



South Coast Air Quality Management District

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

June 7, 2016

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 D 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 April 8, 2016, the South Coast Air Quality Management District (SCAQMD) issued draft permit for Environmental Protection Agency's (EPA) review, for the de-minimis significant revision under A/N 577290 and upon EPA review had no comments. No public notice was required for this revision. The revised sections include the following changes as shown below.

SECTION D: Permits to Operate

Appl. No.	Equipment	Description
571285 through 577289	Five (5) Landfill Gas Turbines (\leq 50 MW), each 4.9 MW	Increased maximum heat input rate of each gas turbine from 48.1 mmBTU/hr to 61.0 mmBTU/hr, with corresponding permit conditions.

SECTION H: Permit to Construct and Temporary Permit to Operate

A/Ns 480567 through 480571 and A/Ns 571762 through 571767 for the five (5) landfill gas combustion turbines, have been removed and superseded by the Permits to Operate listed above in Section D.

SECTION K: Title V Administration

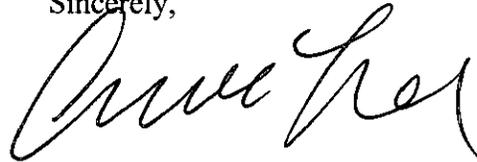
This section has been updated to include current applicable rules and requirements.

APPENDIX B: Rule Emission Limits

This section has been updated to include current applicable rules and requirements.

Please review the attached pages carefully. Insert the enclosed sections in your Title V Facility Permit and discard the earlier versions. If you have any questions concerning this revised permit, or if you determine any administrative error, please contact Mr. Gaurang Rawal at (909) 396-2543, within 30 days of the receipt of your permit.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew Y. Lee". The signature is fluid and cursive, written over the word "Sincerely,".

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

AYL: CDT: AIS: GCR
Enclosure

cc: w/enclosure
Gerardo Rios, USEPA, Region IX
Title V Central File
Title V Revision Application 577290



South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

Title Page	
Facility ID:	139938
Revision #:	4
Date:	June 07, 2016

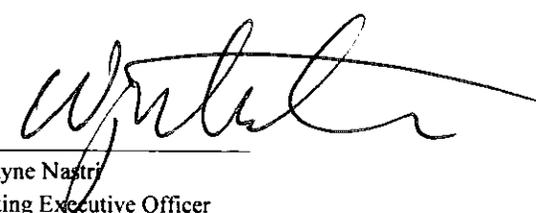
FACILITY PERMIT TO OPERATE

**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 GOVERNMENT AGENCIES.

By 
Wayne Nasti
Acting Executive Officer



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

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A	Facility Information	1	04/09/2015
B	RECLAIM Annual Emission Allocation	0	04/27/2012
C	Facility Plot Plan	TO BE DEVELOPED	
D	Facility Description and Equipment Specific Conditions	1	06/07/2016
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
H	Permit To Construct and Temporary Permit to Operate	4	06/07/2016
I	Compliance Plans & Schedules	0	04/27/2012
J	Air Toxics	0	04/27/2012
K	Title V Administration	1	06/07/2016
Appendix			
A	NOx and SOx Emitting Equipment Exempt From Written Permit Pursuant to Rule 219	0	04/27/2012
B	Rule Emission Limits	1	06/07/2016



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

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

This section consists of a table listing all permitted equipment at the facility, facility wide requirements, all individual Permits to Operate issued to various equipment at the facility, and Rule 219-exempt equipment subject to source-specific requirements. Each permit and Rule 219-exempt equipment will list operating conditions including periodic monitoring requirements, and applicable emission limits and requirements 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**

PERMITTED EQUIPMENT LIST

The following is a list of all permits to construct and permits to operate at this facility:

Application Number	Permit to Operate Number	Equipment description	Page
577285	G40526	Turbine Engine, #5 (≤ 50 MW) Landfill Gas	5
577286	G40527	Turbine Engine, #4 (≤ 50 MW) Landfill Gas	10
577287	G40528	Turbine Engine, #3 (≤ 50 MW) Landfill Gas	15
577288	G40529	Turbine Engine, #2 (≤ 50 MW) Landfill Gas	20
577289	G40530	Turbine Engine, #1 (≤ 50 MW) Landfill Gas	25

Note: Any other applications that are still being processed and have not been issued Permits to Construct or Permits to Operate will not be found in this Title V permit.



FACILITY PERMIT TO OPERATE 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 Ringelmann 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 AAAAA, such as design specifications, equipment performance, emissions standards, monitoring of operations, reporting and record keeping requirements, etc.
[Gaseous Emissions 40 CFR 63 Subpart AAAAA]
6. The operator shall comply with all applicable mitigation measures stipulated in the statement of findings, statement of overriding consideration, and mitigation monitoring plan document which is part of the SCAQMD Certified Final Environmental Impact Report for this facility.
[CA PRC CEQA, 11-23-1970]
7. The total landfill gas processed at this facility shall not exceed 311.4 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

8. The operator shall monitor and record total volume of raw landfill gas processed by the LFG treatment and compression system, and monthly average H₂S concentration (ppmv) for the LFG. The operator shall calculate facility wide daily SO_x (as SO₂) emission rate, using LFG volume processed and H₂S concentration. All records required shall be kept on file to comply with this condition.
[Rule 204]

9. The facility wide total SO_x emission, as SO₂, shall not exceed 379.6 lbs per day.
[Rule 204]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

PERMIT TO OPERATE

Permit No. G40526
A/N 577285

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, 61.0 mmBTU/hr, driving a nominal 4.9 megawatt (MW) electric generator.
3. Exhaust Stack, 4' - 7" Dia. X 26' - 6" high.

Conditions:

1. 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 61.0 mmBTU/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 61.0 mmBTU/hr limit occurs.
[Rule 1303(b) (1)-Modeling, 1303(b) (2)-Offset, 3004(a) (4), Rule 1401]
7. If any of the five gas turbines has a total heat input rate of 57.7 mmBTU/hr (HHV) or greater, based on a 24-hour average, from the combustion of landfill gas, then the operator shall conduct landfill gas sulfur monitoring as outlined in the table below.

The colorimetric tubes (Tubes) for analyzing H₂S as TS shall be used in accordance with manufacturer's instructions. Testing with Tubes shall be conducted by personnel properly trained in its operation. The Tubes



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

shall be used within their shelf life. The concentration of TS in the landfill gas (as measured by the Tubes), shall be used to determine the action level, monitoring tier, and sampling requirements as shown below.

Action Level	Monitoring Tiers	Sampling Requirements
Tier I	TS < 95	- Quarterly using Method 307-91 - Monthly using Tubes
Tier II	95 ≤ TS < 114	- Monthly using Method 307-91 - Weekly using Tubes
Tier III	114 ≤ TS < 123	- Weekly using Method 307-91 - Daily using Tubes
Tier IV	TS ≥ 123	- Potential Rule 1303-BACT violation for daily SOx emission exceedance. - Follow Reporting Provisions listed under Section K-Title V Administration - Daily using Method 307-91

[Rule 1303(a) (1)-BACT]

8. If all of the five gas turbines have less than a total heat input rate of 57.7 mmBTU/hr (HHV), based on a 24-hour average, from the combustion of landfill gas, then the operator shall conduct landfill gas sulfur monitoring as outlined in the Sunshine Canyon Landfill (Facility Id 49111) Rule 431.1 Alternative Monitoring Plan (A/N 291681) and as shown in the table below.

The colorimetric tubes (Tubes) for analyzing H₂S as TS shall be used in accordance with manufacturer's instructions. Testing with Tubes shall be conducted by personnel properly trained in its operation. The Tubes shall be used within their shelf life. The concentration of TS in the landfill gas (as measured by the Tubes), shall be used to determine the action level, monitoring tier, and sampling requirements as shown below.

