
MOJAVE DESERT
AIR QUALITY MANAGEMENT DISTRICT

Preliminary Determination/Decision - Statement of Basis
for
Modification to

FOP Number: 3100068

For:

**Southern California
Gas Company**

Facility:

South Needles Compressor Station

Facility Address:

**on Hwy 95, 11 miles South of
Needles, CA 92363**

Document Date: **06-06-19**

Submittal date to EPA/CARB for review: **06-10-19**

EPA/CARB 45-Day Commenting Period ends: **07-25-19**

Public Notice Posted, on or before: **06-14-19**

30-Day Public Commenting Period ends at COB: **07-15-19**

Permit Issue date: On or about: **07-26-19**

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A. Introduction

1. Application and Setting

Federal Operating Permit (FOP number: 3100068) for Southern California Gas Company (SCG), South Needles Compressor Station, located on Hwy 95, 11 miles South of Needles, CA 92363. SCG, South Needles Compressor Station - is a natural gas compression and transmission pipeline facility located near Needles, California.

SCG South Needles (SCG SN) is proposing to replace the existing IC ENGINE, EMERGENCY SPARK-IGNITED (SI), AUXILIARY air compressor with a new air compressor. Specifically, the existing 83 horsepower (hp) natural gas fueled internal combustion engine powering an air compressor (District Permit E009234) will be replaced with a new 276 hp natural gas fueled internal combustion engine powering an air compressor. The proposed spark ignition rich-burn turbocharged and aftercooled engine is a Caterpillar model G3406 and will be equipped with a control device, non-selective catalytic reduction (NSCR), and an Air Fuel Ratio Control System.

The Mojave Desert Air Quality Management District (MDAQMD or District) received an application for proposed modification on December 14, 2018.

Initially the applicant had proposed to offset the proposed engine using Simultaneous Emission Reductions (SERs) from the existing engine, however, and due to the existing engines limited recent actual usage, it was decided to use Emission Reduction Credits instead of SERs. The engine shall be used as an auxiliary unit for emergency starting of other devices at SCG SN, and therefore will be permitted as an emergency use engine, which will be operated for less than 100 hours per year for testing and maintenance purposes and unlimited during emergency scenarios.

Prior to this agreement, research was conducted by the MDAQMD into which ERCs were available for use for this permitting effort. Within our District Database we maintain information relating to ERCs, including facility names, locations, equipment changes, facility attainment status, etc. It was decided that ERCs from Certificate 0083 are viable for use for this permitting action.

The final decision to use ERCs occurred on April 25, 2019 by mutual agreement between SCG and the MDAQMD through e-mail correspondence.

A copy of this application can be viewed in Appendix A.

Pursuant to District Rule 1301 – *New Source Review Definitions*, SCG, South Needles (SCG-SN), is an existing Major Facility for CO, NO_x, VOC and PM₁₀. The MDAQMD is classified as ‘attainment/unclassified’ by USEPA and CARB for CO, NO₂, SO₂, and PM, and is classified as ‘nonattainment’ by CARB for PM_{2.5}; therefore, pursuant to District Rule 1303 – *New Source Review Requirements*, the proposed equipment is subject to both BACT and Offset requirements for the Nonattainment Air Pollutant/Precursors of NO_x, VOC and PM₁₀/2.5. Since nearly all emissions from this facility is combustion based, all PM is considered to be PM₁₀ and all PM₁₀ is PM_{2.5}.

Also and since this is a new emissions unit located at an existing Major Source Facility, a complete NSR Analysis is required.

SCG-SN, is defined as a federal Major Facility pursuant to District Rule 1201 – *Federal Operating Permit Definitions*. The proposed modifications are classified as a Significant Modification to SCG-SN, Federal Operating Permit (FOP). Pursuant to District Rule 1205 – *Modifications of Federal Operating Permits*, section (B)(2) and District Rule 1302(D)(1)(d), this document serves as the preliminary decision and Statement of Legal and Factual Basis.

