAS (LFG) FIRED, DRIVING A NOMINAL 4.9 MEGAWATT (MW) ELECTRIC GENERATOR.
3. EXHAUST STACK, 4'- 7" DIA. X 26' - 6" HIGH.

#### 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]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.  
[RULE 204]
4. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING START-UP.  
[RULE 204]
5. A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO THE GAS TURBINE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS (IN SCFM) SUPPLIED.  
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 3004(a) (4)]
6. THE TOTAL HEAT INPUT OF LANDFILL GAS BURNED IN THE GAS TURBINE SHALL NOT EXCEED 48.1MMBTU/HR (HHV), BASED ON A 24 -HOUR AVERAGE. THE OPERATOR SHALL MONITOR THE TOTAL HEAT INPUT RATE OF THE LANDFILL GAS ON A CONTINUOUS BASIS. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL INSTALL AND MAINTAIN A REMOTE NOTIFICATION SYSTEM TO NOTIFY THE FACILITY IF AN EXCEEDANCE OF 48.1 MMBTU/HR LIMIT OCCURS.  
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 3004(a) (4), RULE 1401]

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7. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.  
[RULE 204]
8. THE OPERATOR SHALL DIRECT ALL LANDFILL GAS WHICH IS NOT BURNED IN THIS EQUIPMENT TO ANOTHER COMBUSTION OR PROCESSING FACILITY WHICH IS IN FULL USE, AND CAN ADEQUATELY PROCESS THE VOLUME OF GAS COLLECTED AND WHICH HAS BEEN ISSUED A VALID PERMIT BY THE SCAQMD.  
[RULE 1303(a) (1)-BACT]
9. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR AFTER OCCURRENCE OR WITHIN ONE HOUR OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE AND, IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.  
[RULE 402, AND 430]
10. THE OPERATOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF SAMPLING PORTS AND WELDED NIPPLES WITH CAPS, IN THE EXHAUST STACK AND PROVIDE SAFE ACCESS TO THESE SAMPLING PORTS IN ACCORDANCE WITH RULE 217 AND SCAQMD APPROVAL.  
[RULE 217]
11. A CONTINUOUS COMBUSTION TEMPERATURE MONITORING AND RECORDING SYSTEM SHALL BE MAINTAINED, TO DETERMINE EXHAUST TEMPERATURE OF LAST POWER TURBINE (T7) AND CALCULATE THE COMBUSTION CHAMBER TEMPERATURE (TPZ) PER MANUFACTURER'S RECOMMENDATIONS, PURSUANT TO THE OPERATION AND MAINTENANCE REQUIREMENTS SPECIFIED IN 40 CFR PART 64.7. SUCH A SYSTEM SHALL HAVE AN ACCURACY OF WITHIN  $\pm 1\%$  OF THE TEMPERATURE BEING MONITORED AND SHALL BE INSPECTED, MAINTAINED, AND CALIBRATED ON AN ANNUAL BASIS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS USING AN APPLICABLE SCAQMD OR EPA APPROVED METHOD.  
[40 CFR 64]
12. THE COMBUSTION CHAMBER TEMPERATURE OF LAST POWER TURBINE (T7) SHALL BE RECORDED AT LEAST EVERY 15 MINUTES, AND THE HOURLY AVERAGE SHALL BE COMPUTED FROM SUCH DATA POINTS. THE OPERATOR SHALL REVIEW THE RECORDS OF TEMPERATURE ON A DAILY BASIS TO DETERMINE IF A DEVIATION OCCURRED OR SHALL INSTALL AN ALARM SYSTEM TO ALERT THE OPERATOR WHEN A DEVIATION OCCURS.  
[40 CFR 64]
13. ALL DEVIATIONS SHALL BE REPORTED TO THE SCAQMD ON A SEMI-ANNUAL BASIS PURSUANT TO THE REQUIREMENTS SPECIFIED IN 40 CFR 64.9 AND CONDITION NOS. 22 AND 23 IN SECTION K OF THIS PERMIT. FOR THE PURPOSE OF THIS CONDITION, A DEVIATION SHALL BE DEFINED AS WHEN THE LAST POWER TURBINE (T7) EXHAUST TEMPERATURE IS LESS THAN 1100 DEGREES FAHRENHEIT OR GREATER THAN 1300 DEGREES FAHRENHEIT, OR AS OTHERWISE APPROVED BY SCAQMD, OCCURS AVERAGED OVER ONE HOUR DURING

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OPERATION EXCEPT DURING START UP AND SHUTDOWN EVENTS LASTING FOR A MAXIMUM OF ONE HOUR. MULTIPLE START UP AND SHUTDOWN EVENTS CAN OCCUR CONSECUTIVELY.  
[40 CFR 64]

14. FOR EACH SEMI-ANNUAL REPORTING PERIOD SPECIFIED IN CONDITION NO. 23 IN SECTION K, WHENEVER A DEVIATION OCCURS FROM THE TEMPERATURE, THE OPERATOR SHALL TAKE IMMEDIATE CORRECTIVE ACTION, AND KEEP RECORDS OF THE DURATION AND CAUSE (INCLUDING UNKNOWN CAUSE, IF APPLICABLE) OF THE DEVIATION AND THE CORRECTIVE ACTION TAKEN.  
[40 CFR 64]
15. 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.  
[40 CFR 64]
16. THE OWNER OR OPERATOR SHALL SUBMIT AN APPLICATION WITH A QUALITY IMPROVEMENT PLAN (QIP) IN ACCORDANCE WITH 40 CFR PART 64.8 TO THE SCAQMD IF AN ACCUMULATION OF DEVIATIONS 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.  
[40 CFR 64]
17. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE EXHAUST CONCENTRATION FOR NO<sub>x</sub>, AND O<sub>2</sub> ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NO<sub>x</sub> CONCENTRATION TO A CORRECTED NO<sub>x</sub> CONCENTRATION AT 15% O<sub>2</sub>, DRY, AND RESULTS SHALL BE CONTINUOUSLY RECORDED.  
[RULE 218, 1303(b) (1) MODELING, 1303(B) (2)-OFFSET, 3004(a) (4)]
18. OPERATOR SHALL CONDUCT ANNUAL PERFORMANCE TESTS, AT FULL LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND SOURCE TEST PROTOCOL, AND WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST. THE WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE 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 THE TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET LANDFILL GAS AND THE GAS TURBINE EXHAUST FOR:
  - A. METHANE AND TOTAL NON-METHANE HYDROCARBONS (TNMHC)
  - B. CARBON MONOXIDE (EXHAUST ONLY)
  - C. OXIDES OF NITROGEN (EXHAUST ONLY)
  - D. CARBON DIOXIDE
  - E. PARTICULATE MATTER/PM10 (EXHAUST ONLY)

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- F. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H<sub>2</sub>S (SPECIATED, INLET ONLY)
- G. TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1, 2-DICHLOROETHANE, 1, 1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1, 1, 1-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS.
- H. OXYGEN AND NITROGEN
- I. MOISTURE CONTENT
- J. TEMPERATURE
- K. FLOW RATE
- L. VOLATILE ORGANIC COMPOUNDS (VOCS) CONTROL EFFICIENCY, WT% (BASED ON INLET AND EXHAUST VOCS)
- M. KW GENERATED.

THE REPORT SHALL ALSO PRESENT THE EMISSIONS DATA IN UNITS OF POUNDS PER HOUR (LB/HR), POUNDS PER MILLION BTU (LB/MMBTU), AND PARTS PER MILLION (PPMV) ON A DRY BASIS AT 15% O<sub>2</sub> (CO, NO<sub>x</sub>, TNMHC, AND TAC.) AND GAS TURBINE'S OVERALL TNMHC DESTRUCTION EFFICIENCY (WT %). TOTAL PARTICULATE/PM<sub>10</sub> SHALL BE REPORTED IN GR/SCF AND LBS/HR. THE REPORT SHALL PROJECT THE TOTAL DAILY SO<sub>2</sub> AND HCL EMISSIONS BASED ON THE TEST RESULTS. IN ADDITION, THE REPORT SHALL PROVIDE GAS TURBINE'S DEMONSTRATED EFFICIENCY AT FULL LOAD, IN BTU/KW-HR, CORRECTED TO THE HIGHER HEATING VALUE (HHV) OF THE FUEL.