Action Level	Monitoring Tiers	Sampling Requirements
Tier I	TS < 100	- Quarterly using Method 307-91 - Monthly using Tubes
Tier II	100 ≤ TS < 120	- Monthly using Method 307-91 - Weekly using Tubes
Tier III	120 ≤ TS < 130	- Weekly using Method 307-91 - Daily using Tubes
Tier IV	TS ≥ 130	- Potential Rule 1303-BACT violation for daily SOx emission exceedance. - Follow Reporting Provisions listed under Section K-Title V Administration - Daily using Method 307-91

[RULE 1303(a) (1)-BACT]

9. The operator shall synchronize all recording devices with respect to the time of day.
[Rule 204]
10. 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]



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11. 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, 430]
12. 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]
13. 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]
14. 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]
15. 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]
16. 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]
17. 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]
18. 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

19. 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_x and O₂, on a dry basis. In addition, the system shall convert the actual NO_x concentration to a corrected NO_x concentration at 15% O₂, dry, and results shall be continuously recorded.
[Rule 218, 1303(b) (1)-Modeling, 1303(b) (2)-Offset, 3004(a) (4)]
20. The operator shall conduct annual performance tests (within 45 days of anniversary of initial test), at maximum achievable load, in accordance with the approved test procedures. Written results of such performance tests shall be submitted within 60 days after testing. 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)
 - 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. Hydrochloric Acid (Exhaust Only)
 - I. Oxygen and Nitrogen
 - J. Moisture Content
 - K. Temperature
 - L. Flow Rate
 - M. Volatile Organic Compounds (VOC) Control Efficiency, wt. % (based on inlet and exhaust VOC)
 - 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_x, TNMHC, and TAC), and the 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

21. Emissions from the gas turbine shall not exceed the following:

Contaminant	lbs/day
CO	78.3
NOx (as NO ₂)	74.8
PM ₁₀	17.3
TNMOC (as CH ₄)	21.9
SOx (as SO ₂)	74.6

[Rule 1303(b) (1)-Modeling, 1303(b) (2)-Offset]

22. Emission of oxides of nitrogen shall not exceed 12.5 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]

23. Emission of carbon monoxide shall not exceed 21.5 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]

24. All records shall be kept for a period of at least five years and shall be made available to SCAQMD personnel upon request.

[Rule 3004 (a) (4)]

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: 21.5 ppmv, @ 15% O₂, Rule 1303-BACT/LAER
NOx: 12.5 ppmv, @ 15% O₂, Rule 1303-BACT/LAER
NOx: 96 ppmv, @ 15% O₂, dry, or 5.5 lb/MWh, NSPS, 40CFR60 Subpart KKKK
PM: Combustion Contaminant, 0.1 grain/dscf of gas, calculated @ 12% CO₂, averaged over 15 consecutive minutes, Rule 409.
NMOC: 10.5 ppmv, @ 15% O₂, as methane, Rule 1303-BACT/LAER
NMOC: 20 ppmv, as hexane, @ 3% O₂, dry OR 98% (by wt.) destruction efficiency, Rule 1150.1, 40 CFR60 Subpart WWW, 40 CFR 63 Subpart AAAA.
SOx: Based on maximum 150 ppmv H₂S con. in LFG, Rule 431.1
SOx: Facility wide total SOx emission shall not exceed 379.6 lbs/day, from five gas turbines and a regeneration flare.
SOx: 0.90 lb/MWh or 0.15 lb/mmBTU, NSPS, 40 CFR 60 Subpart KKKK.
SOx: 0.2% Rule 53



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

PERMIT TO OPERATE

Permit No. G40527
A/N 577286

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, 61.0 mmBTU/hr, driving a nominal 4.9 megawatt (MW) electric generator.
3. Exhaust Stack, 4' - 7" Dia. X 26' - 6" high.

Conditions:

1. 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 61.0 mmBTU/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 61.0 mmBTU/hr limit occurs.
[Rule 1303(b) (1)-Modeling, 1303(b) (2)-Offset, 3004(a) (4), Rule 1401]
7. If any of the five gas turbines has a total heat input rate of 57.7 mmBTU/hr (HHV) or greater, based on a 24-hour average, from the combustion of landfill gas, then the operator shall conduct landfill gas sulfur monitoring as outlined in the table below.

The colorimetric tubes (Tubes) for analyzing H₂S as TS shall be used in accordance with manufacturer's instructions. Testing with Tubes shall be conducted by personnel properly trained in its operation. The Tubes



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

shall be used within their shelf life. The concentration of TS in the landfill gas (as measured by the Tubes), shall be used to determine the action level, monitoring tier, and sampling requirements as shown below.

Action Level	Monitoring Tiers	Sampling Requirements
Tier I	TS < 95	- Quarterly using Method 307-91 - Monthly using Tubes
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Tier IV	TS ≥ 123	- Potential Rule 1303-BACT violation for daily SOx emission exceedance. - Follow Reporting Provisions listed under Section K-Title V Administration - Daily using Method 307-91

[Rule 1303(a) (1)-BACT]

8. If all of the five gas turbines have less than a total heat input rate of 57.7 mmBTU/hr (HHV), based on a 24-hour average, from the combustion of landfill gas, then the operator shall conduct landfill gas sulfur monitoring as outlined in the Sunshine Canyon Landfill (Facility Id 49111) Rule 431.1 Alternative Monitoring Plan (A/N 291681) and as shown in the table below.

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[RULE 1303(a) (1)-BACT]

9. The operator shall synchronize all recording devices with respect to the time of day.
[Rule 204]
10. 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

11. 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, 430]
12. 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]
13. 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]
14. 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]
15. 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]
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[40 CFR 64]
17. 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]
18. 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

19. 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_x and O₂, on a dry basis. In addition, the system shall convert the actual NO_x concentration to a corrected NO_x concentration at 15% O₂, dry, and results shall be continuously recorded.
[Rule 218, 1303(b) (1)-Modeling, 1303(b) (2)-Offset, 3004(a) (4)]
20. The operator shall conduct annual performance tests (within 45 days of anniversary of initial test), at maximum achievable load, in accordance with the approved test procedures. Written results of such performance tests shall be submitted within 60 days after testing. 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)
 - 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. Hydrochloric Acid (Exhaust Only)
 - I. Oxygen and Nitrogen
 - J. Moisture Content
 - K. Temperature
 - L. Flow Rate
 - M. Volatile Organic Compounds (VOC) Control Efficiency, wt. % (based on inlet and exhaust VOC)
 - 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_x, TNMHC, and TAC), and the 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]



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

21. Emissions from the gas turbine shall not exceed the following:

Contaminant	lbs/day
CO	78.3
NOx (as NO2)	74.8
PM10	17.3
TNMOC (as CH4)	21.9
SOx (as SO2)	74.6

[Rule 1303(b) (1)-Modeling, 1303(b) (2)-Offset]

22. Emission of oxides of nitrogen shall not exceed 12.5 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]
23. Emission of carbon monoxide shall not exceed 21.5 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]
24. All records shall be kept for a period of at least five years and shall be made available to SCAQMD personnel upon request.
[Rule 3004 (a) (4)]

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: 21.5 ppmv, @ 15% O2, Rule 1303-BACT/LAER
NOx: 12.5 ppmv, @ 15% O2, Rule 1303-BACT/LAER
NOx: 96 ppmv, @ 15% O2, dry, or 5.5 lb/MWh, NSPS, 40CFR60 Subpart KKKK
PM: Combustion Contaminant, 0.1 grain/dscf of gas, calculated @ 12% CO2, averaged over 15 consecutive minutes, Rule 409.
NMOC: 10.5 ppmv, @ 15% O2, as methane, Rule 1303-BACT/LAER
NMOC: 20 ppmv, as hexane, @ 3% O2, dry OR 98% (by wt.) destruction efficiency, Rule 1150.1, 40 CFR60 Subpart WWW, 40 CFR 63 Subpart AAAA.
SOx: Based on maximum 150 ppmv H2S con. in LFG, Rule 431.1
SOx: Facility wide total SOx emission shall not exceed 379.6 lbs/day, from five gas turbines and a regeneration flare.
SOx: 0.90 lb/MWh or 0.15 lb/mmBTU, NSPS, 40 CFR 60 Subpart KKKK.
SOx: 0.2% Rule 53



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

PERMIT TO OPERATE

**Permit No. G40528
A/N 577287**

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, 61.0 mmBTU/hr, driving a nominal 4.9 megawatt (MW) electric generator.
3. Exhaust Stack, 4' - 7" Dia. X 26' - 6" high.

Conditions:

1. 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 61.0 mmBTU/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 61.0 mmBTU/hr limit occurs.
[Rule 1303(b) (1)-Modeling, 1303(b) (2)-Offset, 3004(a) (4), Rule 1401]
7. If any of the five gas turbines has a total heat input rate of 57.7 mmBTU/hr (HHV) or greater, based on a 24-hour average, from the combustion of landfill gas, then the operator shall conduct landfill gas sulfur monitoring as outlined in the table below.

