Section I , SCAQMD BACT Determination

Source Type: **Major/LAER**

Application No.: **589228**

Equipment Category: **Gas Turbine**

Equipment Subcategory: **Simple Cycle Landfill Gas**

Date: **June 30, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Solar Turbines	B. MODEL: Mercury 50
C. DESCRIPTION: Simple Cycle (No. 4) , fueled on treated 100% LFG from Sunshine Canyon Landfill	
D. FUNCTION: Sunshine Gas Producers utilizes this LFG fired turbine to generate electricity to sell back to electric company. This is one of five identical units at this location, all are simple cycle with no energy recovery, and all exhaust gases leave the exhaust stack. There are no add-on controls.	
E. SIZE/DIMENSIONS/CAPACITY: Generator serving gas turbine is 4.9MW	
COMBUSTION SOURCES	
F. MAXIMUM HEAT INPUT: 61.0 MMBtu/hr (as listed on permit but may vary)	
G. BURNER INFORMATION	

TYPE	INDIVIDUAL HEAT INPUT	NUMBER
Make and model of burner	Rated heat input of single burner, in btu/hr	Number of burners
Enter additional burner types, as needed, add extra rows		

H. PRIMARY FUEL: LANDFILL GAS	I. OTHER FUEL: N/A
J. OPERATING SCHEDULE: Hours 24 Days 7 Weeks 52	
K. EQUIPMENT COST:	
L. EQUIPMENT INFORMATION COMMENTS: The gas turbine is equipped with a landfill gas clean clean-up system for removal of siloxanes, sulfur and moisture.	

2. COMPANY INFORMATION

A. COMPANY: Sunshine Gas Producers, LLC	B. FAC ID: 139938
C. ADDRESS: 14747 San Fernando Road CITY: Sylmar STATE: CA ZIP: 91342	D. NAICS CODE: 22111
E. CONTACT PERSON: Nicholas Deidrich	F. TITLE: Env. Engineer
G. PHONE NO.: (734) 302-5392	H. EMAIL: diedrichn@dteenergy.com

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: NEW CONSTRUCTION
C. SCAQMD ENGINEER: Gaurang Rawal	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 4/8/15 P/O NO.: G47200 PO ISSUANCE DATE: 6/30/2017	
E. START-UP DATE: 11/30/2015	
F. OPERATIONAL TIME: 2.5 years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES: List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (%O_2, %CO_2, dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable.

	VOC	NOx	SOx	CO	PM OR PM_{10}	INORGANIC
BACT Limit	10.5 PPMV	12.5 PPMV		21.5 PPMV		
Averaging Time						
Correction	@ 15% O_2	@ 15% O_2		@ 15% O_2		

B. OTHER BACT REQUIREMENTS: The emission limits shall not apply during gas turbine start-up and shutdown periods. Start-up time shall not exceed 30 minutes for each start-up. Shutdown periods shall not exceed 30 minutes for each shutdown.

C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology

4. EMISSION INFORMATION

D. EMISSION INFORMATION COMMENTS: Although the following mass emission limits may be specific to this project they were also included in the permit:

Criteria pollutants from gas turbine shall not exceed the following limits per day:
NOx: 72.40 lbs.
VOC: 21.90 lbs as methane
CO: 70.27 lbs.
SOx: 74.60 lbs.
PM10: 17.30 lbs.

5. CONTROL TECHNOLOGY

A. MANUFACTURER: N/A	B. MODEL: N/A
C. DESCRIPTION: N/A	
D. SIZE/DIMENSIONS/CAPACITY: An appropriate size parameter such as rated heat input, usable volume, rated filter efficiency, and/or one more characteristic dimensions.	
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. Click here to enter text. PC ISSUANCE DATE: Click here to enter a date. PO NO.: Click here to enter text. PO ISSUANCE DATE: Click here to enter a date.	
F. REQUIRED CONTROL EFFICIENCIES: .	

CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	___%	___%	___%
NOx	___%	___%	___%
SOx	___%	___%	___%
CO	___%	___%	___%
PM	___%	___%	___%
PM_{10}	___%	___%	___%
INORGANIC	___%	___%	___%

G. CONTROL TECHNOLOGY COMMENTS

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source Test
B. DATE(S) OF SOURCE TEST: November 30, 2015
C. COLLECTION EFFICIENCY METHOD: N/A
D. COLLECTION EFFICIENCY PARAMETERS: N/A
E. SOURCE TEST/PERFORMANCE DATA: 4.3 PPMV NOx @15% O_2; 11.3 PPMV CO @15% O_2 ; 3.6 PPMV VOC @15% O_2 as methane; 0.00826 gr/dscf @ 12% CO_2 PM10

F. TEST OPERATING PARAMETERS AND CONDITIONS: All test performed at highest achievable load.
G. TEST METHODS (SPECIFY AGENCY): SCAQMD Methods 100.1, 207.1 5.1, 25.3 and 307.91.
H. MONITORING AND TESTING REQUIREMENTS: Install, maintain and operate CEMS and source test once per year.

I. DEMONSTRATION OF COMPLIANCE COMMENTS: Enter comments for additional information for Demonstration of Compliance.

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: 053738	B. CCAT: Click here to enter text.	C. APPLICATION TYPE CODE: 60
D. RECLAIM FAC? YES ☐ NO ☒	E. TITLE V FAC: YES ☒ NO ☐	F. SOURCE TEST ID(S): PR14466A
G. SCAQMD SOURCE SPECIFIC RULES: Click here to enter text.		
H. HEALTH RISK FOR PERMIT UNIT		

H1. MICR: Click here to enter text.	H2. MICR DATE: Click here to enter a date.	H3. CANCER BURDEN: Click here to enter text.	H4. CB DATE: Click here to enter a date.
H5: HIA: Click here to enter text.	H6. HIA DATE: Click here to enter a date.	H7. HIC: Click here to enter text.	H8. HIC DATE: Click here to enter a date.