[RULE 1303 (a) (1)-BACT, 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 1150.1, 1401, 3004 (a) (4), 40 CFR PART 60 SUBPART WWW]

19. EMISSIONS FROM THE GAS TURBINE SHALL NOT EXCEED THE FOLLOWING:

CONTAMINANT	LBS/DAY
CO	77.6
NO <sub>x</sub> (AS NO <sub>2</sub> )	76.5
PM <sub>10</sub>	17.3
TNMOC (AS CH <sub>4</sub> )	21.1

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

20. EMISSION OF OXIDES OF NITROGEN SHALL NOT EXCEED 15 PPMV, CALCULATED AT 15% O<sub>2</sub>, DRY BASIS, EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN NOT TO EXCEED 30 MINUTES PER INCIDENT.

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

21. EMISSION OF CARBON MONOXIDE SHALL NOT EXCEED 25 PPMV, CALCULATED AT 15% O<sub>2</sub>, DRY BASIS, EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN NOT TO EXCEED 30 MINUTES PER INCIDENT.

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

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22. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 3004 (a) (4)]

### Emissions and Requirements:

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

23. CO: 2000 PPMV, DRY, 15 MIN. AVG., RULE 407  
CO: 25 PPMV, @ 15% O<sub>2</sub>, DRY, MAJOR SOURCE - LAER  
NO<sub>x</sub>: 15 PPMV, @ 15% O<sub>2</sub>, DRY, MAJOR SOURCE - LAER  
NO<sub>x</sub>: 96 PPMV, @ 15% O<sub>2</sub>, DRY, OR 5.5 LB/MWh, NSPS, 40CFR60 SUBPART KKKK  
PM: COMBUSTION CONTAMINANT, 0.1 GRAIN/DSCF OF GAS, CALCULATED @ 12% CO<sub>2</sub>, AVERAGED OVER 15 CONSECUTIVE MINUTES, RULE 409.  
ROG: 20 PPMV, AS HEXANE, @ 3% O<sub>2</sub>, DRY OR 98% (BY WT) DESTRUCTION EFFICIENCY, RULE 1150.1, 40 CFR60 SUBPART WWW, 40 CFR 63 SUBPART AAAA.
- SO<sub>x</sub>: BASED ON MAXIMUM 150 PPMV H<sub>2</sub>S CON. IN LFG, RULE 431.1  
SO<sub>x</sub>: FACILITY WIDE TOTAL SO<sub>x</sub> EMISSION SHALL NOT EXCEED 375.1 LBS/DAY, FROM FIVE GAS TURBINES AND A REGENERATION FLARE.  
SO<sub>x</sub>: 0.90 LB/MWh OR 0.15 LB/MMBTU, NSPS, 40 CFR 60 SUBPART KKKK.  
SO<sub>x</sub>: 0.2% RULE 53

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### PERMIT TO CONSTRUCT

A/N 571763  
Granted as of TBD

#### Equipment Description:

RESOURCE RECOVERY/LANDFILL GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.
2. GAS TURBINE, NO. 2, SOLAR, MERCURY 50, LANDFILL GAS (LFG) FIRED, DRIVING A NOMINAL 4.9 MEGAWATT (MW) ELECTRIC GENERATOR.
3. EXHAUST STACK, 4'- 7" DIA. X 26' - 6" HIGH.

#### 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]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.  
[RULE 204]
4. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING START-UP.  
[RULE 204]
5. A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO THE GAS TURBINE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS (IN SCFM) SUPPLIED.  
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 3004(a) (4)]
6. THE TOTAL HEAT INPUT OF LANDFILL GAS BURNED IN THE GAS TURBINE SHALL NOT EXCEED 48.1MMBTU/HR (HHV), BASED ON A 24 -HOUR AVERAGE. THE OPERATOR SHALL MONITOR THE TOTAL HEAT INPUT RATE OF THE LANDFILL GAS ON A CONTINUOUS BASIS. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL INSTALL AND MAINTAIN A REMOTE NOTIFICATION SYSTEM TO NOTIFY THE FACILITY IF AN EXCEEDANCE OF 48.1 MMBTU/HR LIMIT OCCURS.  
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 3004(a) (4), RULE 1401]

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

7. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.  
[RULE 204]
8. THE OPERATOR SHALL DIRECT ALL LANDFILL GAS WHICH IS NOT BURNED IN THIS EQUIPMENT TO ANOTHER COMBUSTION OR PROCESSING FACILITY WHICH IS IN FULL USE, AND CAN ADEQUATELY PROCESS THE VOLUME OF GAS COLLECTED AND WHICH HAS BEEN ISSUED A VALID PERMIT BY THE SCAQMD.  
[RULE 1303(a) (1)-BACT]
9. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR AFTER OCCURRENCE OR WITHIN ONE HOUR OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE AND, IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.  
[RULE 402, AND 430]
10. THE OPERATOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF SAMPLING PORTS AND WELDED NIPPLES WITH CAPS, IN THE EXHAUST STACK AND PROVIDE SAFE ACCESS TO THESE SAMPLING PORTS IN ACCORDANCE WITH RULE 217 AND SCAQMD APPROVAL.  
[RULE 217]
11. A CONTINUOUS COMBUSTION TEMPERATURE MONITORING AND RECORDING SYSTEM SHALL BE MAINTAINED, TO DETERMINE EXHAUST TEMPERATURE OF LAST POWER TURBINE (T7) AND CALCULATE THE COMBUSTION CHAMBER TEMPERATURE (TPZ) PER MANUFACTURER'S RECOMMENDATIONS, PURSUANT TO THE OPERATION AND MAINTENANCE REQUIREMENTS SPECIFIED IN 40 CFR PART 64.7. SUCH A SYSTEM SHALL HAVE AN ACCURACY OF WITHIN  $\pm 1\%$  OF THE TEMPERATURE BEING MONITORED AND SHALL BE INSPECTED, MAINTAINED, AND CALIBRATED ON AN ANNUAL BASIS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS USING AN APPLICABLE SCAQMD OR EPA APPROVED METHOD.  
[40 CFR 64]
12. THE COMBUSTION CHAMBER TEMPERATURE OF LAST POWER TURBINE (T7) SHALL BE RECORDED AT LEAST EVERY 15 MINUTES, AND THE HOURLY AVERAGE SHALL BE COMPUTED FROM SUCH DATA POINTS. THE OPERATOR SHALL REVIEW THE RECORDS OF TEMPERATURE ON A DAILY BASIS TO DETERMINE IF A DEVIATION OCCURRED OR SHALL INSTALL AN ALARM SYSTEM TO ALERT THE OPERATOR WHEN A DEVIATION OCCURS.  
[40 CFR 64]
13. ALL DEVIATIONS SHALL BE REPORTED TO THE SCAQMD ON A SEMI-ANNUAL BASIS PURSUANT TO THE REQUIREMENTS SPECIFIED IN 40 CFR 64.9 AND CONDITION NOS. 22 AND 23 IN SECTION K OF THIS PERMIT. FOR THE PURPOSE OF THIS CONDITION, A DEVIATION SHALL BE DEFINED AS WHEN THE LAST POWER TURBINE (T7) EXHAUST TEMPERATURE IS LESS THAN 1100 DEGREES FAHRENHEIT OR GREATER THAN 1300 DEGREES FAHRENHEIT, OR AS OTHERWISE APPROVED BY SCAQMD, OCCURS AVERAGED OVER ONE HOUR DURING

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OPERATION EXCEPT DURING START UP AND SHUTDOWN EVENTS LASTING FOR A MAXIMUM OF ONE HOUR. MULTIPLE START UP AND SHUTDOWN EVENTS CAN OCCUR CONSECUTIVELY.  
[40 CFR 64]