The colorimetric tubes (Tubes) for analyzing H₂S as TS shall be used in accordance with manufacturer's instructions. Testing with Tubes shall be conducted by personnel properly trained in its operation. The Tubes



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

shall be used within their shelf life. The concentration of TS in the landfill gas (as measured by the Tubes), shall be used to determine the action level, monitoring tier, and sampling requirements as shown below.

Action Level	Monitoring Tiers	Sampling Requirements
Tier I	TS < 95	- Quarterly using Method 307-91 - Monthly using Tubes
Tier II	95 ≤ TS < 114	- Monthly using Method 307-91 - Weekly using Tubes
Tier III	114 ≤ TS < 123	- Weekly using Method 307-91 - Daily using Tubes
Tier IV	TS ≥ 123	- Potential Rule 1303-BACT violation for daily SOx emission exceedance. - Follow Reporting Provisions listed under Section K-Title V Administration - Daily using Method 307-91

[Rule 1303(a) (1)-BACT]

8. If all of the five gas turbines have less than a total heat input rate of 57.7 mmBTU/hr (HHV), based on a 24-hour average, from the combustion of landfill gas, then the operator shall conduct landfill gas sulfur monitoring as outlined in the Sunshine Canyon Landfill (Facility Id 49111) Rule 431.1 Alternative Monitoring Plan (A/N 291681) and as shown in the table below.

The colorimetric tubes (Tubes) for analyzing H₂S as TS shall be used in accordance with manufacturer's instructions. Testing with Tubes shall be conducted by personnel properly trained in its operation. The Tubes shall be used within their shelf life. The concentration of TS in the landfill gas (as measured by the Tubes), shall be used to determine the action level, monitoring tier, and sampling requirements as shown below.

Action Level	Monitoring Tiers	Sampling Requirements
Tier I	TS < 100	- Quarterly using Method 307-91 - Monthly using Tubes
Tier II	100 ≤ TS < 120	- Monthly using Method 307-91 - Weekly using Tubes
Tier III	120 ≤ TS < 130	- Weekly using Method 307-91 - Daily using Tubes
Tier IV	TS ≥ 130	- Potential Rule 1303-BACT violation for daily SOx emission exceedance. - Follow Reporting Provisions listed under Section K-Title V Administration - Daily using Method 307-91

[RULE 1303(a) (1)-BACT]

9. The operator shall synchronize all recording devices with respect to the time of day.
[Rule 204]
10. 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

11. 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, 430]
12. 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]
13. 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]
14. 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]
15. 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]
16. 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]
17. 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]
18. 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

19. 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_x and O₂, on a dry basis. In addition, the system shall convert the actual NO_x concentration to a corrected NO_x concentration at 15% O₂, dry, and results shall be continuously recorded.
[Rule 218, 1303(b) (1)-Modeling, 1303(b) (2)-Offset, 3004(a) (4)]
20. The operator shall conduct annual performance tests (within 45 days of anniversary of initial test), at maximum achievable load, in accordance with the approved test procedures. Written results of such performance tests shall be submitted within 60 days after testing. 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)
 - 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. Hydrochloric Acid (Exhaust Only)
 - I. Oxygen and Nitrogen
 - J. Moisture Content
 - K. Temperature
 - L. Flow Rate
 - M. Volatile Organic Compounds (VOC) Control Efficiency, wt. % (based on inlet and exhaust VOC)
 - 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_x, TNMHC, and TAC), and the 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]



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

21. Emissions from the gas turbine shall not exceed the following:

Contaminant	lbs/day
CO	78.3
NOx (as NO2)	74.8
PM10	17.3
TNMOC (as CH4)	21.9
SOx (as SO2)	74.6

[Rule 1303(b) (1)-Modeling, 1303(b) (2)-Offset]

22. Emission of oxides of nitrogen shall not exceed 12.5 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]

23. Emission of carbon monoxide shall not exceed 21.5 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]

24. All records shall be kept for a period of at least five years and shall be made available to SCAQMD personnel upon request.

[Rule 3004 (a) (4)]

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: 21.5 ppmv, @ 15% O2, Rule 1303-BACT/LAER
 NOx: 12.5 ppmv, @ 15% O2, Rule 1303-BACT/LAER
 NOx: 96 ppmv, @ 15% O2, dry, or 5.5 lb/MWh, NSPS, 40CFR60 Subpart KKKK
 PM: Combustion Contaminant, 0.1 grain/dscf of gas, calculated @ 12% CO2, averaged over 15 consecutive minutes, Rule 409.
 NMOC: 10.5 ppmv, @ 15% O2, as methane, Rule 1303-BACT/LAER
 NMOC: 20 ppmv, as hexane, @ 3% O2, dry OR 98% (by wt.) destruction efficiency, Rule 1150.1, 40 CFR60 Subpart WWW, 40 CFR 63 Subpart AAAA.
 SOx: Based on maximum 150 ppmv H2S con. in LFG, Rule 431.1
 SOx: Facility wide total SOx emission shall not exceed 379.6 lbs/day, from five gas turbines and a regeneration flare.
 SOx: 0.90 lb/MWh or 0.15 lb/mmBTU, NSPS, 40 CFR 60 Subpart KKKK.
 SOx: 0.2% Rule 53



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

PERMIT TO OPERATE

Permit No. G40529
A/N 577288

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, 61.0 mmBTU/hr, driving a nominal 4.9 megawatt (MW) electric generator.
3. Exhaust Stack, 4' - 7" Dia. X 26' - 6" high.

Conditions:

1. 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 61.0 mmBTU/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 61.0 mmBTU/hr limit occurs.
[Rule 1303(b) (1)-Modeling, 1303(b) (2)-Offset, 3004(a) (4), Rule 1401]
7. If any of the five gas turbines has a total heat input rate of 57.7 mmBTU/hr (HHV) or greater, based on a 24-hour average, from the combustion of landfill gas, then the operator shall conduct landfill gas sulfur monitoring as outlined in the table below.

The colorimetric tubes (Tubes) for analyzing H₂S as TS shall be used in accordance with manufacturer's instructions. Testing with Tubes shall be conducted by personnel properly trained in its operation. The Tubes



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

shall be used within their shelf life. The concentration of TS in the landfill gas (as measured by the Tubes), shall be used to determine the action level, monitoring tier, and sampling requirements as shown below.

Action Level	Monitoring Tiers	Sampling Requirements
Tier I	TS < 95	- Quarterly using Method 307-91 - Monthly using Tubes
Tier II	95 ≤ TS < 114	- Monthly using Method 307-91 - Weekly using Tubes
Tier III	114 ≤ TS < 123	- Weekly using Method 307-91 - Daily using Tubes
Tier IV	TS ≥ 123	- Potential Rule 1303-BACT violation for daily SO _x emission exceedance. - Follow Reporting Provisions listed under Section K-Title V Administration - Daily using Method 307-91

[Rule 1303(a) (1)-BACT]

8. If all of the five gas turbines have less than a total heat input rate of 57.7 mmBTU/hr (HHV), based on a 24-hour average, from the combustion of landfill gas, then the operator shall conduct landfill gas sulfur monitoring as outlined in the Sunshine Canyon Landfill (Facility Id 49111) Rule 431.1 Alternative Monitoring Plan (A/N 291681) and as shown in the table below.

The colorimetric tubes (Tubes) for analyzing H₂S as TS shall be used in accordance with manufacturer's instructions. Testing with Tubes shall be conducted by personnel properly trained in its operation. The Tubes shall be used within their shelf life. The concentration of TS in the landfill gas (as measured by the Tubes), shall be used to determine the action level, monitoring tier, and sampling requirements as shown below.

