



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

April 9, 2015

Mr. Gary S. Quantock  
Vice President, Operations and Asset Management  
Sunshine Gas Producers, LLC  
425 S. Main Street, Suite 201  
Ann Arbor, MI 48104

Subject: Title V Facility Permit Revision for Sunshine Gas Producers, LLC  
(Facility ID 139938)

Dear Mr. Quantock:

Enclosed are the revised Title Page, Table of Contents, Section A and Section H of Title V Facility Permit, for Sunshine Gas Producers, LLC (SGP), located at 14747 San Fernando Road (at Sunshine Canyon Landfill), Sylmar, CA. On February 20, 2015, the South Coast Air Quality Management District (AQMD) issued draft permit for Environmental Protection Agency's (EPA) review, for the de-minimis significant revision under A/N 571768 and no comments were received from EPA. No public notice was required for this revision.

Section A-Facility Information; is updated to show Responsible Official's name, Title and phone number. This change is considered an administrative revision.

The revised Section H reflects the approval of the permits as shown below.

SECTION H: Permit to Construct and Temporary Permit to Operate

Application Numbers	PC Approval Date	Description
571762 through 571765 and 571767	04/08/2015	Turbine Engines (5), Landfill Gas, each 4.9 MW
571766	04/08/2015	Landfill gas fueled enclosed Regeneration Flare

Please review the attached pages carefully. Insert the enclosed section in your Title V Facility Permit and discard the earlier versions. Questions concerning this revised permit should be directed to Mr. Gaurang Rawal at (909) 396-2543.

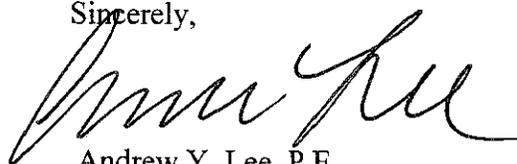
Mr. Gary S. Quantock  
Sunshine Gas Producers, LLC  
Title V Permit Revision  
Facility ID. 139938

-2-

April 9, 2015

The operation of your facility is bound by the conditions and/or requirements stated in your Facility Permit to Operate. If you determine any administrative errors, please contact Mr. Gaurang Rawal at (909) 396-2543 or E-mail [grawal@aqmd.gov](mailto:grawal@aqmd.gov) within 30 days of receipt of your permit.

Sincerely,



Andrew Y. Lee, P.E.  
Senior AQ Engineering Manager  
Energy/Public Services/  
Waste Mgmt/Terminals-Permitting

AYL: CDT: GCR  
Enclosure

cc: w/enclosure  
Gerardo Rios, USEPA, Region IX  
Title V Central File  
Title V Revision Application 571768



## FACILITY PERMIT TO OPERATE

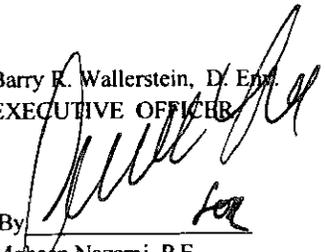
**SUNSHINE GAS PRODUCERS LLC  
14747 SAN FERNANDO RD  
SYLMAR, CA 91342**

### NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Barry K. Wallerstein, D. Eng.  
EXECUTIVE OFFICER

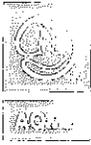
By   
Mohsen Nazemi, P.E.  
Deputy Executive Officer  
Engineering & Compliance



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

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C	Facility Plot Plan	TO BE DEVELOPED	
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E	Administrative Conditions	0	04/27/2012
F	RECLAIM Monitoring and Source Testing Requirements	0	04/27/2012
G	Recordkeeping and Reporting Requirements for RECLAIM Sources	0	04/27/2012
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I	Compliance Plans & Schedules	0	04/27/2012
J	Air Toxics	0	04/27/2012
K	Title V Administration	0	04/27/2012
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A	NOx and SOx Emitting Equipment Exempt From Written Permit Pursuant to Rule 219	0	04/27/2012
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**FACILITY PERMIT TO OPERATE  
SUNSHINE GAS PRODUCERS LLC**