14. FOR EACH SEMI-ANNUAL REPORTING PERIOD SPECIFIED IN CONDITION NO. 23 IN SECTION K, WHENEVER A DEVIATION OCCURS FROM THE TEMPERATURE, THE OPERATOR SHALL TAKE IMMEDIATE CORRECTIVE ACTION, AND KEEP RECORDS OF THE DURATION AND CAUSE (INCLUDING UNKNOWN CAUSE, IF APPLICABLE) OF THE DEVIATION AND THE CORRECTIVE ACTION TAKEN.  
[40 CFR 64]
15. 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.  
[40 CFR 64]
16. THE OWNER OR OPERATOR SHALL SUBMIT AN APPLICATION WITH A QUALITY IMPROVEMENT PLAN (QIP) IN ACCORDANCE WITH 40 CFR PART 64.8 TO THE SCAQMD IF AN ACCUMULATION OF DEVIATIONS 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.  
[40 CFR 64]
17. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE EXHAUST CONCENTRATION FOR NO<sub>x</sub>, AND O<sub>2</sub> ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NO<sub>x</sub> CONCENTRATION TO A CORRECTED NO<sub>x</sub> CONCENTRATION AT 15% O<sub>2</sub>, DRY, AND RESULTS SHALL BE CONTINUOUSLY RECORDED.  
[RULE 218, 1303(b) (1) MODELING, 1303(B) (2)-OFFSET, 3004(a) (4)]
18. OPERATOR SHALL CONDUCT ANNUAL PERFORMANCE TESTS, AT FULL LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND SOURCE TEST PROTOCOL, AND WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST. THE WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE 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 THE TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET LANDFILL GAS AND THE GAS TURBINE EXHAUST FOR:
  - A. METHANE AND TOTAL NON-METHANE HYDROCARBONS (TNMHC)
  - B. CARBON MONOXIDE (EXHAUST ONLY)
  - C. OXIDES OF NITROGEN (EXHAUST ONLY)
  - D. CARBON DIOXIDE

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

- E. PARTICULATE MATTER/PM10 (EXHAUST ONLY)
- F. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
- G. TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1, 2-DICHLOROETHANE, 1, 1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1, 1, 1-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS.
- H. OXYGEN AND NITROGEN
- I. MOISTURE CONTENT
- J. TEMPERATURE
- K. FLOW RATE
- L. VOLATILE ORGANIC COMPOUNDS (VOCS) CONTROL EFFICIENCY, WT% (BASED ON INLET AND EXHAUST VOCS)
- M. KW GENERATED.

THE REPORT SHALL ALSO PRESENT THE EMISSIONS DATA IN UNITS OF POUNDS PER HOUR (LB/HR), POUNDS PER MILLION BTU (LB/MMBTU), AND PARTS PER MILLION (PPMV) ON A DRY BASIS AT 15% O2 (CO, NO<sub>x</sub>, TNMHC, AND TAC.) AND GAS TURBINE'S OVERALL TNMHC DESTRUCTION EFFICIENCY (WT %). TOTAL PARTICULATE/PM10 SHALL BE REPORTED IN GR/SCF AND LBS/HR. THE REPORT SHALL PROJECT THE TOTAL DAILY SO2 AND HCL EMISSIONS BASED ON THE TEST RESULTS. IN ADDITION, THE REPORT SHALL PROVIDE GAS TURBINE'S DEMONSTRATED EFFICIENCY AT FULL LOAD, IN BTU/KW-HR, CORRECTED TO THE HIGHER HEATING VALUE (HHV) OF THE FUEL.

[RULE 1303 (a) (1)-BACT, 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 1150.1, 1401, 3004 (a) (4), 40 CFR PART 60 SUBPART WWW]

19. EMISSIONS FROM THE GAS TURBINE SHALL NOT EXCEED THE FOLLOWING:

CONTAMINANT	LBS/DAY
CO	77.6
NO <sub>x</sub> (AS NO2)	76.5
PM10	17.3
TNMOC (AS CH4)	21.1

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

20. EMISSION OF OXIDES OF NITROGEN SHALL NOT EXCEED 15 PPMV, CALCULATED AT 15% O2, DRY BASIS, EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN NOT TO EXCEED 30 MINUTES PER INCIDENT.

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

21. EMISSION OF CARBON MONOXIDE SHALL NOT EXCEED 25 PPMV, CALCULATED AT 15% O2, DRY BASIS, EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN NOT TO EXCEED 30 MINUTES PER INCIDENT.

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

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

22. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 3004 (a) (4)]

### Emissions and Requirements:

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

23. CO: 2000 PPMV, DRY, 15 MIN. AVG., RULE 407  
CO: 25 PPMV, @ 15% O2, DRY, MAJOR SOURCE - LAER  
NOx: 15 PPMV, @ 15% O2, DRY, MAJOR SOURCE - LAER  
NOx: 96 PPMV, @ 15% O2, DRY, OR 5.5 LB/MWh, NSPS, 40CFR60 SUBPART KKKK  
PM: COMBUSTION CONTAMINANT, 0.1 GRAIN/DSCF OF GAS, CALCULATED @ 12% CO2, AVERAGED OVER 15 CONSECUTIVE MINUTES, RULE 409.  
ROG: 20 PPMV, AS HEXANE, @ 3% O2, DRY OR 98% (BY WT) DESTRUCTION EFFICIENCY, RULE 1150.1, 40 CFR60 SUBPART WWW, 40 CFR 63 SUBPART AAAA.
- SOx: BASED ON MAXIMUM 150 PPMV H2S CON. IN LFG, RULE 431.1  
SOx: FACILITY WIDE TOTAL SOx EMISSION SHALL NOT EXCEED 375.1 LBS/DAY, FROM FIVE GAS TURBINES AND A REGENERATION FLARE.  
SOx: 0.90 LB/MWh OR 0.15 LB/MMBTU, NSPS, 40 CFR 60 SUBPART KKKK.  
SOx: 0.2% RULE 53

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

### PERMIT TO CONSTRUCT

A/N 571764  
Granted as of TBD

#### Equipment Description:

RESOURCE RECOVERY/LANDFILL GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.
2. GAS TURBINE, NO. 3, SOLAR, MERCURY 50, LANDFILL GAS (LFG) FIRED, DRIVING A NOMINAL 4.9 MEGAWATT (MW) ELECTRIC GENERATOR.
3. EXHAUST STACK, 4'- 7" DIA. X 26' - 6" HIGH.

#### 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]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.  
[RULE 204]
4. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING START-UP.  
[RULE 204]
5. A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO THE GAS TURBINE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS (IN SCFM) SUPPLIED.  
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 3004(a) (4)]
6. THE TOTAL HEAT INPUT OF LANDFILL GAS BURNED IN THE GAS TURBINE SHALL NOT EXCEED 48.1MMBTU/HR (HHV), BASED ON A 24 -HOUR AVERAGE. THE OPERATOR SHALL MONITOR THE TOTAL HEAT INPUT RATE OF THE LANDFILL GAS ON A CONTINUOUS BASIS. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL INSTALL AND MAINTAIN A REMOTE NOTIFICATION SYSTEM TO NOTIFY THE FACILITY IF AN EXCEEDANCE OF 48.1 MMBTU/HR LIMIT OCCURS.  
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 3004(a) (4), RULE 1401]