Action Level	Monitoring Tiers	Sampling Requirements
Tier I	TS < 100	- Quarterly using Method 307-91 - Monthly using Tubes
Tier II	100 ≤ TS < 120	- Monthly using Method 307-91 - Weekly using Tubes
Tier III	120 ≤ TS < 130	- Weekly using Method 307-91 - Daily using Tubes
Tier IV	TS ≥ 130	- Potential Rule 1303-BACT violation for daily SO _x emission exceedance. - Follow Reporting Provisions listed under Section K-Title V Administration - Daily using Method 307-91

[RULE 1303(a) (1)-BACT]

9. The operator shall synchronize all recording devices with respect to the time of day.
[Rule 204]
10. 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

11. 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, 430]
12. 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]
13. 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]
14. 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]
15. 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]
16. 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]
17. 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]
18. 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

19. 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_x and O₂, on a dry basis. In addition, the system shall convert the actual NO_x concentration to a corrected NO_x concentration at 15% O₂, dry, and results shall be continuously recorded.
[Rule 218, 1303(b) (1)-Modeling, 1303(b) (2)-Offset, 3004(a) (4)]
20. The operator shall conduct annual performance tests (within 45 days of anniversary of initial test), at maximum achievable load, in accordance with the approved test procedures. Written results of such performance tests shall be submitted within 60 days after testing. 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)
 - 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. Hydrochloric Acid (Exhaust Only)
 - I. Oxygen and Nitrogen
 - J. Moisture Content
 - K. Temperature
 - L. Flow Rate
 - M. Volatile Organic Compounds (VOC) Control Efficiency, wt. % (based on inlet and exhaust VOC)
 - 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_x, TNMHC, and TAC), and the 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]



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

21. Emissions from the gas turbine shall not exceed the following:

Contaminant	lbs/day
CO	78.3
NOx (as NO2)	74.8
PM10	17.3
TNMOC (as CH4)	21.9
SOx (as SO2)	74.6

[Rule 1303(b) (1)-Modeling, 1303(b) (2)-Offset]

22. Emission of oxides of nitrogen shall not exceed 12.5 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]
23. Emission of carbon monoxide shall not exceed 21.5 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]
24. All records shall be kept for a period of at least five years and shall be made available to SCAQMD personnel upon request.
[Rule 3004 (a) (4)]

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: 21.5 ppmv, @ 15% O2, Rule 1303-BACT/LAER
NOx: 12.5 ppmv, @ 15% O2, Rule 1303-BACT/LAER
NOx: 96 ppmv, @ 15% O2, dry, or 5.5 lb/MWh, NSPS, 40CFR60 Subpart KKKK
PM: Combustion Contaminant, 0.1 grain/dscf of gas, calculated @ 12% CO2, averaged over 15 consecutive minutes, Rule 409.
NMOC: 10.5 ppmv, @ 15% O2, as methane, Rule 1303-BACT/LAER
NMOC: 20 ppmv, as hexane, @ 3% O2, dry OR 98% (by wt.) destruction efficiency, Rule 1150.1, 40 CFR60 Subpart WWW, 40 CFR 63 Subpart AAAA.
SOx: Based on maximum 150 ppmv H2S con. in LFG, Rule 431.1
SOx: Facility wide total SOx emission shall not exceed 379.6 lbs/day, from five gas turbines and a regeneration flare.
SOx: 0.90 lb/MWh or 0.15 lb/mmBTU, NSPS, 40 CFR 60 Subpart KKKK.
SOx: 0.2% Rule 53



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

PERMIT TO OPERATE

**Permit No. G40530
A/N 577289**

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, 61.0 mmBTU/hr, driving a nominal 4.9 megawatt (MW) electric generator.
3. Exhaust Stack, 4' - 7" Dia. X 26' - 6" high.

Conditions:

1. 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 61.0 mmBTU/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 61.0 mmBTU/hr limit occurs.
[Rule 1303(b) (1)-Modeling, 1303(b) (2)-Offset, 3004(a) (4), Rule 1401]
7. If any of the five gas turbines has a total heat input rate of 57.7 mmBTU/hr (HHV) or greater, based on a 24-hour average, from the combustion of landfill gas, then the operator shall conduct landfill gas sulfur monitoring as outlined in the table below.

The colorimetric tubes (Tubes) for analyzing H₂S as TS shall be used in accordance with manufacturer's instructions. Testing with Tubes shall be conducted by personnel properly trained in its operation. The Tubes



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

shall be used within their shelf life. The concentration of TS in the landfill gas (as measured by the Tubes), shall be used to determine the action level, monitoring tier, and sampling requirements as shown below.

Action Level	Monitoring Tiers	Sampling Requirements
Tier I	TS < 95	- Quarterly using Method 307-91 - Monthly using Tubes
Tier II	95 ≤ TS < 114	- Monthly using Method 307-91 - Weekly using Tubes
Tier III	114 ≤ TS < 123	- Weekly using Method 307-91 - Daily using Tubes
Tier IV	TS ≥ 123	- Potential Rule 1303-BACT violation for daily SOx emission exceedance. - Follow Reporting Provisions listed under Section K-Title V Administration - Daily using Method 307-91

[Rule 1303(a) (1)-BACT]

8. If all of the five gas turbines have less than a total heat input rate of 57.7 mmBTU/hr (HHV), based on a 24-hour average, from the combustion of landfill gas, then the operator shall conduct landfill gas sulfur monitoring as outlined in the Sunshine Canyon Landfill (Facility Id 49111) Rule 431.1 Alternative Monitoring Plan (A/N 291681) and as shown in the table below.

The colorimetric tubes (Tubes) for analyzing H₂S as TS shall be used in accordance with manufacturer's instructions. Testing with Tubes shall be conducted by personnel properly trained in its operation. The Tubes shall be used within their shelf life. The concentration of TS in the landfill gas (as measured by the Tubes), shall be used to determine the action level, monitoring tier, and sampling requirements as shown below.

Action Level	Monitoring Tiers	Sampling Requirements
Tier I	TS < 100	- Quarterly using Method 307-91 - Monthly using Tubes
Tier II	100 ≤ TS < 120	- Monthly using Method 307-91 - Weekly using Tubes
Tier III	120 ≤ TS < 130	- Weekly using Method 307-91 - Daily using Tubes
Tier IV	TS ≥ 130	- Potential Rule 1303-BACT violation for daily SOx emission exceedance. - Follow Reporting Provisions listed under Section K-Title V Administration - Daily using Method 307-91

[RULE 1303(a) (1)-BACT]

9. The operator shall synchronize all recording devices with respect to the time of day.
[Rule 204]
10. 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

11. 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, 430]
12. 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]
13. 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]
14. 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]
15. 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]
16. 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]
17. 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]
18. 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

19. 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_x and O₂, on a dry basis. In addition, the system shall convert the actual NO_x concentration to a corrected NO_x concentration at 15% O₂, dry, and results shall be continuously recorded.
[Rule 218, 1303(b) (1)-Modeling, 1303(b) (2)-Offset, 3004(a) (4)]
20. The operator shall conduct annual performance tests (within 45 days of anniversary of initial test), at maximum achievable load, in accordance with the approved test procedures. Written results of such performance tests shall be submitted within 60 days after testing. 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)
 - 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. Hydrochloric Acid (Exhaust Only)
 - I. Oxygen and Nitrogen
 - J. Moisture Content
 - K. Temperature
 - L. Flow Rate
 - M. Volatile Organic Compounds (VOC) Control Efficiency, wt. % (based on inlet and exhaust VOC)
 - 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_x, TNMHC, and TAC), and the 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]



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

21. Emissions from the gas turbine shall not exceed the following:

Contaminant	lbs/day
CO	78.3
NOx (as NO2)	74.8
PM10	17.3
TNMOC (as CH4)	21.9
SOx (as SO2)	74.6

[Rule 1303(b) (1)-Modeling, 1303(b) (2)-Offset]

22. Emission of oxides of nitrogen shall not exceed 12.5 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]

23. Emission of carbon monoxide shall not exceed 21.5 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]

24. All records shall be kept for a period of at least five years and shall be made available to SCAQMD personnel upon request.

[Rule 3004 (a) (4)]

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: 21.5 ppmv, @ 15% O2, Rule 1303-BACT/LAER
 NOx: 12.5 ppmv, @ 15% O2, Rule 1303-BACT/LAER
 NOx: 96 ppmv, @ 15% O2, dry, or 5.5 lb/MWh, NSPS, 40CFR60 Subpart KKKK
 PM: Combustion Contaminant, 0.1 grain/dscf of gas, calculated @ 12% CO2, averaged over 15 consecutive minutes, Rule 409.
 NMOC: 10.5 ppmv, @ 15% O2, as methane, Rule 1303-BACT/LAER
 NMOC: 20 ppmv, as hexane, @ 3% O2, dry OR 98% (by wt.) destruction efficiency, Rule 1150.1, 40 CFR60 Subpart WWW, 40 CFR 63 Subpart AAAA.
 SOx: Based on maximum 150 ppmv H2S con. in LFG, Rule 431.1
 SOx: Facility wide total SOx emission shall not exceed 379.6 lbs/day, from five gas turbines and a regeneration flare.
 SOx: 0.90 lb/MWh or 0.15 lb/mmBTU, NSPS, 40 CFR 60 Subpart KKKK.
 SOx: 0.2% Rule 53



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

RULE 219 EQUIPMENT

Equipment Description:

Rule 219 Exempt Equipment, abrasive blasting equipment, glove-box, < 53 ft³, 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)]



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

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



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

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



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

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:

I. 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
- NOx: 30 ppmv @3% O₂, dry-type 2 unit, > 400,000 BTU/hr and ≤2 mm BTU/hr, Rule 1146.2
- NOx: 55 ppmv @3% O₂, 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



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

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: 40 CFR 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



**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 individual Permits to Construct issued to various equipment at the facility. Each permit will list operating conditions including periodic monitoring requirements and applicable emission limits and requirements. Also included is the rule origin and authority of each emission limit and permit condition.