**SECTION A: FACILITY INFORMATION**

**LEGAL OWNER &/OR OPERATOR:** SUNSHINE GAS PRODUCERS LLC

**LEGAL OPERATOR (if different than owner):**

**EQUIPMENT LOCATION:** 14747 SAN FERNANDO RD  
SYLMAR, CA 91342

**MAILING ADDRESS:** 425 S MAIN ST STE 201  
ANN ARBOR, MI 48104

**RESPONSIBLE OFFICIAL:** GARY S QUANTOCK

**TITLE:** VICE PRESIDENT, OPS & ASSET MANAGER

**TELEPHONE NUMBER:** (734) 913-5649

**CONTACT PERSON:** MICHAEL MANN

**TITLE:** SR. PROJECT MANAGER

**TELEPHONE NUMBER:** (734) 913-2977

**INITIAL TITLE V PERMIT ISSUED:** April 27, 2012

**TITLE V PERMIT EXPIRATION DATE:** April 26, 2017

<b>TITLE V</b>	<b>RECLAIM</b>
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<b>YES</b>	<b>NOx:</b>	<b>NO</b>
	<b>SOx:</b>	<b>NO</b>
	<b>CYCLE:</b>	<b>0</b>
	<b>ZONE:</b>	<b>COASTAL</b>



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
21865 Copley Drive, Diamond Bar, CA 91765





**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



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

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 SOX (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 SOX 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 480567  
Granted as of 4/27/2012

#### 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]
45. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING START-UP.  
[RULE 204]
6. 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)]
7. 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  
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8. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.  
[RULE 204]
9. 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]
10. 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]
11. 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]
12. 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]
13. 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]
14. 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 OPERATION EXCEPT DURING START UP AND SHUTDOWN EVENTS LASTING FOR A MAXIMUM OF ONE HOUR. MULTIPLE START UP AND SHUTDOWN EVENTS CAN OCCUR CONSECUTIVELY.



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

[40 CFR 64]

15. 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]
16. 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]
17. 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]
18. 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)]
19. WITHIN 180 DAYS AFTER INITIAL START-UP, AND ANNUALLY (WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST) THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS, AT FULL LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE AQMD 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)
  - F. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
  - G. FORMALDEHYDE, AND ALDEHYDES (EXHAUST ONLY)



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

- H. 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.
- I. OXYGEN AND NITROGEN
- J. MOISTURE CONTENT
- K. TEMPERATURE
- L. FLOW RATE
- M. VOLATILE ORGANIC COMPOUNDS (VOCS) CONTROL EFFICIENCY, WT% (BASED ON INLET AND EXHAUST VOCS)
- N. 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 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]

20. 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
SOX (AS SO <sub>2</sub> )	73.7

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

21. 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]
22. 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]
23. IF THE SOURCE TEST INDICATES ADDITIONAL TOXIC AIR CONTAMINANTS (TAC) COMPOUNDS ARE EMITTED OR THAT TAC RATES ARE SIGNIFICANTLY DIFFERENT THAN THE PREVIOUSLY EVALUATED RISK ASSESSMENT, THEN THE OWNER OR OPERATOR SHALL CALCULATE THE



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

MAXIMUM INDIVIDUAL CANCER RISK (MICR), ACUTE HAZARD INDEX (HIA) AND CHRONIC HAZARD INDEX (HIC), BASED ON THE SOURCE TESTS RESULTS, USING AQMD PUBLISHED "RISK ASSESSMENT PROCEDURES FOR RULES 1401 AND 212" (VERSION 7.0), TO DETERMINE THE COMPLIANCE WITH RULE 1401. RESULTS SHALL BE SUBMITTED TO AQMD WITHIN 90 DAYS AFTER INITIAL TESTING IS COMPLETED.

[RULE 1401]

24. 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.