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

7. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.  
[RULE 204]
8. THE OPERATOR SHALL DIRECT ALL LANDFILL GAS WHICH IS NOT BURNED IN THIS EQUIPMENT TO ANOTHER COMBUSTION OR PROCESSING FACILITY WHICH IS IN FULL USE, AND CAN ADEQUATELY PROCESS THE VOLUME OF GAS COLLECTED AND WHICH HAS BEEN ISSUED A VALID PERMIT BY THE SCAQMD.  
[RULE 1303(a) (1)-BACT]
9. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR AFTER OCCURRENCE OR WITHIN ONE HOUR OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE AND, IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.  
[RULE 402, AND 430]
10. THE OPERATOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF SAMPLING PORTS AND WELDED NIPPLES WITH CAPS, IN THE EXHAUST STACK AND PROVIDE SAFE ACCESS TO THESE SAMPLING PORTS IN ACCORDANCE WITH RULE 217 AND SCAQMD APPROVAL.  
[RULE 217]
11. A CONTINUOUS COMBUSTION TEMPERATURE MONITORING AND RECORDING SYSTEM SHALL BE MAINTAINED, TO DETERMINE EXHAUST TEMPERATURE OF LAST POWER TURBINE (T7) AND CALCULATE THE COMBUSTION CHAMBER TEMPERATURE (TPZ) PER MANUFACTURER'S RECOMMENDATIONS, PURSUANT TO THE OPERATION AND MAINTENANCE REQUIREMENTS SPECIFIED IN 40 CFR PART 64.7. SUCH A SYSTEM SHALL HAVE AN ACCURACY OF WITHIN  $\pm 1\%$  OF THE TEMPERATURE BEING MONITORED AND SHALL BE INSPECTED, MAINTAINED, AND CALIBRATED ON AN ANNUAL BASIS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS USING AN APPLICABLE SCAQMD OR EPA APPROVED METHOD.  
[40 CFR 64]
12. THE COMBUSTION CHAMBER TEMPERATURE OF LAST POWER TURBINE (T7) SHALL BE RECORDED AT LEAST EVERY 15 MINUTES, AND THE HOURLY AVERAGE SHALL BE COMPUTED FROM SUCH DATA POINTS. THE OPERATOR SHALL REVIEW THE RECORDS OF TEMPERATURE ON A DAILY BASIS TO DETERMINE IF A DEVIATION OCCURRED OR SHALL INSTALL AN ALARM SYSTEM TO ALERT THE OPERATOR WHEN A DEVIATION OCCURS.  
[40 CFR 64]
13. ALL DEVIATIONS SHALL BE REPORTED TO THE SCAQMD ON A SEMI-ANNUAL BASIS PURSUANT TO THE REQUIREMENTS SPECIFIED IN 40 CFR 64.9 AND CONDITION NOS. 22 AND 23 IN SECTION K OF THIS PERMIT. FOR THE PURPOSE OF THIS CONDITION, A DEVIATION SHALL BE DEFINED AS WHEN THE LAST POWER TURBINE (T7) EXHAUST TEMPERATURE IS LESS THAN 1100 DEGREES FAHRENHEIT OR GREATER THAN 1300 DEGREES FAHRENHEIT, OR AS OTHERWISE APPROVED BY SCAQMD, OCCURS AVERAGED OVER ONE HOUR DURING

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

OPERATION EXCEPT DURING START UP AND SHUTDOWN EVENTS LASTING FOR A MAXIMUM OF ONE HOUR. MULTIPLE START UP AND SHUTDOWN EVENTS CAN OCCUR CONSECUTIVELY.  
[40 CFR 64]

14. FOR EACH SEMI-ANNUAL REPORTING PERIOD SPECIFIED IN CONDITION NO. 23 IN SECTION K, WHENEVER A DEVIATION OCCURS FROM THE TEMPERATURE, THE OPERATOR SHALL TAKE IMMEDIATE CORRECTIVE ACTION, AND KEEP RECORDS OF THE DURATION AND CAUSE (INCLUDING UNKNOWN CAUSE, IF APPLICABLE) OF THE DEVIATION AND THE CORRECTIVE ACTION TAKEN.  
[40 CFR 64]
15. 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.  
[40 CFR 64]
16. THE OWNER OR OPERATOR SHALL SUBMIT AN APPLICATION WITH A QUALITY IMPROVEMENT PLAN (QIP) IN ACCORDANCE WITH 40 CFR PART 64.8 TO THE SCAQMD IF AN ACCUMULATION OF DEVIATIONS 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.  
[40 CFR 64]
17. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE EXHAUST CONCENTRATION FOR NO<sub>x</sub>, AND O<sub>2</sub> ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NO<sub>x</sub> CONCENTRATION TO A CORRECTED NO<sub>x</sub> CONCENTRATION AT 15% O<sub>2</sub>, DRY, AND RESULTS SHALL BE CONTINUOUSLY RECORDED.  
[RULE 218, 1303(b) (1) MODELING, 1303(B) (2)-OFFSET, 3004(a) (4)]
18. OPERATOR SHALL CONDUCT ANNUAL PERFORMANCE TESTS, AT FULL LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND SOURCE TEST PROTOCOL, AND WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST. THE WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE 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 THE TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET LANDFILL GAS AND THE GAS TURBINE EXHAUST FOR:
  - A. METHANE AND TOTAL NON-METHANE HYDROCARBONS (TNMHC)
  - B. CARBON MONOXIDE (EXHAUST ONLY)
  - C. OXIDES OF NITROGEN (EXHAUST ONLY)
  - D. CARBON DIOXIDE

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

- E. PARTICULATE MATTER/PM10 (EXHAUST ONLY)
- F. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
- G. TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1, 2-DICHLOROETHANE, 1, 1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1, 1, 1-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS.
- H. OXYGEN AND NITROGEN
- I. MOISTURE CONTENT
- J. TEMPERATURE
- K. FLOW RATE
- L. VOLATILE ORGANIC COMPOUNDS (VOCS) CONTROL EFFICIENCY, WT% (BASED ON INLET AND EXHAUST VOCS)
- M. KW GENERATED.

THE REPORT SHALL ALSO PRESENT THE EMISSIONS DATA IN UNITS OF POUNDS PER HOUR (LB/HR), POUNDS PER MILLION BTU (LB/MMBTU), AND PARTS PER MILLION (PPMV) ON A DRY BASIS AT 15% O2 (CO, NO<sub>x</sub>, TNMHC, AND TAC.) AND GAS TURBINE'S OVERALL TNMHC DESTRUCTION EFFICIENCY (WT %). TOTAL PARTICULATE/PM10 SHALL BE REPORTED IN GR/SCF AND LBS/HR. THE REPORT SHALL PROJECT THE TOTAL DAILY SO2 AND HCL EMISSIONS BASED ON THE TEST RESULTS. IN ADDITION, THE REPORT SHALL PROVIDE GAS TURBINE'S DEMONSTRATED EFFICIENCY AT FULL LOAD, IN BTU/KW-HR, CORRECTED TO THE HIGHER HEATING VALUE (HHV) OF THE FUEL.

[RULE 1303 (a) (1)-BACT, 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 1150.1, 1401, 3004 (a) (4), 40 CFR PART 60 SUBPART WWW]

19. EMISSIONS FROM THE GAS TURBINE SHALL NOT EXCEED THE FOLLOWING:

CONTAMINANT	LBS/DAY
CO	77.6
NO <sub>x</sub> (AS NO <sub>2</sub> )	76.5
PM10	17.3
TNMOC (AS CH <sub>4</sub> )	21.1

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

20. EMISSION OF OXIDES OF NITROGEN SHALL NOT EXCEED 15 PPMV, CALCULATED AT 15% O<sub>2</sub>, DRY BASIS, EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN NOT TO EXCEED 30 MINUTES PER INCIDENT.

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

21. EMISSION OF CARBON MONOXIDE SHALL NOT EXCEED 25 PPMV, CALCULATED AT 15% O<sub>2</sub>, DRY BASIS, EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN NOT TO EXCEED 30 MINUTES PER INCIDENT.

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

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

22. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 3004 (a) (4)]

### Emissions and Requirements:

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

23. CO: 2000 PPMV, DRY, 15 MIN. AVG., RULE 407  
CO: 25 PPMV, @ 15% O<sub>2</sub>, DRY, MAJOR SOURCE – LAER  
NO<sub>x</sub>: 15 PPMV, @ 15% O<sub>2</sub>, DRY, MAJOR SOURCE - LAER  
NO<sub>x</sub>: 96 PPMV, @ 15% O<sub>2</sub>, DRY, OR 5.5 LB/MWh, NSPS, 40CFR60 SUBPART KKKK  
PM: COMBUSTION CONTAMINANT, 0.1 GRAIN/DSCF OF GAS, CALCULATED @ 12% CO<sub>2</sub>, AVERAGED OVER 15 CONSECUTIVE MINUTES, RULE 409.  
ROG: 20 PPMV, AS HEXANE, @ 3% O<sub>2</sub>, DRY OR 98% (BY WT) DESTRUCTION EFFICIENCY, RULE 1150.1, 40 CFR60 SUBPART WWW, 40 CFR 63 SUBPART AAAA.
- SO<sub>x</sub>: BASED ON MAXIMUM 150 PPMV H<sub>2</sub>S CON. IN LFG, RULE 431.1  
SO<sub>x</sub>: FACILITY WIDE TOTAL SO<sub>x</sub> EMISSION SHALL NOT EXCEED 375.1 LBS/DAY, FROM FIVE GAS TURBINES AND A REGENERATION FLARE.  
SO<sub>x</sub>: 0.90 LB/MWh OR 0.15 LB/MMBTU, NSPS, 40 CFR 60 SUBPART KKKK.  
SO<sub>x</sub>: 0.2% RULE 53

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

### PERMIT TO CONSTRUCT

A/N 571765  
Granted as of TBD

#### Equipment Description:

RESOURCE RECOVERY/LANDFILL GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.
2. GAS TURBINE, NO. 5, SOLAR, MERCURY 50, LANDFILL GAS (LFG) FIRED, DRIVING A NOMINAL 4.9 MEGAWATT (MW) ELECTRIC GENERATOR.
3. EXHAUST STACK, 4'- 7" DIA. X 26' - 6" HIGH.