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

PERMITTED EQUIPMENT LIST

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

Application Number	Permit to Construct Granted On	Equipment description	Page
480572	4/27/2012	Landfill Gas Flare	5
482510	4/27/2012	Landfill Gas Treatment System	9
571766	4/08/2015, supersedes 480572	Landfill Gas Regeneration Flare	11

Note: Equipment listed above that has no corresponding Permits to Operate number is issued Permits to Construct. The issuance or denial of their Permits to Operate is subject to engineering final review. Any other applications that are still being processed and have not been issued Permits to Construct or Permits to Operate will not be found in this Title V permit.



FACILITY PERMIT TO OPERATE 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 AAAAA, such as design specifications, equipment performance, emissions standards, monitoring of operations, reporting and record keeping requirements, etc.
[Gaseous Emissions 40 CFR 63 Subpart AAAAA]
6. The operator shall comply with all applicable mitigation measures stipulated in the statement of findings, statement of overriding consideration, and mitigation monitoring plan document which is part of the SCAQMD Certified Final Environmental Impact Report for this facility.
[CA PRC CEQA, 11-23-1970]
7. The total landfill gas processed at this facility shall not exceed 311.4 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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

8. The operator shall monitor and record total volume of raw landfill gas processed by the LFG treatment and compression system, and monthly average H₂S concentration (ppmv) for the LFG. The operator shall calculate facility wide daily SO_x (as SO₂) emission rate, using LFG volume processed and H₂S concentration. All records required shall be kept on file to comply with this condition.
[Rule 204]

9. The facility wide total SO_x emission, as SO₂, shall not exceed 379.6 lbs per day.
[Rule 204]



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.
[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)]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

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 SCAQMD for approval at least 30 days prior to the scheduled testing. Written notification of the scheduled test date shall be provided to the SCAQMD at least seven (7) days prior to the date so that the testing may be observed by SCAQMD personnel. The testing shall be conducted when the equipment is in full operation, and shall include, but not limited to, a test of the inlet to the flare and the flare exhaust for:
 - A. Methane
 - B. Total Non-Methane Organic Compounds (TNMOC)
 - C. Toxic Air Contaminants (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. NO_x, As NO₂ (Exhaust Only)
 - F. SO_x, 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]



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

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]

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]

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 SCAQMD 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 SCAQMD 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 SCAQMD 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 SCAQMD within 90 calendar days after the due date for the semi-annual monitoring report.



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

The operator shall keep adequate records in a format that is acceptable to the SCAQMD 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, 40 CFR 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 resulting in the emission of raw landfill gas shall be reported to the SCAQMD 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 SCAQMD 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, 40 CFR 60 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]
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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

8. Within one year of LFG treatment system operation, the owner or operator shall submit to SCAQMD 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 SCAQMD personnel upon request.
[Rule 3004 (a) (4)]



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)]
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]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

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 SCAQMD at least seven (7) days prior to the date so that the testing may be observed by SCAQMD personnel. The testing shall be conducted when the equipment is in full operation, and shall include, but not limited to, a test of the inlet to the flare and the flare exhaust for:
 - A. Methane
 - B. Total Non-Methane Organic Compounds (TNMOC)
 - C. Toxic Air Contaminants (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. NO_x, as NO₂ (Exhaust Only)
 - E. SO_x, 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]



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

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]

15. The maximum flare skin temperature at any location shall not exceed 250 degrees Fahrenheit.
[Rule 217]

16. Emissions from the flare shall not exceed the following:

Pollutant	lbs/day
CO	6.15
NOx as NO2	2.60
PM10, as PM2.5	26.1
ROG	1.88

[Rule 1303(a) (1) -BACT, Rule 1303(b) (1) and (b) (2)–Modeling and Offset, 1401]

17. The operator shall operate and maintain this equipment according to the following requirements:

The exhaust temperature shall be maintained at a minimum of 1,400 degrees Fahrenheit whenever the equipment it serves is in operation.

Continuous exhaust temperature monitoring and recording system shall be pursuant to the operation and maintenance requirements specified in 40 CFR Part 64.7. Such a system shall have an accuracy of within $\pm 1\%$ of the 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.

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 SCAQMD 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 SCAQMD 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 SCAQMD within 90 calendar days after the due date for the semi-annual monitoring report.



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS, LLC

The operator shall keep adequate records in a format that is acceptable to the SCAQMD 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 SCAQMD 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 SCAQMD personnel upon request.
[Rule 3004 (a) (4)]

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, 40 CFR 60 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

SOx: Facility wide total SOx emission shall not exceed 375.1 lbs/day, from five gas turbines and a regeneration flare.



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

SECTION K: TITLE V Administration

GENERAL PROVISIONS

1. This permit may be revised, revoked, reopened and reissued, or terminated for cause, or for failure to comply with regulatory requirements, permit terms, or conditions. [3004(a)(7)(C)]
2. This permit does not convey any property rights of any sort or any exclusive privilege. [3004(a)(7)(E)]

Permit Renewal and Expiration

3. (A) Except for solid waste incineration facilities subject to standards under section 129(e) of the Clean Air Act, this permit shall expire five years from the date that this Title V permit is issued. The operator's right to operate under this permit terminates at midnight on this date, unless the facility is protected by an application shield in accordance with Rule 3002(b), due to the filing of a timely and complete application for a Title V permit renewal, consistent with Rule 3003. [3004(a)(2), 3004(f)]

(B) A Title V permit for a solid waste incineration facility combusting municipal waste subject to standards under Section 129(e) of the Clean Air Act shall expire 12 years from the date of issuance unless such permit has been renewed pursuant to this regulation. These permits shall be reviewed by the Executive Officer at least every five years from the date of issuance. [3004(f)(2)]
4. To renew this permit, the operator shall submit to the Executive Officer an application for renewal at least 180 days, but not more than 545 days, prior to the expiration date of this permit. [3003(a)(6)]

Duty to Provide Information

5. The applicant for, or holder of, a Title V permit shall furnish, pursuant to Rule 3002(d) and (e), timely information and records to the Executive Officer or designee within a reasonable time as specified in writing by the Executive Officer or designee. [3004(a)(7)(F)]

Payment of Fees

6. The operator shall pay all required fees specified in Regulation III - Fees. [3004(a)(7)(G)]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

SECTION K: TITLE V Administration

Reopening for Cause

7. The Executive Officer will reopen and revise this permit if any of the following circumstances occur:
- (A) Additional regulatory requirements become applicable with a remaining permit term of three or more years. Reopening is not required if the effective date of the requirement is later than the expiration date of this permit, unless the permit or any of its terms and conditions has been extended pursuant to paragraph (f)(4) of Rule 3004.
 - (B) The Executive Officer or EPA Administrator determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.
 - (C) The Executive Officer or EPA Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements. [3005(g)(1)]

COMPLIANCE PROVISIONS

8. The operator shall comply with all regulatory requirements, and all permit terms and conditions, except:
- (A) As provided for by the emergency provisions of condition no. 17 or condition no. 18, or
 - (B) As provided by an alternative operating condition granted pursuant to a federally approved (SIP-approved) Rule 518.2.