25. 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>: 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 480568  
Granted as of 4/27/2012

#### 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. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO THE SCAQMD FINAL RESOURCE RECOVERY/LANDFILL GAS-TO-ENERGY SYSTEM PIPING AND INSTRUMENTATION (P&I) DIAGRAMS, CONTROL DIAGRAMS AND EQUIPMENT SPECIFICATIONS (MAKE, MODEL, DIMENSIONS, SIZE AND MAXIMUM CAPACITY) PRIOR TO INSTALLATION OF THIS EQUIPMENT.  
[RULE 204]
5. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING START-UP.  
[RULE 204]
6. 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)]



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7. 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]
8. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.  
[RULE 204]
9. 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]
10. 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]
11. 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]
12. 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]
13. 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]



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14. 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 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]
15. 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]
16. 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]
17. 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]
18. 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)]
19. WITHIN 180 DAYS AFTER INITIAL START-UP, AND ANNUALLY (WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST) THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS, AT FULL LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE AQMD 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:



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- 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)
- F. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
- G. FORMALDEHYDE, AND ALDEHYDES (EXHAUST ONLY)
- H. 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.
- I. OXYGEN AND NITROGEN
- J. MOISTURE CONTENT
- K. TEMPERATURE
- L. FLOW RATE
- M. VOLATILE ORGANIC COMPOUNDS (VOCS) CONTROL EFFICIENCY, WT% (BASED ON INLET AND EXHAUST VOCS)
- N. 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 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]

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

CONTAMINANT	LBS/DAY
CO	77.6
NOx (AS NO2)	76.5
PM <sub>10</sub>	17.3
TNMOC (AS CH4)	21.1
SOX (AS SO2)	73.7

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

21. 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]



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22. 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]
23. IF THE SOURCE TEST INDICATES ADDITIONAL TOXIC AIR CONTAMINANTS (TAC) COMPOUNDS ARE EMITTED OR THAT TAC RATES ARE SIGNIFICANTLY DIFFERENT THAN THE PREVIOUSLY EVALUATED RISK ASSESSMENT, THEN THE OWNER OR OPERATOR SHALL CALCULATE THE MAXIMUM INDIVIDUAL CANCER RISK (MICR), ACUTE HAZARD INDEX (HIA) AND CHRONIC HAZARD INDEX (HIC), BASED ON THE SOURCE TESTS RESULTS, USING AQMD PUBLISHED "RISK ASSESSMENT PROCEDURES FOR RULES 1401 AND 212" (VERSION 7.0), TO DETERMINE THE COMPLIANCE WITH RULE 1401. RESULTS SHALL BE SUBMITTED TO AQMD WITHIN 90 DAYS AFTER INITIAL TESTING IS COMPLETED.  
[RULE 1401]
24. 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.

25. 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>: 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 480569  
Granted as of 4/27/2012

#### 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. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO THE SCAQMD FINAL RESOURCE RECOVERY/LANDFILL GAS-TO-ENERGY SYSTEM PIPING AND INSTRUMENTATION (P&I) DIAGRAMS, CONTROL DIAGRAMS AND EQUIPMENT SPECIFICATIONS (MAKE, MODEL, DIMENSIONS, SIZE AND MAXIMUM CAPACITY) PRIOR TO INSTALLATION OF THIS EQUIPMENT.  
[RULE 204]
5. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING START-UP.  
[RULE 204]
6. 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)]



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

7. 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]
8. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY. [RULE 204]
9. 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]
10. 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]
11. 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]
12. 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]
13. 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]



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

14. 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 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]
15. 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]
16. 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]
17. 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]
18. 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)]
19. WITHIN 180 DAYS AFTER INITIAL START-UP, AND ANNUALLY (WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST) THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS, AT FULL LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE AQMD 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:



