



South Coast  
AQMD

## **Part B, Section 1 - SCAQMD BACT Determination**

Source Type: **Major/LAER**  
 Application No.: **492565**  
 Equipment Category: **Gas Turbine**  
 Equipment Subcategory: **Simple Cycle, Produced Gas**  
 Date: **February 1, 2019**

### **1. EQUIPMENT INFORMATION**

A. MANUFACTURER: Solar Turbines		B. MODEL: Taurus 60-T7301S	
C. DESCRIPTION: Simple Cycle with SCR and Oxidation catalyst			
D. FUNCTION: Signal Hill Petroleum operates a crude oil/gas/water separation and gas production facility in Long Beach. Produced gas mixed with natural gas is used to power a gas turbine to generate cost-effective reliable electrical power for the facility.			
E. SIZE/DIMENSIONS/CAPACITY: Generator serving gas turbine is 5.651 MW			
<b>COMBUSTION SOURCES</b>			
F. MAXIMUM HEAT INPUT: 76.20 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: PRODUCED 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 oxidation catalyst and SCR.			

### **2. COMPANY INFORMATION**

A. COMPANY: Signal Hill Petroleum, Inc.		B. FAC ID: 101977	
C. ADDRESS: 2901 Orange Ave. CITY: Long Beach STATE: CA ZIP: 90806		D. NAICS CODE: 211111	
E. CONTACT PERSON: Jim Lee		F. TITLE: Regulatory Specialist	
G. PHONE NO.: (562) 426-4695		H. EMAIL: jslee@shpi.net	

### 3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: NEW CONSTRUCTION
C. SCAQMD ENGINEER: C.S. Bhatt	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 10/21/03 P/O NO.: G2023 PO ISSUANCE DATE: 3/27/2009	
E. START-UP DATE: 12/31/2004	
F. OPERATIONAL TIME: 9 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 <sub>2</sub> , %CO <sub>2</sub> , 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.						
	<b>VOC</b>	<b>NOx</b>	<b>SOx</b>	<b>CO</b>	<b>PM OR PM<sub>10</sub></b>	<b>INORGANIC</b>
BACT Limit	2 PPMV	5 PPMV	150 PPM	6 PPMV		5 PPMV NH <sub>3</sub>
Averaging Time	1 HOUR	1 HOUR		3 HOUR		1 HOUR
Correction	@ 15% O <sub>2</sub>	@ 15% O <sub>2</sub>	FUEL SAMPLE	@ 15% O <sub>2</sub>		@ 15% O <sub>2</sub>
B. OTHER BACT REQUIREMENTS: The emission limits shall not apply during gas turbine start-up and shutdown periods.						
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 month:

VOC: 125 lbs.

CO: 660 lbs.

SOx: 87 lbs.

PM10: 298 lbs.

## 5. CONTROL TECHNOLOGY

A. MANUFACTURER: BASF (SCR & OxiCat)		B. MODEL: NOxCat ZMX & Camet Catco	
C. DESCRIPTION: High temperature zeolite SCR with ammonia injection			
D. SIZE/DIMENSIONS/CAPACITY: SCR: 400 cu.ft., 16'W x 12'H x 34'L and OxiCat: 28 cu.ft. of catalyst volume.			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. 463796 PC ISSUANCE DATE: 10/21/03 PO NO.: F87575 PO ISSUANCE DATE: 2/9/2007			
F. REQUIRED CONTROL EFFICIENCIES: .			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	___%	___%	___%
NOx	___%	___%	___%
SOx	___%	___%	___%
CO	___%	___%	___%
PM	___%	___%	___%
PM <sub>10</sub>	___%	___%	___%
INORGANIC	___%	___%	___%
G. CONTROL TECHNOLOGY COMMENTS 5ppm NH3, 5ppm NOx, 6ppm CO and 2ppm VOC.			

## 6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source Test and CEMS data
B. DATE(S) OF SOURCE TEST: October 20, 2016, October 23, 2014.
C. COLLECTION EFFICIENCY METHOD: N/A
D. COLLECTION EFFICIENCY PARAMETERS: N/A
E. SOURCE TEST/PERFORMANCE DATA: 3.45PPM NOx @15% O <sub>2</sub> ; 00.0PPM CO @15% O <sub>2</sub> ; 0.020PPM NH <sub>3</sub> @15% O <sub>2</sub> ; 0.0020 gr/dscf @ 12% CO <sub>2</sub> PM <sub>10</sub> ; 0.08ppm SO <sub>2</sub> @ 15% O <sub>2</sub> at turbine exhaust
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 <input type="checkbox"/> NO <input type="checkbox"/>	E. TITLE V FAC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	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.