Any non-compliance with any federally enforceable permit condition constitutes a violation of the Federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or denial of a permit renewal application. Non-compliance may also be grounds for civil or criminal penalties under the California State Health and Safety Code. [3004(a)(7)(A)]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

SECTION K: TITLE V Administration

9. The operator shall allow the Executive Officer or authorized representative, upon presentation of appropriate credentials to:
 - (A) Enter the operator's premises where emission-related activities are conducted, or records are kept under the conditions of this permit;
 - (B) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
 - (C) Inspect at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - (D) Sample or monitor at reasonable times, substances or parameters for the purpose of assuring compliance with the facility permit or regulatory requirements. [3004(a)(10)(B)]

10. All terms and conditions in this permit, including any provisions designed to limit a facility's potential to emit, are enforceable by the EPA Administrator and citizens under the federal Clean Air Act, unless the term or condition is designated as not federally enforceable. Each day during any portion of which a violation occurs is a separate offense. [3004(g)]

11. A challenge to any permit condition or requirement raised by EPA, the operator, or any other person, shall not invalidate or otherwise affect the remaining portions of this permit. [3007(b)]

12. The filing of any application for a permit revision, revocation, or termination, or a notification of planned changes or anticipated non-compliance does not stay any permit condition. [3004(a)(7)(D)]

13. It shall not be a defense for a person in an enforcement action, including those listed in Rule 3002(c)(2), that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit, except as provided for in "Emergency Provisions" of this section. [3004(a)(7)(H)]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

SECTION K: TITLE V Administration

14. The operator shall not build, erect, install, or use any equipment, the use of which, without resulting in a reduction in the total release of air contaminants to atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Chapter 3 (commencing with Section 41700) of Part 4, of Division 26 of the California Health and Safety Code or of AQMD rules. This rule shall not apply to cases in which the only violation involved is of Section 41700 of the California Health and Safety Code, or Rule 402 of AQMD Rules. [408]
15. Nothing in this permit or in any permit shield can alter or affect:
- (A) Under Section 303 of the federal Clean Air Act, the provisions for emergency orders;
 - (B) The liability of the operator for any violation of applicable requirements prior to or at the time of permit issuance;
 - (C) The applicable requirements of the Acid Rain Program, Regulation XXXI;
 - (D) The ability of EPA to obtain information from the operator pursuant to Section 114 of the federal Clean Air Act;
 - (E) The applicability of state or local requirements that are not "applicable requirements", as defined in Rule 3000, at the time of permit issuance but which do apply to the facility, such as toxics requirements unique to the State; and
 - (F) The applicability of regulatory requirements with compliance dates after the permit issuance date. [3004(c)(3)]
16. For any portable equipment that requires an AQMD or state permit or registration, excluding a) portable engines, b) military tactical support equipment and c) AQMD-permitted portable equipment that are not a major source, are not located at the facility for more than 12 consecutive months after commencing operation, and whose operation does not conflict with the terms or conditions of this Title V permit: 1) the facility operator shall keep a copy of the AQMD or state permit or registration; 2) the equipment operator shall comply with the conditions on the permit or registration and all other regulatory requirements; and 3) the facility operator shall treat the permit or registration as a part of its Title V permit, subject to recordkeeping, reporting and certification requirements. [3004(a)(1)]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

SECTION K: TITLE V Administration EMERGENCY PROVISIONS

17. An emergency¹ constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limit only if:

(A) Properly signed, contemporaneous operating records or other credible evidence demonstrate that:

- (1) An emergency occurred and the operator can identify the cause(s) of the emergency;
- (2) The facility was operated properly (i.e. operated and maintained in accordance with the manufacturer's specifications, and in compliance with all regulatory requirements or a compliance plan), before the emergency occurred;
- (3) The operator took all reasonable steps to minimize levels of emissions that exceeded emissions standard, or other requirements in the permit; and,
- (4) The operator submitted a written notice of the emergency to the AQMD within two working days of the time when the emissions limitations were exceeded due to the emergency. The notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken, and

(B) The operator complies with the breakdown provisions of Rule 430 – Breakdown Provisions, or subdivision (i) of Rule 2004 – Requirements, whichever is applicable. [3002(g), 430, 2004(i)]

18. The operator is excused from complying with any regulatory requirement that is suspended by the Executive Officer during a state of emergency or state of war emergency, in accordance with Rule 118 - Emergencies. [118]

¹ "Emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the operator, including acts of God, which: (A) requires immediate corrective action to restore normal operation; and (B) causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency; and (C) is not caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

SECTION K: TITLE V Administration RECORDKEEPING PROVISIONS

19. In addition to any other recordkeeping requirements specified elsewhere in this permit, the operator shall keep records of required monitoring information, where applicable, that include:
- (A) The date, place as defined in the Title V permit, and time of sampling or measurements;
 - (B) The date(s) analyses were performed;
 - (C) The company or entity that performed the analyses;
 - (D) The analytical techniques or methods used;
 - (E) The results of such analyses; and
 - (F) The operating conditions as existing at the time of sampling or measurement. [3004(a)(4)(B)]
20. The operator shall maintain records pursuant to Rule 109 and any applicable material safety data sheet (MSDS) for any equipment claimed to be exempt from a written permit by Rule 219 based on the information in those records. [219(t)]
21. The operator shall keep all records of monitoring data required by this permit or by regulatory requirements for a period of at least five years from the date of the monitoring sample, measurement, report, or application. [3004(a)(4)(E)]

REPORTING PROVISIONS

22. The operator shall comply with the following requirements for prompt reporting of deviations:
- (A) Breakdowns shall be reported as required by Rule 430 – Breakdown Provisions or subdivision (i) of Rule 2004 - Requirements, whichever is applicable.



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

SECTION K: TITLE V Administration

- (B) Other deviations from permit or applicable rule emission limitations, equipment operating conditions, or work practice standards, determined by observation or by any monitoring or testing required by the permit or applicable rules that result in emissions greater than those allowed by the permit or applicable rules shall be reported within 72 hours (unless a shorter reporting period is specified in an applicable State or Federal Regulation) of discovery of the deviation by contacting AQMD enforcement personnel assigned to this facility or otherwise calling (800) CUT-SMOG.
 - (C) A written report of such deviations reported pursuant to (B), and any corrective actions or preventative measures taken, shall be submitted to AQMD, in an AQMD approved format, within 14 days of discovery of the deviation.
 - (D) All other deviations shall be reported with the monitoring report required by condition no. 23. [3004(a)(5)]
23. Unless more frequent reporting of monitoring results are specified in other permit conditions or in regulatory requirements, the operator shall submit reports of any required monitoring to the AQMD at least twice per year. The report shall include a) a statement whether all monitoring required by the permit was conducted; and b) identification of all instances of deviations from permit or regulatory requirements. A report for the first six calendar months of the year is due by August 31 and a report for the last six calendar months of the year is due by February 28. [3004(a)(4)(F)]
24. The operator shall submit to the Executive Officer and to the Environmental Protection Agency (EPA), an annual compliance certification. For RECLAIM facilities, the certification is due when the Annual Permit Emissions Program (APEP) report is due and shall cover the same reporting period. For other facilities, the certification is due on March 1 for the previous calendar year. The certification need not include the period preceding the date the initial Title V permit was issued. Each compliance certification shall include:
- (A) Identification of each permit term or condition that is the basis of the certification;



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

SECTION K: TITLE V Administration

- (B) The compliance status during the reporting period;
- (C) Whether compliance was continuous or intermittent;
- (D) The method(s) used to determine compliance over the reporting period and currently, and
- (E) Any other facts specifically required by the Executive Officer to determine compliance.

The EPA copy of the certification shall be sent to: Director of the Air Division Attn:
Air-3 USEPA, Region IX 75 Hawthorne St. San Francisco, CA 94105 [3004(a)(10)(E)]

25. All records, reports, and documents required to be submitted by a Title V operator to AQMD or EPA shall contain a certification of accuracy consistent with Rule 3003(c)(7) by a responsible official (as defined in Rule 3000). [3004(a)(12)]

PERIODIC MONITORING

26. All periodic monitoring required by this permit pursuant to Rule 3004(a)(4)(c) is based on the requirements and justifications in the AQMD document "Periodic Monitoring Guidelines for Title V Facilities" or in case-by-case determinations documented in the TitleV application file. [3004(a)(4)]



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

SECTION K: TITLE V Administration

FACILITY RULES

This facility is subject to the following rules and regulations

With the exception of Rule 402, 473, 477, 1118 and Rules 1401 through 1420, the following rules that are designated as non-federally enforceable are pending EPA approval as part of the state implementation plan. Upon the effective date of that approval, the approved rule(s) will become federally enforceable, and any earlier versions of those rules will no longer be federally enforceable.

RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
RULE 109	5-2-2003	Federally enforceable
RULE 1113	6-3-2011	Federally enforceable
RULE 1113	9-6-2013	Non federally enforceable
RULE 1140	2-1-1980	Federally enforceable
RULE 1140	8-2-1985	Non federally enforceable
RULE 1150	10-15-1982	Non federally enforceable
RULE 1150.1	3-17-2000	Federally enforceable
RULE 1150.1	4-1-2011	Non federally enforceable
RULE 1171	2-1-2008	Federally enforceable
RULE 1171	5-1-2009	Non federally enforceable
RULE 1303(a)(1)-BACT	12-6-2002	Non federally enforceable
RULE 1303(a)(1)-BACT	5-10-1996	Federally enforceable
RULE 1303(a)-BACT	5-10-1996	Federally enforceable
RULE 1303(b)(1)-Modeling	12-6-2002	Non federally enforceable
RULE 1303(b)(1)-Modeling	5-10-1996	Federally enforceable
RULE 1303(b)(2)-Offset	12-6-2002	Non federally enforceable
RULE 1303(b)(2)-Offset	5-10-1996	Federally enforceable
RULE 1309.1	1-8-2010	Non federally enforceable
RULE 1309.1	5-3-2002	Federally enforceable
RULE 1401	6-5-2015	Non federally enforceable
RULE 1401.1	6-5-2015	Non federally enforceable
RULE 1415	12-3-2010	Non federally enforceable



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

SECTION K: TITLE V Administration

RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
RULE 1415.1	12-3-2010	Non federally enforceable
RULE 1418	9-10-1999	Non federally enforceable
RULE 1714	12-10-2012	Federally enforceable
RULE 204	10-8-1993	Federally enforceable
RULE 217	1-5-1990	Federally enforceable
RULE 219	5-3-2013	Non federally enforceable
RULE 219	9-4-1981	Federally enforceable
RULE 3002	11-14-1997	Federally enforceable
RULE 3002	11-5-2010	Non federally enforceable
RULE 3003	11-14-1997	Federally enforceable
RULE 3003	11-5-2010	Non federally enforceable
RULE 3004	12-12-1997	Federally enforceable
RULE 3005	11-14-1997	Federally enforceable
RULE 3005	11-5-2010	Non federally enforceable
RULE 3006	11-14-1997	Federally enforceable
RULE 3006	11-5-2010	Non federally enforceable
RULE 3007	10-8-1993	Federally enforceable
RULE 301	5-1-2015	Non federally enforceable
RULE 304	5-1-2015	Non federally enforceable
RULE 306	5-1-2015	Non federally enforceable
RULE 401	11-9-2001	Non federally enforceable
RULE 401	3-2-1984	Federally enforceable
RULE 402	5-7-1976	Non federally enforceable
RULE 404	2-7-1986	Federally enforceable
RULE 409	8-7-1981	Federally enforceable
RULE 430	7-12-1996	Non federally enforceable
RULE 431.1	6-12-1998	Federally enforceable
RULE 431.2	5-4-1990	Federally enforceable
RULE 431.2	9-15-2000	Non federally enforceable
RULE 461	4-6-2012	Federally enforceable
RULE 701	6-13-1997	Federally enforceable
CA PRC CEQA	11-23-1970	Non federally enforceable
40CFR 60 Subpart KKKK	7-6-2006	Federally enforceable



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

SECTION K: TITLE V Administration

RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
40CFR 60 Subpart WWW	10-17-2000	Federally enforceable
40CFR 63 Subpart AAAA	1-16-2003	Federally enforceable
40CFR 63 Subpart AAAA	4-20-2006	Federally enforceable
40CFR 63 Subpart YYYY	4-20-2006	Federally enforceable
40 CFR 64	11-21-1997	Federally enforceable



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 06-03-2011]

- (1) Except as provided in paragraphs (c)(3), (c)(4), and designated coatings averaged under (c)(6) of Rule 1113, no person shall supply, sell, offer for sale, market, manufacture, blend, repackage, apply, store at a worksite, or solicit the application of any architectural coating within the District:
 - (A) That is listed in the Table of Standards 1 and contains VOC (excluding any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified; or
 - (B) That is not listed in the Table of Standards 1, and contains VOC (excluding any colorant added to tint bases) in excess of 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, until January 1, 2014, at which time the limit drops to 50 grams of VOC per liter of coating, less water, less exempt compounds (0.42 pounds per gallon).
- (2) No person within the District shall add colorant at the point of sale that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding VOC limit specified in the Table of Standards 2, after the effective date specified.



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

**APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 06-03-2011]**

**TABLE OF STANDARDS 1
VOC LIMITS**

**Grams of VOC Per Liter of Coating,
Less Water and Less Exempt Compounds**

COATING CATEGORY	Ceiling Limit ¹	Current Limit ²	Effective Date		
			7/1/08	1/1/12	1/1/14
Bond Breakers		350			
Clear Wood Finishes		275			
Varnish	350	275			
Sanding Sealers	350	275			
Lacquer		275			
Concrete-Curing Compounds		100			
Concrete-Curing Compounds For Roadways and Bridges ³		350			
Concrete Surface Retarder		250			50
Driveway Sealer		100		50	
Dry-Fog Coatings		150			50
Faux Finishing Coatings					
Clear Topcoat		350		200	
Decorative Coatings		350			100
Glazes		350			
Japan		350			
Trowel Applied Coatings		350		150	50
Fire-Proofing Coatings		350			150
Flats	250	50	50		
Floor Coatings	100	50			
Form Release Compound		250			100
Graphic Arts (Sign) Coatings		500			150
Industrial Maintenance (IM) Coatings	420	100			
High Temperature IM Coatings		420			
Non-Sacrificial Anti-Graffiti Coatings		100			
Zinc-Rich IM Primers	340	100			
Magnesite Cement Coatings		450			
Mastic Coatings		300			100
Metallic Pigmented Coatings	500	500			150
Multi-Color Coatings		250			
Nonflat Coatings	150	50			
Pre-Treatment Wash Primers		420			
Primers, Sealers, and Undercoaters	200	100			
Reactive Penetrating Sealers		350			
Recycled Coatings		250			
Roof Coatings	250	50			
Roof Coatings, Aluminum		100			



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

**APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 06-03-2011]**

Roof Primers, Bituminous	350	350		
Rust Preventative Coatings	400	100		
Stone Consolidant		450		
Sacrificial Anti-Graffiti Coatings		100	50	
Shellac				
Clear		730		
Pigmented		550		
Specialty Primers	350	100		
Stains		100		



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 06-03-2011]

COATING CATEGORY	Ceiling Limit ¹	Current Limit ²	Effective Date		
			7/1/08	1/1/12	1/1/14
Stains, Interior	250	250			
Swimming Pool Coatings					
Repair		340			
Other		340			
Traffic Coatings		100			
Waterproofing Sealers	250	100			
Waterproofing Concrete/Masonry Sealers	400	100			
Wood Preservatives		350			

1. The specified ceiling limits are applicable to products sold under the Averaging Compliance Option.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards.
3. Does not include compounds used for curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas.

TABLE OF STANDARDS 1 (cont.) VOC LIMITS

Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

TABLE OF STANDARDS 2 VOC LIMITS FOR COLORANTS

Grams of VOC Per Liter of Colorant Less Water and Less Exempt Compounds

COLORANT	Limit ⁴
Architectural Coatings, excluding IM Coatings	50
Solvent-Based IM	600
Waterborne IM	50

4. Effective January 1, 2014.



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 09-06-2013]

- (1) Except as provided in paragraphs (c)(3), (c)(4), and designated coatings averaged under (c)(6), no person shall supply, sell, offer for sale, market, manufacture, blend, repackage, apply, store at a worksite, or solid the application of any architectural coating within in the District:
 - (A) That is listed in the Table of Standards 1 and contains VOC (excluding any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified; or
 - (B) That is not listed in the Table of Standards 1, and contains VOC (excluding any colorant added to tint bases) in excess of 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, until January 1, 2014, at which time the limit drops to 50 grams of VOC per liter of coating, less water, less exempt compounds (0.42 pounds per gallon).
- (2) No person within the District shall add colorant at the point of sale that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding VOC limit specified in the Table of Standards 2, after the effective date specified.