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

- 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)
- F. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
- G. FORMALDEHYDE, AND ALDEHYDES (EXHAUST ONLY)
- H. 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.
- I. OXYGEN AND NITROGEN
- J. MOISTURE CONTENT
- K. TEMPERATURE
- L. FLOW RATE
- M. VOLATILE ORGANIC COMPOUNDS (VOCS) CONTROL EFFICIENCY, WT% (BASED ON INLET AND EXHAUST VOCS)
- N. 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 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]

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

CONTAMINANT	LBS/DAY
CO	77.6
NOx (AS NO2)	76.5
PM <sub>10</sub>	17.3
TNMOC (AS CH4)	21.1
SOX (AS SO2)	73.7

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

21. 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]



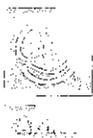
## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

22. 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]
23. IF THE SOURCE TEST INDICATES ADDITIONAL TOXIC AIR CONTAMINANTS (TAC) COMPOUNDS ARE EMITTED OR THAT TAC RATES ARE SIGNIFICANTLY DIFFERENT THAN THE PREVIOUSLY EVALUATED RISK ASSESSMENT, THEN THE OWNER OR OPERATOR SHALL CALCULATE THE MAXIMUM INDIVIDUAL CANCER RISK (MICR), ACUTE HAZARD INDEX (HIA) AND CHRONIC HAZARD INDEX (HIC), BASED ON THE SOURCE TESTS RESULTS, USING AQMD PUBLISHED "RISK ASSESSMENT PROCEDURES FOR RULES 1401 AND 212" (VERSION 7.0), TO DETERMINE THE COMPLIANCE WITH RULE 1401. RESULTS SHALL BE SUBMITTED TO AQMD WITHIN 90 DAYS AFTER INITIAL TESTING IS COMPLETED.  
[RULE 1401]
24. 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.

25. 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>: 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 480570  
Granted as of 4/27/2012

#### 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. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO THE SCAQMD FINAL RESOURCE RECOVERY/LANDFILL GAS-TO-ENERGY SYSTEM PIPING AND INSTRUMENTATION (P&I) DIAGRAMS, CONTROL DIAGRAMS AND EQUIPMENT SPECIFICATIONS (MAKE, MODEL, DIMENSIONS, SIZE AND MAXIMUM CAPACITY) PRIOR TO INSTALLATION OF THIS EQUIPMENT.  
[RULE 204]
5. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING START-UP.  
[RULE 204]
6. 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)]



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- 7. 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]
- 8. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY. [RULE 204]
- 9. 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]
- 10. 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]
- 11. 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]
- 12. 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]
- 13. 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]

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14. 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 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]
15. 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]
16. 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]
17. 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]
18. 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)]
19. WITHIN 180 DAYS AFTER INITIAL START-UP, AND ANNUALLY (WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST) THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS, AT FULL LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE AQMD 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:



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- 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)
- F. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
- G. FORMALDEHYDE, AND ALDEHYDES (EXHAUST ONLY)
- H. 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.
- I. OXYGEN AND NITROGEN
- J. MOISTURE CONTENT
- K. TEMPERATURE
- L. FLOW RATE
- M. VOLATILE ORGANIC COMPOUNDS (VOCS) CONTROL EFFICIENCY, WT% (BASED ON INLET AND EXHAUST VOCS)
- N. 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 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]

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

CONTAMINANT	LBS/DAY
CO	77.6
NOx (AS NO2)	76.5
PM <sub>10</sub>	17.3
TNMOC (AS CH4)	21.1
SOX (AS SO2)	73.7

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

21. 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]

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22. 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]
23. IF THE SOURCE TEST INDICATES ADDITIONAL TOXIC AIR CONTAMINANTS (TAC) COMPOUNDS ARE EMITTED OR THAT TAC RATES ARE SIGNIFICANTLY DIFFERENT THAN THE PREVIOUSLY EVALUATED RISK ASSESSMENT, THEN THE OWNER OR OPERATOR SHALL CALCULATE THE MAXIMUM INDIVIDUAL CANCER RISK (MICR), ACUTE HAZARD INDEX (HIA) AND CHRONIC HAZARD INDEX (HIC), BASED ON THE SOURCE TESTS RESULTS, USING AQMD PUBLISHED "RISK ASSESSMENT PROCEDURES FOR RULES 1401 AND 212" (VERSION 7.0), TO DETERMINE THE COMPLIANCE WITH RULE 1401. RESULTS SHALL BE SUBMITTED TO AQMD WITHIN 90 DAYS AFTER INITIAL TESTING IS COMPLETED.  
[RULE 1401]
24. 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.