#### 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]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.  
[RULE 204]
4. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING START-UP.  
[RULE 204]
5. A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO THE GAS TURBINE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS (IN SCFM) SUPPLIED.  
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 3004(a) (4)]
6. THE TOTAL HEAT INPUT OF LANDFILL GAS BURNED IN THE GAS TURBINE SHALL NOT EXCEED 48.1MMBTU/HR (HHV), BASED ON A 24 -HOUR AVERAGE. THE OPERATOR SHALL MONITOR THE TOTAL HEAT INPUT RATE OF THE LANDFILL GAS ON A CONTINUOUS BASIS. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL INSTALL AND MAINTAIN A REMOTE NOTIFICATION SYSTEM TO NOTIFY THE FACILITY IF AN EXCEEDANCE OF 48.1 MMBTU/HR LIMIT OCCURS.  
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 3004(a) (4), RULE 1401]

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

7. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.  
[RULE 204]
8. THE OPERATOR SHALL DIRECT ALL LANDFILL GAS WHICH IS NOT BURNED IN THIS EQUIPMENT TO ANOTHER COMBUSTION OR PROCESSING FACILITY WHICH IS IN FULL USE, AND CAN ADEQUATELY PROCESS THE VOLUME OF GAS COLLECTED AND WHICH HAS BEEN ISSUED A VALID PERMIT BY THE SCAQMD.  
[RULE 1303(a) (1)-BACT]
9. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR AFTER OCCURRENCE OR WITHIN ONE HOUR OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE AND, IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.  
[RULE 402, AND 430]
10. THE OPERATOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF SAMPLING PORTS AND WELDED NIPPLES WITH CAPS, IN THE EXHAUST STACK AND PROVIDE SAFE ACCESS TO THESE SAMPLING PORTS IN ACCORDANCE WITH RULE 217 AND SCAQMD APPROVAL.  
[RULE 217]
11. A CONTINUOUS COMBUSTION TEMPERATURE MONITORING AND RECORDING SYSTEM SHALL BE MAINTAINED, TO DETERMINE EXHAUST TEMPERATURE OF LAST POWER TURBINE (T7) AND CALCULATE THE COMBUSTION CHAMBER TEMPERATURE (TPZ) PER MANUFACTURER'S RECOMMENDATIONS, PURSUANT TO THE OPERATION AND MAINTENANCE REQUIREMENTS SPECIFIED IN 40 CFR PART 64.7. SUCH A SYSTEM SHALL HAVE AN ACCURACY OF WITHIN  $\pm 1\%$  OF THE TEMPERATURE BEING MONITORED AND SHALL BE INSPECTED, MAINTAINED, AND CALIBRATED ON AN ANNUAL BASIS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS USING AN APPLICABLE SCAQMD OR EPA APPROVED METHOD.  
[40 CFR 64]
12. THE COMBUSTION CHAMBER TEMPERATURE OF LAST POWER TURBINE (T7) SHALL BE RECORDED AT LEAST EVERY 15 MINUTES, AND THE HOURLY AVERAGE SHALL BE COMPUTED FROM SUCH DATA POINTS. THE OPERATOR SHALL REVIEW THE RECORDS OF TEMPERATURE ON A DAILY BASIS TO DETERMINE IF A DEVIATION OCCURRED OR SHALL INSTALL AN ALARM SYSTEM TO ALERT THE OPERATOR WHEN A DEVIATION OCCURS.  
[40 CFR 64]
13. ALL DEVIATIONS SHALL BE REPORTED TO THE SCAQMD ON A SEMI-ANNUAL BASIS PURSUANT TO THE REQUIREMENTS SPECIFIED IN 40 CFR 64.9 AND CONDITION NOS. 22 AND 23 IN SECTION K OF THIS PERMIT. FOR THE PURPOSE OF THIS CONDITION, A DEVIATION SHALL BE DEFINED AS WHEN THE LAST POWER TURBINE (T7) EXHAUST TEMPERATURE IS LESS THAN 1100 DEGREES FAHRENHEIT OR GREATER THAN 1300 DEGREES FAHRENHEIT, OR AS OTHERWISE APPROVED BY SCAQMD, OCCURS AVERAGED OVER ONE HOUR DURING

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

OPERATION EXCEPT DURING START UP AND SHUTDOWN EVENTS LASTING FOR A MAXIMUM OF ONE HOUR. MULTIPLE START UP AND SHUTDOWN EVENTS CAN OCCUR CONSECUTIVELY.  
[40 CFR 64]

14. FOR EACH SEMI-ANNUAL REPORTING PERIOD SPECIFIED IN CONDITION NO. 23 IN SECTION K, WHENEVER A DEVIATION OCCURS FROM THE TEMPERATURE, THE OPERATOR SHALL TAKE IMMEDIATE CORRECTIVE ACTION, AND KEEP RECORDS OF THE DURATION AND CAUSE (INCLUDING UNKNOWN CAUSE, IF APPLICABLE) OF THE DEVIATION AND THE CORRECTIVE ACTION TAKEN.  
[40 CFR 64]
15. 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.  
[40 CFR 64]
16. THE OWNER OR OPERATOR SHALL SUBMIT AN APPLICATION WITH A QUALITY IMPROVEMENT PLAN (QIP) IN ACCORDANCE WITH 40 CFR PART 64.8 TO THE SCAQMD IF AN ACCUMULATION OF DEVIATIONS 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.  
[40 CFR 64]
17. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE EXHAUST CONCENTRATION FOR NO<sub>x</sub>, AND O<sub>2</sub> ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NO<sub>x</sub> CONCENTRATION TO A CORRECTED NO<sub>x</sub> CONCENTRATION AT 15% O<sub>2</sub>, DRY, AND RESULTS SHALL BE CONTINUOUSLY RECORDED.  
[RULE 218, 1303(b) (1) MODELING, 1303(B) (2)-OFFSET, 3004(a) (4)]
18. OPERATOR SHALL CONDUCT ANNUAL PERFORMANCE TESTS, AT FULL LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND SOURCE TEST PROTOCOL, AND WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST. THE WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE 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 THE TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET LANDFILL GAS AND THE GAS TURBINE EXHAUST FOR:
  - A. METHANE AND TOTAL NON-METHANE HYDROCARBONS (TNMHC)
  - B. CARBON MONOXIDE (EXHAUST ONLY)
  - C. OXIDES OF NITROGEN (EXHAUST ONLY)
  - D. CARBON DIOXIDE

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

- E. PARTICULATE MATTER/PM10 (EXHAUST ONLY)
- F. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
- G. TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1, 2-DICHLOROETHANE, 1, 1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1, 1, 1-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS.
- H. OXYGEN AND NITROGEN
- I. MOISTURE CONTENT
- J. TEMPERATURE
- K. FLOW RATE
- L. VOLATILE ORGANIC COMPOUNDS (VOCS) CONTROL EFFICIENCY, WT% (BASED ON INLET AND EXHAUST VOCS)
- M. KW GENERATED.