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 09-06-2013] TABLE OF STANDARDS 1 VOC LIMITS

**Grams of VOC Per Liter of Coating,
Less Water and Less Exempt Compounds**

COATING CATEGORY	Ceiling Limit ¹	Current Limit ²	Effective Date		
			7/1/08	1/1/12	1/1/14
Bond Breakers		350			
Clear Wood Finishes		275			
Varnish	350	275			
Sanding Sealers	350	275			
Lacquer		275			
Concrete-Curing Compounds		100			
Concrete-Curing Compounds For Roadways and Bridges ³		350			
Concrete Surface Retarder		250			50
Driveway Sealer		100		50	
Dry-Fog Coatings		150			50
Faux Finishing Coatings					
Clear Topcoat		350		200	100
Decorative Coatings		350			
Glazes		350			
Japan		350			
Trowel Applied Coatings		350		150	50
Fire-Proofing Coatings		350			150
Flats	250	50	50		
Floor Coatings	100	50			
Form Release Compound		250			100
Graphic Arts (Sign) Coatings		500			150
Industrial Maintenance (IM) Coatings	420	100			
High Temperature IM Coatings		420			
Non-Sacrificial Anti-Graffiti Coatings		100			
Zinc-Rich IM Primers		100			
Magnesite Cement Coatings		450			
Mastic Coatings		300			100
Metallic Pigmented Coatings	500	500			150
Multi-Color Coatings		250			
Nonflat Coatings	150	50			
Pre-Treatment Wash Primers		420			
Primers, Sealers, and Undercoaters		100			
Reactive Penetrating Sealers		350			



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

**APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 09-06-2013]**

Recycled Coatings		250			
Roof Coatings		50			
Roof Coatings, Aluminum		100			
Roof Primers, Bituminous		350			
Rust Preventative Coatings	400	100			
Sacrificial Anti-Graffiti Coatings		100		50	
Shellac					
Clear		730			



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

APPENDIX B: RULE EMISSION LIMITS [RULE 1113 09-06-2013]

COATING CATEGORY	Ceiling Limit ¹	Current Limit ²	Effective Date		
			7/1/08	1/1/12	1/1/14
Pigmented		550			
Specialty Primers		100			
Stains	350	100			
Stains, Interior	250	250			
Stone Consolidant		450			
Swimming Pool Coatings					
Repair		340			
Other		340			
Traffic Coatings		100			
Waterproofing Sealers		100			
Waterproofing Concrete/Masonry Sealers		100			
Wood Preservatives		350			

- 1 The specified ceiling limits are applicable to products sold under the Averaging Compliance Option.
- 2 The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards.
- 3 Does not include compounds used for curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas.

TABLE OF STANDARDS 1 (cont.) VOC LIMITS

Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

TABLE OF STANDARDS 2 VOC LIMITS FOR COLORANTS

Grams of VOC Per Liter of Colorant Less Water and Less Exempt Compounds

COLORANT ADDED TO	Limit ⁴
Architectural Coatings, excluding IM Coatings	50
Solvent-Based IM	600
Waterborne IM	50

4. Effective January 1, 2014.



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

**APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 02-01-2008]**

(I) Solvent Requirements

A person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

	CURRENT LIMITS*	EFFECTIVE 1/1/2008*	EFFECTIVE 1/1/2009
SOLVENT CLEANING ACTIVITY	VOC g/l (lb/gal)	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application			
(i) General	25 (0.21)		
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)		
(iii) Medical Devices & Pharmaceuticals	800 (6.7)		
(B) Repair and Maintenance Cleaning			
(i) General	25 (0.21)		
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)		



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

**APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 02-01-2008]**

	CURRENT LIMITS*	EFFECTIVE 1/1/2008*	EFFECTIVE 1/1/2009
SOLVENT CLEANING ACTIVITY (cont.)	VOC g/l (lb/gal)	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(iii) Medical Devices & Pharmaceuticals			
(A) Tools, Equipment, & Machinery	800 (6.7)		
(B) General Work Surfaces	600 (5.0)		
(C) Cleaning of Coatings or Adhesives Application Equipment	25 (0.21)		
(D) Cleaning of Ink Application Equipment			
(i) General	25 (0.21)		
(ii) Flexographic Printing	25 (0.21)		
(iii) Gravure Printing			
(A) Publication	100 (0.83)		
(B) Packaging	25 (0.21)		
(iv) Lithographic (Offset) or Letter Press Printing			
(A) Roller Wash, Blanket Wash, & On-Press Components			
(1) Newsprint	100 (0.83)		



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

APPENDIX B: RULE EMISSION LIMITS [RULE 1171 02-01-2008]

	CURRENT LIMITS*	EFFECTIVE 1/1/2008*	EFFECTIVE 1/1/2009
SOLVENT CLEANING ACTIVITY (cont.)	VOC g/l (lb/gal)	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(II) Other Substrates	500 (4.2)	100 (0.83)	
(B) Removable Press Components	25 (0.21)		
(v) Screen Printing	500 (4.2)	100 (0.83)	
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	650 (5.4)	650 (5.4)	100 (0.83)
(vii) Specialty Flexographic Printing	100 (0.83)		
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)		

* The specified limits remain in effect unless revised limits are listed in subsequent columns.



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

APPENDIX B: RULE EMISSION LIMITS [RULE 1171 05-01-2009]

(1) Solvent Requirements

A person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	
(iii) Medical Devices & Pharmaceuticals	800 (6.7)	
(B) Repair and Maintenance Cleaning		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

APPENDIX B: RULE EMISSION LIMITS [RULE 1171 05-01-2009]

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY (cont.)	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(iii) Medical Devices & Pharmaceuticals		
(A) Tools, Equipment, & Machinery	800 (6.7)	
(B) General Work Surfaces	600 (5.0)	
(C) Cleaning of Coatings or Adhesives Application Equipment	25 (0.21)	
(D) Cleaning of Ink Application Equipment		
(i) General	25 (0.21)	
(ii) Flexographic Printing	25 (0.21)	
(iii) Gravure Printing		
(A) Publication	100 (0.83)	
(B) Packaging	25 (0.21)	
(iv) Lithographic (Offset) or Letter Press Printing		
(A) Roller Wash, Blanket Wash, & On-Press Components	100 (0.83)	



FACILITY PERMIT TO OPERATE SUNSHINE GAS PRODUCERS LLC

APPENDIX B: RULE EMISSION LIMITS [RULE 1171 05-01-2009]

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY (cont.)	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(B) Removable Press Components	25 (0.21)	
(v) Screen Printing	100 (0.83)	
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	650 (5.4)	100 (0.83)
(vii) Specialty Flexographic Printing	100 (0.83)	
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)	

* The specified limits remain in effect unless revised limits are listed in subsequent columns.



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

**APPENDIX B: RULE EMISSION LIMITS
 [RULE 404 02-07-1986]**

The operator shall not discharge into the atmosphere from this equipment, particulate matter in excess of the concentration at standard conditions, shown in Table 404(a).

Where the volume discharged is between figures listed in the Table, the exact concentration permitted to be discharged shall be determined by linear interpolation.

For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.

TABLE 404(a)

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter ¹ Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
25 or less	883 or less	450	0.196	900	31780	118	0.0515
30	1059	420	.183	1000	35310	113	.0493
35	1236	397	.173	1100	38850	109	.0476
40	1413	377	.165	1200	42380	106	.0463
45	1589	361	.158	1300	45910	102	.0445



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

**APPENDIX B: RULE EMISSION LIMITS
[RULE 404 02-07-1986]**

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
50	1766	347	.152	1400	49440	100	.0437
60	2119	324	.141	1500	52970	97	.0424
70	2472	306	.134	1750	61800	92	.0402
80	2825	291	.127	2000	70630	87	.0380
90	3178	279	.122	2250	79460	83	.0362
100	3531	267	.117	2500	88290	80	.0349
125	4414	246	.107	3000	105900	75	.0327
150	5297	230	.100	4000	141300	67	.0293
175	6180	217	.0947	5000	176600	62	.0271
200	7063	206	.0900	6000	211900	58	.0253
250	8829	190	.0830	8000	282500	52	.0227
300	10590	177	.0773	10000	353100	48	.0210
350	12360	167	.0730	15000	529700	41	.0179
400	14130	159	.0694	20000	706300	37	.0162
450	15890	152	.0664	25000	882900	34	.0148



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

**APPENDIX B: RULE EMISSION LIMITS
 [RULE 404 02-07-1986]**

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter ² Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
		Milligrams per Cubic Meter	Grains per Cubic Foot			Milligrams per Cubic Meter	Grains per Cubic Foot
Cubic meters Per Minute	Cubic feet Per Minute			Cubic meters Per Minute	Cubic feet Per Minute		
500	17660	146	.0637	30000	1059000	32	.0140
600	21190	137	.0598	40000	1413000	28	.0122
700	24720	129	.0563	50000	1766000	26	.0114
800	28250	123	.0537	70000 or more	2472000 or more	23	.0100