25. 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>: 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 480571  
Granted as of 4/27/2012

#### 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. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO THE SCAQMD FINAL RESOURCE RECOVERY/LANDFILL GAS-TO-ENERGY SYSTEM PIPING AND INSTRUMENTATION (P&I) DIAGRAMS, CONTROL DIAGRAMS AND EQUIPMENT SPECIFICATIONS (MAKE, MODEL, DIMENSIONS, SIZE AND MAXIMUM CAPACITY) PRIOR TO INSTALLATION OF THIS EQUIPMENT.  
[RULE 204]
5. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING START-UP.  
[RULE 204]
6. 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)]

7. 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]
8. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY. [RULE 204]
9. 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]
10. 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]
11. 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]
12. 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]
13. 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]

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SUNSHINE GAS PRODUCERS, LLC**

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
21865 Copley Drive, Diamond Bar, CA 91765



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Facility I.D. #: 139938  
Revision #: 03  
Date: April 9, 2015



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14. 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 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]
15. 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]
16. 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]
17. 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]
18. 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)]
19. WITHIN 180 DAYS AFTER INITIAL START-UP, AND ANNUALLY (WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST) THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS, AT FULL LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE AQMD 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:

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

- 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)
- F. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
- G. FORMALDEHYDE, AND ALDEHYDES (EXHAUST ONLY)
- H. 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.
- I. OXYGEN AND NITROGEN
- J. MOISTURE CONTENT
- K. TEMPERATURE
- L. FLOW RATE
- M. VOLATILE ORGANIC COMPOUNDS (VOCS) CONTROL EFFICIENCY, WT% (BASED ON INLET AND EXHAUST VOCS)
- N. 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 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]

20. 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
SOX (AS SO <sub>2</sub> )	73.7

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

21. 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]



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

22. 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]
23. IF THE SOURCE TEST INDICATES ADDITIONAL TOXIC AIR CONTAMINANTS (TAC) COMPOUNDS ARE EMITTED OR THAT TAC RATES ARE SIGNIFICANTLY DIFFERENT THAN THE PREVIOUSLY EVALUATED RISK ASSESSMENT, THEN THE OWNER OR OPERATOR SHALL CALCULATE THE MAXIMUM INDIVIDUAL CANCER RISK (MICR), ACUTE HAZARD INDEX (HIA) AND CHRONIC HAZARD INDEX (HIC), BASED ON THE SOURCE TESTS RESULTS, USING AQMD PUBLISHED "RISK ASSESSMENT PROCEDURES FOR RULES 1401 AND 212" (VERSION 7.0), TO DETERMINE THE COMPLIANCE WITH RULE 1401. RESULTS SHALL BE SUBMITTED TO AQMD WITHIN 90 DAYS AFTER INITIAL TESTING IS COMPLETED.  
[RULE 1401]
24. 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.

25. 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>: 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 480572  
Granted as of 4/27/2012

#### Equipment Description:

LANDFILL GAS (LFG) 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 IGNITOR, 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 OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO THE SCAQMD FINAL LANDFILL GAS (LFG) FLARE SYSTEM PIPING AND INSTRUMENTATION (P&I) DIAGRAMS, CONTROL DIAGRAMS AND EQUIPMENT SPECIFICATIONS (MAKE, MODEL, DIMENSIONS, SIZE AND MAXIMUM CAPACITY) PRIOR TO INSTALLATION OF THIS EQUIPMENT  
[RULE 204]
5. 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]
6. 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.