THE REPORT SHALL ALSO PRESENT THE EMISSIONS DATA IN UNITS OF POUNDS PER HOUR (LB/HR), POUNDS PER MILLION BTU (LB/MMBTU), AND PARTS PER MILLION (PPMV) ON A DRY BASIS AT 15% O2 (CO, NOx, TNMHC, AND TAC.) AND GAS TURBINE'S OVERALL TNMHC DESTRUCTION EFFICIENCY (WT %). TOTAL PARTICULATE/PM10 SHALL BE REPORTED IN GR/SCF AND LBS/HR. THE REPORT SHALL PROJECT THE TOTAL DAILY SO2 AND HCL EMISSIONS BASED ON THE TEST RESULTS.. IN ADDITION, THE REPORT SHALL PROVIDE GAS TURBINE'S DEMONSTRATED EFFICIENCY AT FULL LOAD, IN BTU/KW-HR, CORRECTED TO THE HIGHER HEATING VALUE (HHV) OF THE FUEL.

[RULE 1303 (a) (1)-BACT, 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 1150.1, 1401, 3004 (a) (4), 40 CFR PART 60 SUBPART WWW]

19. EMISSIONS FROM THE GAS TURBINE SHALL NOT EXCEED THE FOLLOWING:

CONTAMINANT	LBS/DAY
CO	77.6
NOx (AS NO2)	76.5
PM10	17.3
TNMOC (AS CH4)	21.1

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

20. EMISSION OF OXIDES OF NITROGEN SHALL NOT EXCEED 15 PPMV, CALCULATED AT 15% O2, DRY BASIS, EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN NOT TO EXCEED 30 MINUTES PER INCIDENT.

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

21. EMISSION OF CARBON MONOXIDE SHALL NOT EXCEED 25 PPMV, CALCULATED AT 15% O2, DRY BASIS, EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN NOT TO EXCEED 30 MINUTES PER INCIDENT.

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

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

22. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 3004 (a) (4)]

### Emissions and Requirements:

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

23. CO: 2000 PPMV, DRY, 15 MIN. AVG., RULE 407  
CO: 25 PPMV, @ 15% O<sub>2</sub>, DRY, MAJOR SOURCE - LAER  
NO<sub>x</sub>: 15 PPMV, @ 15% O<sub>2</sub>, DRY, MAJOR SOURCE - LAER  
NO<sub>x</sub>: 96 PPMV, @ 15% O<sub>2</sub>, DRY, OR 5.5 LB/MWh, NSPS, 40CFR60 SUBPART KKKK  
PM: COMBUSTION CONTAMINANT, 0.1 GRAIN/DSCF OF GAS, CALCULATED @ 12% CO<sub>2</sub>, AVERAGED OVER 15 CONSECUTIVE MINUTES, RULE 409.  
ROG: 20 PPMV, AS HEXANE, @ 3% O<sub>2</sub>, DRY OR 98% (BY WT) DESTRUCTION EFFICIENCY, RULE 1150.1, 40 CFR60 SUBPART WWW, 40 CFR 63 SUBPART AAAA.
- SO<sub>x</sub>: BASED ON MAXIMUM 150 PPMV H<sub>2</sub>S CON. IN LFG, RULE 431.1  
SO<sub>x</sub>: FACILITY WIDE TOTAL SO<sub>x</sub> EMISSION SHALL NOT EXCEED 375.1 LBS/DAY, FROM FIVE GAS TURBINES AND A REGENERATION FLARE.  
SO<sub>x</sub>: 0.90 LB/MWh OR 0.15 LB/MMBTU, NSPS, 40 CFR 60 SUBPART KKKK.  
SO<sub>x</sub>: 0.2% RULE 53

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

### PERMIT TO CONSTRUCT

A/N 571766  
Granted as of TBD

#### Equipment Description:

LANDFILL GAS (LFG) FUELED REGENERATION FLARE CONSISTING OF:

1. EXHAUST GAS FROM THE LFG TREATMENT AND COMPRESSION SYSTEM (A/N 482510).
2. FLARE, JOHN ZINK, MODEL ZULE ULTRA LOW EMISSION, LANDFILL GAS AND PURGE -AIR, RATED AT 6,400,000 BTU PER HOUR BURNER, WITH A FLAME ARRESTER, PROPANE PILOT WITH AN AUTOMATED TRU-LITE IGNITER, COMBUSTION AIR BLOWER, AUTOMATIC IGNITION, FLARE SHUT DOWN, AND WITH A PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEM.
3. EXHAUST STACK, 4'- 0" DIA. X 40'- 0" H.

#### 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]
3. THIS EQUIPMENT SHALL BE OPERATED AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.  
[RULE 204]
4. THE OPERATOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF SAMPLING PORTS AND WELDED NIPPLES WITH CAPS, IN THE INLET GAS AND EXHAUST STACK AND PROVIDE SAFE ACCESS TO THESE SAMPLING PORTS IN ACCORDANCE WITH RULE 217 AND SCAQMD APPROVAL.  
[RULE 217]
5. A FLOW INDICATOR AND RECORDING DEVICE SHALL BE MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO THE FLARE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS (IN SCFM) BURNED IN FLARE.  
[RULE 1303(b) (2)-OFFSET, 3004 (a) (4)]
6. THE OPERATOR SHALL MEASURE AND RECORD THE BTU CONTENT OF THE LANDFILL GAS BURNED IN THE FLARE AT LEAST ONCE PER WEEK USING AN INSTRUMENT APPROVED BY THE SCAQMD.  
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 3004(a) (4)]

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7. THE TOTAL VOLUME OF LANDFILL GAS BURNED IN FLARE SHALL NOT EXCEED MAXIMUM HEAT INPUT RATE OF 6.4 MMBTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF LANDFILL GAS BURNED IN 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]
8. OPERATION OF THIS EQUIPMENT USING LFG SHALL BE LIMITED TO NO MORE THAN 16 HOURS IN ONE DAY, DURING WHICH PERIOD EXHAUST FROM THE LFG TREATMENT'S MEDIA REGENERATION CYCLE IS TREATED.  
[RULE 1303(b) (1) AND (b) (2)-MODELING AND OFFSET, 1401]
9. THIS EQUIPMENT SHALL BE EQUIPPED WITH A TEMPERATURE INDICATOR AND RECORDER WHICH MEASURES AND RECORDS THE EXHAUST GAS TEMPERATURE IN THE FLARE STACK. THE TEMPERATURE INDICATOR AND RECORDER 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 TWO (2) FEET BELOW THE TOP OF THE STACK.  
[RULE 1303(a) (1)-BACT, 3004 (a) (4)]
10. 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]
11. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO TIME OF THE DAY.  
[RULE 204]
12. THE AUTOMATIC SHUTDOWN SAFETY SYSTEM SHALL BE TESTED ANNUALLY FOR PROPER OPERATION AND THE RESULTS RECORDED.  
[RULE 1303(a) (1)-BACT]
13. OPERATOR SHALL CONDUCT ANNUAL PERFORMANCE TESTS, AT FULL LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND SOURCE TEST PROTOCOL, AND WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST. 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 AQMD 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 (TAC) INCLUDING, BUT NOT LIMITED TO,

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BENZENE, CHLOROBENZENE, 1, 2-DICHLOROETHANE, 1, 1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1, 1, 1-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS (EXHAUST ONLY).