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[RULE 1303(b) (2)-OFFSET, 3004 (a) (4)]

7. 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)]
8. 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]
9. 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]
10. 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)]
11. 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]
12. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO TIME OF THE DAY.  
[RULE 204]
13. THE AUTOMATIC SHUTDOWN SAFETY SYSTEM SHALL BE TESTED ANNUALLY FOR PROPER OPERATION AND THE RESULTS RECORDED.  
[RULE 1303(a) (1)-BACT]
14. WITHIN 180 DAYS AFTER INITIAL START-UP, AND ANNUALLY (WITHIN 45 DAYS OF ANNIVERSARY OF INITIAL TEST) THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH THE 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 AQMD AT LEAST SEVEN (7) DAYS PRIOR TO THE DATE SO



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

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

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

15. THE SOURCE TEST REPORT FOR THE FLARE TESTED SHALL INCLUDE: EMISSIONS OF CO, NOx, TNMOCs, TOTAL PARTICULATES/PM10, SOx 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 ANNUAL 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]

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

17. 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
SOX AS SO2	6.60

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



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

18. 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 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]

19. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION OF THIS EQUIPMENT

**FACILITY PERMIT TO OPERATE  
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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]

20. 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)]

**Emissions And Requirements:**

21. 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% CO2, RULE 409  
SOx: BASED ON MAXIMUM 150 PPMV H2S CON. IN LFG, RULE 431.1



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

### PERMIT TO CONSTRUCT

A/N 485210  
Granted as of 4/27/2012

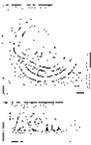
#### Equipment Description:

LANDFILL GAS (LFG) TREATMENT AND COMPRESSION SYSTEM, 247 MMBTU/HR 24-HOUR AVERAGE CAPACITY, CONSISTING OF;

1. DEWATERING UNITS WITH FIVE (5) STAGES.
2. COMPRESSION SYSTEM WITH THREE (3) STAGES, TWO (2) UNITS IN PARALLEL PER STAGE.
3. SILOXANE REMOVAL SYSTEM WITH FOUR (4) STAGES.
4. PRE-FILTER.
5. TEMPERATURE SWING ADSORPTION (TSA) SYSTEM, 2 X 3-IN-SERIES ALTERNATING UNITS.
6. ACTIVATED CARBON POLISHING, TWO (2) UNITS IN PARALLEL.
7. ONE AFTER-FILTER.
8. REGENERATION OFF-GAS (SILOXANE) TO AN ENCLOSED FLARE.

#### 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. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO SCAQMD FINAL LANDFILL GAS (LFG) TREATMENT AND COMPRESSION SYSTEM P & I DIAGRAMS, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, DIMENSIONS, SIZE, TYPE OF ADSORBENT MEDIA AND ADSORBERS' ARRANGEMENT AND MAXIMUM CAPACITY) PRIOR TO THE INSTALLATION OF THE EQUIPMENT.  
[RULE 204]
5. THE LFG TREATMENT SYSTEM SHALL BE OPERATED TO COMPLY WITH ALL APPLICABLE REQUIREMENTS OF EPA 40 CFR PART 60, SUBPART WWW, SUCH AS DESIGN SPECIFICATIONS FOR FILTRATION, DE-WATERING, COMPRESSION SYSTEM AND EQUIPMENT PERFORMANCE AND MONITORING REQUIREMENTS.  
[40 CFR PART 60, SUBPART WWW]



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

6. DURING AN ADSORBENT REGENERATION MODE, THE OFF-GAS FROM THE ADSORBER TRAIN SHALL BE VENTED ALL TIME TO AN AIR POLLUTION CONTROL SYSTEM (FLARE) WHICH IS IN FULL OPERATION AND HAS A VALID PERMIT TO CONSTRUCT/ OPERATE ISSUED BY THE SCAQMD.  
[RULE 1303(a) (1) – BACT]
7. SAMPLING PORTS, FOR EACH ADSORBER TRAIN OF THE LANDFILL GAS TREATMENT SYSTEM, SHALL BE PROVIDED IN THE INLET AND OUTLET LINE, AND THE ADSORBER'S REGENERATION OFF-GAS LINE.  
[RULE 204]
8. WITHIN ONE YEAR OF LFG TREATMENT SYSTEM OPERATION, THE OWNER OR OPERATOR SHALL SUBMIT TO AQMD A COMPLETE REPORT WITH RESULTS. REPORT SHALL INCLUDE SYSTEM OVERALL PERFORMANCE FOR SILOXANES REMOVAL, ADSORPTION CYCLE TIME, MEDIA LIFE, PROCESS PARAMETERS MEASURED AND MONITORED, ETC. THE REPORT SHALL BE SENT TO: SCAQMD, REFINERY AND WASTE MANAGEMENT PERMITTING, 21865 COPLEY DRIVE, DIAMOND BAR, CA 91765. THE SUBMITTAL SHALL INCLUDE A COPY OF THIS PERMIT.  
[RULE 204]
9. ALL RECORDS SHALL BE KEPT AND MAINTAINED FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 3004 (a) (4)]



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

### PERMIT TO CONSTRUCT

A/N 571762  
Granted as of 04/08/2015

#### 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]

**FACILITY PERMIT TO OPERATE  
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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
  - E. PARTICULATE MATTER/PM10 (EXHAUST ONLY)



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- 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 571763  
Granted as of 04/08/2015

#### 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



## 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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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

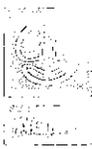
[RULE 1303(b) (1)-MODELING, 1303(b) (2)-OFFSET]

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 571764

Granted as of 04/08/2015

#### 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]



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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



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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, 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]



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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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SUNSHINE GAS PRODUCERS, LLC**

**PERMIT TO CONSTRUCT**

A/N 571765  
Granted as of 04/08/2015

**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]



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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



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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, 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]



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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



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

### PERMIT TO CONSTRUCT

A/N 571766  
Granted as of 04/08/2015

#### 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, NOx, TNMOCs, TOTAL PARTICULATES/PM10, SOx 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 SO2 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 ± 1% OF THE

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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.



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### PERMIT TO CONSTRUCT

A/N 571767  
Granted as of 04/08/2015

#### 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



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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



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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, 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 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
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]



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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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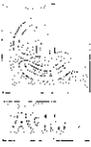
### RULE 219 EQUIPMENT

#### Equipment Description:

RULE 219 EXEMPT EQUIPMENT, ABRASIVE BLASTING EQUIPMENT, GLOVE-BOX, < 53 FT<sup>3</sup>, WITH DUST FILTER.

#### Periodic Monitoring:

1. THE OPERATOR SHALL PERFORM AN ANNUAL INSPECTION OF THE EQUIPMENT AND FILTER MEDIA FOR LEAKS, BROKEN OR TORN FILTER MEDIA AND IMPROPERLY INSTALLED FILTER MEDIA. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):
  - A. THE NAME OF THE PERSON PERFORMING THE INSPECTION AND/OR MAINTENANCE OF THE FILTER MEDIA;
  - B. THE DATE, TIME AND RESULTS OF THE INSPECTION; AND
  - C. THE DATE, TIME AND DESCRIPTION OF ANY MAINTENANCE OR REPAIRS RESULTING FROM THE INSPECTION.[RULE 3004 (a) (4)]
  