- D. NOX, AS NO2 (EXHAUST ONLY)
- E. SOX, AS SO2 (EXHAUST ONLY)
- F. CO (EXHAUST ONLY)
- G. TOTAL PARTICULATES/PM10 (EXHAUST ONLY)
- H. OXYGEN
- I. MOISTURE CONTENT
- J. TEMPERATURE
- K. FLOW RATE

[RULE 1303(b) (1) AND (b) (2)-MODELING AND OFFSET, 1401, 1150.1, 3004 (a) (4), 40 CFR PART 60 SUBPART WWW]

14. THE SOURCE TEST REPORT FOR THE FLARE TESTED SHALL INCLUDE: EMISSIONS OF CO, NO<sub>x</sub>, TNMOCs, TOTAL PARTICULATES/PM10, SO<sub>x</sub> AND TAC, IN UNITS OF LBS/HR AND PPMV (EXCEPT TOTAL PARTICULATES/PM10 WHICH SHALL BE IN LBS/HR AND GR/SCF), OVERALL TNMOC DESTRUCTION EFFICIENCY (WT %), ACETALDEHYDE, FORMALDEHYDE, EMISSIONS (LBS/HR AND PPMV), AND TNMOC EMISSIONS (PPMV), DRY BASIS, AS HEXANE AT 3% OXYGEN. THE REPORT SHALL ALSO PROJECT THE TOTAL DAILY SO<sub>2</sub> AND HCL EMISSIONS BASED ON THE RESULTS  
[RULE 1303(b) (1) AND (b) (2)-MODELING AND OFFSET, 1401, 1150.1, 3004 (a) (4), 40 CFR PART 60 SUBPART WWW, RULE 1150.1]

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

16. EMISSIONS FROM THE FLARE SHALL NOT EXCEED THE FOLLOWING:

POLLUTANT	LBS/DAY
CO	6.15
NOX AS NO2	2.60
PM10, AS PM2.5	26.1
ROG	1.88

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

17. THE OPERATOR SHALL OPERATE AND MAINTAIN THIS EQUIPMENT ACCORDING TO THE FOLLOWING REQUIREMENTS:

THE EXHAUST TEMPERATURE SHALL BE MAINTAINED AT A MINIMUM OF 1,400 DEGREES FAHRENHEIT WHENEVER THE EQUIPMENT IT SERVES IS IN OPERATION.

CONTINUOUS EXHAUST TEMPERATURE MONITORING AND RECORDING SYSTEM SHALL BE PURSUANT TO THE OPERATION AND MAINTENANCE REQUIREMENTS SPECIFIED IN 40 CFR PART 64.7. SUCH A SYSTEM SHALL HAVE AN ACCURACY OF WITHIN  $\pm$  1% OF THE

## **FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC**

TEMPERATURE BEING MONITORED AND SHALL BE INSPECTED, MAINTAINED, AND CALIBRATED ON AN ANNUAL BASIS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS USING AN APPLICABLE AQMD OR EPA APPROVED METHOD.

FOR THE PURPOSE OF THIS CONDITION, A DEVIATION SHALL BE DEFINED AS WHEN A TEMPERATURE OF LESS THAN 1,400 DEGREES FAHRENHEIT OCCURS DURING NORMAL OPERATION. THE OPERATOR SHALL REVIEW THE RECORDS OF 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.

SEMI-ANNUAL REPORTING SPECIFIED IN CONDITION NO. 23 IN SECTION K, WHENEVER A DEVIATION OCCURS IN WHICH THE TEMPERATURE OF THE FLARE FALLS BELOW 1,400 DEGREES FAHRENHEIT, THE OPERATOR SHALL TAKE NECESSARY CORRECTIVE ACTIONS AS EXPEDITIOUSLY AS PRACTICABLE IN ACCORDANCE WITH GOOD AIR POLLUTION CONTROL PRACTICES FOR MINIMIZING EMISSIONS. RECORDS OF THE DURATION AND CAUSE (INCLUDING UNKNOWN CAUSE, IF APPLICABLE) OF THE DEVIATION AND THE CORRECTIVE ACTIONS TAKEN SHALL BE INCLUDED IN THE SEMI-ANNUAL REPORTING.

ALL DEVIATIONS SHALL BE REPORTED TO THE AQMD 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.

THE OPERATOR SHALL SUBMIT AN APPLICATION WITH A QUALITY IMPROVEMENT PLAN (QIP) IN ACCORDANCE WITH 40 CFR PART 64.8 TO THE AQMD IF AN ACCUMULATION OF DEVIATIONS EXCEEDS 5 PERCENT 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 AQMD WITHIN 90 CALENDAR DAYS AFTER THE DUE DATE FOR THE SEMI-ANNUAL MONITORING REPORT.

THE OPERATOR SHALL KEEP ADEQUATE RECORDS IN A FORMAT THAT IS ACCEPTABLE TO THE AQMD TO DEMONSTRATE COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS SPECIFIED IN THIS CONDITION AND 40 CFR PART 64.9 FOR A MINIMUM OF FIVE YEARS.  
[RULE 3004(A) (4)-PERIODIC MONITORING, 40CFR PART 64]

18. 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]
19. ALL RECORDS SHALL BE KEPT AND MAINTAINED FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 3004 (a) (4)]

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### Emissions and Requirements:

20. 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

NMOC: 98% DESTRUCTION OR 20 PPMV, AS HEXANE, RULE 1150.1, 40CFR60 SUBPART WWW

PM: RULE 404, SEE APPENDIX B FOR EMISSIONS LIMITS

PM: 0.1 gr/scf @ 12% CO<sub>2</sub>, RULE 409

SOx: BASED ON MAXIMUM 150 PPMV H<sub>2</sub>S CON. IN LFG, RULE 431.1

SOx: FACILITY WIDE TOTAL SO<sub>x</sub> EMISSION SHALL NOT EXCEED 375.1 LBS/DAY, FROM FIVE GAS TURBINES AND A REGENERATION FLARE.

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

### PERMIT TO CONSTRUCT

A/N 571767  
Granted as of TBD

#### Equipment Description:

RESOURCE RECOVERY/LANDFILL GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.
2. GAS TURBINE, NO. 4, SOLAR, MERCURY 50, LANDFILL GAS (LFG) FIRED, DRIVING A NOMINAL 4.9 MEGAWATT (MW) ELECTRIC GENERATOR.
3. EXHAUST STACK, 4'- 7" DIA. X 26' - 6" HIGH.

#### 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]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.  
[RULE 204]
4. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING START-UP.  
[RULE 204]
5. A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO THE GAS TURBINE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS (IN SCFM) SUPPLIED.  
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 3004(a) (4)]
6. THE TOTAL HEAT INPUT OF LANDFILL GAS BURNED IN THE GAS TURBINE SHALL NOT EXCEED 48.1MMBTU/HR (HHV), BASED ON A 24 -HOUR AVERAGE. THE OPERATOR SHALL MONITOR THE TOTAL HEAT INPUT RATE OF THE LANDFILL GAS ON A CONTINUOUS BASIS. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL INSTALL AND MAINTAIN A REMOTE NOTIFICATION SYSTEM TO NOTIFY THE FACILITY IF AN EXCEEDANCE OF 48.1 MMBTU/HR LIMIT OCCURS.  
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 3004(a) (4), RULE 1401]

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7. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.  
[RULE 204]
8. THE OPERATOR SHALL DIRECT ALL LANDFILL GAS WHICH IS NOT BURNED IN THIS EQUIPMENT TO ANOTHER COMBUSTION OR PROCESSING FACILITY WHICH IS IN FULL USE, AND CAN ADEQUATELY PROCESS THE VOLUME OF GAS COLLECTED AND WHICH HAS BEEN ISSUED A VALID PERMIT BY THE SCAQMD.  
[RULE 1303(a) (1)-BACT]
9. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR AFTER OCCURRENCE OR WITHIN ONE HOUR OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE AND, IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.  
[RULE 402, AND 430]
10. THE OPERATOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF SAMPLING PORTS AND WELDED NIPPLES WITH CAPS, IN THE EXHAUST STACK AND PROVIDE SAFE ACCESS TO THESE SAMPLING PORTS IN ACCORDANCE WITH RULE 217 AND SCAQMD APPROVAL.  
[RULE 217]
11. A CONTINUOUS COMBUSTION TEMPERATURE MONITORING AND RECORDING SYSTEM SHALL BE MAINTAINED, TO DETERMINE EXHAUST TEMPERATURE OF LAST POWER TURBINE (T7) AND CALCULATE THE COMBUSTION CHAMBER TEMPERATURE (TPZ) PER MANUFACTURER'S RECOMMENDATIONS, PURSUANT TO THE OPERATION AND MAINTENANCE REQUIREMENTS SPECIFIED IN 40 CFR PART 64.7. SUCH A SYSTEM SHALL HAVE AN ACCURACY OF WITHIN  $\pm 1\%$  OF THE TEMPERATURE BEING MONITORED AND SHALL BE INSPECTED, MAINTAINED, AND CALIBRATED ON AN ANNUAL BASIS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS USING AN APPLICABLE SCAQMD OR EPA APPROVED METHOD.  
[40 CFR 64]
12. THE COMBUSTION CHAMBER TEMPERATURE OF LAST POWER TURBINE (T7) SHALL BE RECORDED AT LEAST EVERY 15 MINUTES, AND THE HOURLY AVERAGE SHALL BE COMPUTED FROM SUCH DATA POINTS. THE OPERATOR SHALL REVIEW THE RECORDS OF TEMPERATURE ON A DAILY BASIS TO DETERMINE IF A DEVIATION OCCURRED OR SHALL INSTALL AN ALARM SYSTEM TO ALERT THE OPERATOR WHEN A DEVIATION OCCURS.  
[40 CFR 64]
13. ALL DEVIATIONS SHALL BE REPORTED TO THE SCAQMD ON A SEMI-ANNUAL BASIS PURSUANT TO THE REQUIREMENTS SPECIFIED IN 40 CFR 64.9 AND CONDITION NOS. 22 AND 23 IN SECTION K OF THIS PERMIT. FOR THE PURPOSE OF THIS CONDITION, A DEVIATION SHALL BE DEFINED AS WHEN THE LAST POWER TURBINE (T7) EXHAUST TEMPERATURE IS LESS THAN 1100 DEGREES FAHRENHEIT OR GREATER THAN 1300 DEGREES FAHRENHEIT, OR AS OTHERWISE APPROVED BY SCAQMD, OCCURS AVERAGED OVER ONE HOUR DURING

## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

OPERATION EXCEPT DURING START UP AND SHUTDOWN EVENTS LASTING FOR A MAXIMUM OF ONE HOUR. MULTIPLE START UP AND SHUTDOWN EVENTS CAN OCCUR CONSECUTIVELY.  
[40 CFR 64]

14. FOR EACH SEMI-ANNUAL REPORTING PERIOD SPECIFIED IN CONDITION NO. 23 IN SECTION K, WHENEVER A DEVIATION OCCURS FROM THE TEMPERATURE, THE OPERATOR SHALL TAKE IMMEDIATE CORRECTIVE ACTION, AND KEEP RECORDS OF THE DURATION AND CAUSE (INCLUDING UNKNOWN CAUSE, IF APPLICABLE) OF THE DEVIATION AND THE CORRECTIVE ACTION TAKEN.  
[40 CFR 64]
15. 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.  
[40 CFR 64]
16. THE OWNER OR OPERATOR SHALL SUBMIT AN APPLICATION WITH A QUALITY IMPROVEMENT PLAN (QIP) IN ACCORDANCE WITH 40 CFR PART 64.8 TO THE SCAQMD IF AN ACCUMULATION OF DEVIATIONS 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.  
[40 CFR 64]
17. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE EXHAUST CONCENTRATION FOR NO<sub>x</sub>, AND O<sub>2</sub> ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NO<sub>x</sub> CONCENTRATION TO A CORRECTED NO<sub>x</sub> CONCENTRATION AT 15% O<sub>2</sub>, DRY, AND RESULTS SHALL BE CONTINUOUSLY RECORDED.  
[RULE 218, 1303(b) (1) MODELING, 1303(B) (2)-OFFSET, 3004(a) (4)]
18. OPERATOR SHALL CONDUCT ANNUAL PERFORMANCE TESTS, AT FULL LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND SOURCE TEST PROTOCOL, AND WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST. THE WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE 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 THE TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET LANDFILL GAS AND THE GAS TURBINE EXHAUST FOR:
  - A. METHANE AND TOTAL NON-METHANE HYDROCARBONS (TNMHC)
  - B. CARBON MONOXIDE (EXHAUST ONLY)
  - C. OXIDES OF NITROGEN (EXHAUST ONLY)
  - D. CARBON DIOXIDE

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- E. PARTICULATE MATTER/PM10 (EXHAUST ONLY)
- F. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
- G. TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1, 2-DICHLOROETHANE, 1, 1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1, 1, 1-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS.
- H. OXYGEN AND NITROGEN
- I. MOISTURE CONTENT
- J. TEMPERATURE
- K. FLOW RATE
- L. VOLATILE ORGANIC COMPOUNDS (VOCS) CONTROL EFFICIENCY, WT% (BASED ON INLET AND EXHAUST VOCS)
- M. KW GENERATED.

THE REPORT SHALL ALSO PRESENT THE EMISSIONS DATA IN UNITS OF POUNDS PER HOUR (LB/HR), POUNDS PER MILLION BTU (LB/MMBTU), AND PARTS PER MILLION (PPMV) ON A DRY BASIS AT 15% O2 (CO, NO<sub>x</sub>, TNMHC, AND TAC.) AND GAS TURBINE'S OVERALL TNMHC DESTRUCTION EFFICIENCY (WT %). TOTAL PARTICULATE/PM10 SHALL BE REPORTED IN GR/SCF AND LBS/HR. THE REPORT SHALL PROJECT THE DAILY SO2 AND ANNUAL HCL EMISSIONS BASED ON THE TEST RESULTS.. IN ADDITION, THE REPORT SHALL PROVIDE GAS TURBINE'S DEMONSTRATED EFFICIENCY AT FULL LOAD, IN BTU/KW-HR, CORRECTED TO THE HIGHER HEATING VALUE (HHV) OF THE FUEL.

[RULE 1303 (a) (1)-BACT, 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET, 1150.1, 1401, 3004 (a) (4), 40 CFR PART 60 SUBPART WWW]

19. EMISSIONS FROM THE GAS TURBINE SHALL NOT EXCEED THE FOLLOWING:

CONTAMINANT	LBS/DAY
CO	77.6
NO <sub>x</sub> (AS NO2)	76.5
PM10	17.3
TNMOC (AS CH4)	21.1

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

20. EMISSION OF OXIDES OF NITROGEN SHALL NOT EXCEED 15 PPMV, CALCULATED AT 15% O2, DRY BASIS, EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN NOT TO EXCEED 30 MINUTES PER INCIDENT.

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

21. EMISSION OF CARBON MONOXIDE SHALL NOT EXCEED 25 PPMV, CALCULATED AT 15% O2, DRY BASIS, EXCEPT DURING PERIODS OF STARTUP AND SHUTDOWN NOT TO EXCEED 30 MINUTES PER INCIDENT.

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

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22. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 3004 (a) (4)]

### Emissions and Requirements:

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

23. CO: 2000 PPMV, DRY, 15 MIN. AVG., RULE 407  
CO: 25 PPMV, @ 15% O<sub>2</sub>, DRY, MAJOR SOURCE – LAER  
NO<sub>x</sub>: 15 PPMV, @ 15% O<sub>2</sub>, DRY, MAJOR SOURCE - LAER  
NO<sub>x</sub>: 96 PPMV, @ 15% O<sub>2</sub>, DRY, OR 5.5 LB/MWh, NSPS, 40CFR60 SUBPART KKKK  
PM: COMBUSTION CONTAMINANT, 0.1 GRAIN/DSCF OF GAS, CALCULATED @ 12% CO<sub>2</sub>, AVERAGED OVER 15 CONSECUTIVE MINUTES, RULE 409.  
ROG: 20 PPMV, AS HEXANE, @ 3% O<sub>2</sub>, DRY OR 98% (BY WT) DESTRUCTION EFFICIENCY, RULE 1150.1, 40 CFR60 SUBPART WWW, 40 CFR 63 SUBPART AAAA.  
SO<sub>x</sub>: BASED ON MAXIMUM 150 PPMV H<sub>2</sub>S CON. IN LFG, RULE 431.1  
SO<sub>x</sub>: FACILITY WIDE TOTAL SO<sub>x</sub> EMISSION SHALL NOT EXCEED 375.1 LBS/DAY, FROM FIVE GAS TURBINES AND A REGENERATION FLARE.  
SO<sub>x</sub>: 0.90 LB/MWh OR 0.15 LB/MMBTU, NSPS, 40 CFR 60 SUBPART KKKK.  
SO<sub>x</sub>: 0.2% RULE 53