2. THE OPERATOR SHALL DISCHARGE DUST COLLECTED IN THIS EQUIPMENT ONLY INTO CLOSED CONTAINERS.  
[RULE 3004 (a) (4)]
  
3. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSIONS FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THERE IS A PUBLIC COMPLAINT OF VISIBLE EMISSIONS, WHENEVER VISIBLE EMISSIONS ARE OBSERVED, AND ON AN ANNUAL BASIS, AT LEAST, UNLESS THE EQUIPMENT DID NOT OPERATE DURING THE ENTIRE ANNUAL PERIOD. THE ROUTINE ANNUAL INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED, THE OPERATOR SHALL TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN ACCORDANCE WITH THE REPORTING REQUIREMENTS IN SECTION K OF THIS PERMIT.  
THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:
  - A. STACK OR EMISSION POINT IDENTIFICATION;
  - B. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS; AND
  - C. DATE AND TIME VISIBLE EMISSION WAS ABATED.[RULE 3004 (a) (4)]



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**RULE 219 EQUIPMENT**

**Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, HAND WIPING OPERATIONS.

**Emissions And Requirements:**

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATION:

VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS



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### **RULE 219 EQUIPMENT**

**Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, CLEANING EQUIPMENT, SMALL UNHEATED, NON-CONVEYORIZED

**Emissions And Requirements:**

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATION:

VOC: RULE 1122

VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS



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### RULE 219 EQUIPMENT

#### Equipment Description:

RULE 219 EXEMPT EQUIPMENT, BOILER, WITH RATED HEAT INPUT STARTING AT 75,000 BTU/HR UP TO AND INCLUDING 2 MMBTU/HR.

#### Emissions And Requirements:

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

PM: 0.1 gr/scf, RULE 409

CO: 2000 PPMV, RULE 407

NO<sub>x</sub>: 30 PPMV @3% O<sub>2</sub>, DRY-TYPE 2 UNIT, > 400,000 BTU/HR AND ≤ 2 MM BTU/HR, RULE 1146.2

NO<sub>x</sub>: 55 PPMV @3% O<sub>2</sub>, DRY-TYPE 1 UNIT, ≥ 400,000 BTU/HR AND ≤ 400,000 BTU/HR, RULE 1146.2



## FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

### RULE 219 EQUIPMENT

#### Equipment Description:

RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS.

#### Periodic Monitoring:

1. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

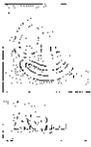
FOR ARCHITECTURAL APPLICATIONS WHERE NO THINNERS, REDUCERS, OR OTHER VOC CONTAINING MATERIALS ARE ADDED, MAINTAIN SEMI-ANNUAL RECORDS OF ALL COATINGS CONSISTING OF (a) COATING TYPE, (b) VOC CONTENT AS SUPPLIED IN GRAMS PER LITER (g/l) OF MATERIALS FOR LOW-SOLIDS COATINGS, (c) VOC CONTENT AS SUPPLIED IN g/l OF COATING, LESS WATER AND EXEMPT SOLVENT, FOR OTHER COATING.

FOR OTHER ARCHITECTURAL APPLICATIONS WHERE THINNERS, REDUCERS, OR OTHER VOC CONTAINING MATERIALS ARE ADDED, MAINTAIN DAILY RECORDS FOR EACH COATING CONSISTING OF (a) COATING TYPE, (b) VOC CONTENT AS APPLIED IN GRAMS PER LITER (g/l) OF MATERIALS USED FOR LOW-SOLIDS COATINGS, (c) VOC CONTENT AS APPLIED IN g/l OF COATING, LESS WATER AND EXEMPT SOLVENT, FOR OTHER COATING.  
[RULE 3004(a) (4)]

#### Emissions And Requirements:

2. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATION:

VOC: RULE 1113, SEE APPENDIX B FOR EMISSION LIMITS  
VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS



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

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**RULE 219 EQUIPMENT**

**Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, AIR CONDITIONING UNITS.

**Emissions And Requirements:**

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATION:

VOC: RULE 1415

VOC: 40CFR 82 SUBPART F

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

**RULE 219 EQUIPMENT**

**Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, FIRE EXTINGUISHING EQUIPMENT

**Emissions And Requirements:**

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATION:

HALON:           RULE 1418



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
21865 Copley Drive, Diamond Bar, CA 91765