2. Description of Project

SCG-SN proposes to permit and operate a new 4-Stroke Rich Burn (4SRB) Natural Gas fired engine, which will eventually replace the existing engine, currently operating with valid District Permit E009234, described as a IC ENGINE, EMERGENCY SPARK-IGNITED (SI) , AUXILIARY consisting of: Year of Manufacture: pre-June 2006; Uncertified, 4SRB, located at a HAP Major Source One Waukesha, NG fired internal combustion engine Model No. VRG330U and Serial No. 399781, producing 83 bhp with 6 cylinders at 2200 rpm while consuming a maximum of 648 scf/hr with a heat input rating of 0 MMBTUH. This equipment powers a Ingersol-Rand Compressor Model No. HSOA and Serial No. T-40 MO238 D88A, rated at 250 psi.

The applicant is not planning to bank the emission reductions from the old engine once the proposed engine is permitted and fully operational.

The proposed engine is described as:

A SPARK-IGNITED (SI) NATURAL GAS IC ENGINE, POWERING AN AIR COMPRESSOR (Unit 1A) consisting of: Year of Manufacture; 2019; 4SRB; Engine is Subject to NSPS 40 CFR Part 60 Subpart JJJJ, BACT and Offset Requirements of District Regulation XIII. Facility is a HAP Major Source.

Exhaust Stack is 13.5 feet high and has a 1.167 foot diameter.

Exhaust vents at 400 CFM and at a temperature of 1004 Degrees F.

Facility Elevation is 1349 feet above sea level.

B. Analysis

1. Determination of Emissions [District Rule 1302(C)(1)]

The owner/operator has proposed to operate the new engine as an emergency engine and to operate the engine no more than 100 hours per year for testing and maintenance purposes. Therefore, and pursuant to District Rule 1302, Procedure, the engines Potential to Emit (PTE) has been calculated based on 1 Hrs/Day, and no more than 100 hours per year for testing and maintenance. NOX, CO and VOC emission levels are based on manufacturer's guaranteed

levels, and SOx and PM are based on AP-42 emission factors for a Spark Ignited, Natural Gas fired, four-stroke rich-burn (4SRB) engine. Table 1 below summarizes the proposed engine's emissions.

Table 1: Emission Calculations for Proposed Emergency Air Compressor (South Needles)

| Emissions | Pollutant | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|-----------------|-----------------|----------------|
| | NOx (gm/bhp-hr) | CO (gm/bhp-hr) | VOC (gm/bhp-hr) | SOx (gm/bhp-hr) | PM (gm/bhp-hr) |
| Emission Factor ^{1,2} | 0.440 | 2.000 | 0.290 | 0.0020 | 0.033 |
| Emissions | NOx | CO | VOC | SOx | PM10 |
| Emissions for Testing/Maintenance (lb/hr) | 0.26773 | 1.21695 | 0.17646 | 0.0012039 | 0.0203 |
| Emissions for Testing/Maintenance (lb/Yr) | 26.773 | 121.695 | 17.646 | 0.120 | 2.029 |
| Emissions for Testing/Maintenance (tpy) | 0.013 | 0.061 | 0.009 | 0.000 | 0.001 |
| Equipment Rating (BHP) = | 276 | | | | |
| Maximum Fuel Consumption BTU/bhp-hr | 7418.00 | | | | |
| Calculated MMBTU/hr | 2.04737 | | | | |
| MMBTU/Yr | 204.74 | | | | |
| Maximum Annual Operations (Hours) = | 100 | | | | |
| Grams per pound | 453.592 | | | | |
| Calculated fuel consumption using HHV (MMscf/hr) | 0.002007 | | | | |
| Calculated fuel consumption using HHV (MMscf/yr) | 0.201 | | | | |
| 1. Emission Factors for NOx, CO, and VOC based on the SJVAPCD BACT Guidelines; emissions, offsets, and associated permit conditions will reflect those values. The applicable BACT Guideline can be seen at by scrolling to page 3.1.5, using the following link: https://www.valleyair.org/busind/pto/bact/chapter3.pdf . | | | | | |
| Please note that these emission rates are Lower than those required by NSPS, Subpart JJJJ; NOx of 2.0 g/Hp-hr, CO of 4.0 g/Hp-hr, and VOC of 1.0 g/Hp-hr. Link: https://www.ecfr.gov/cgi-bin/text-idx?node=sp40.7.60.jjjj | | | | | |
| 2. Emission Factors for SOx, PM Condensable based on AP-42 Table 3.2-3 (4SRB engines): https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s02.pdf | | | | | |

Since the proposed engine is a new emission source, all of the criteria pollutants that the facility is a major source of, shall be fully offset; simultaneous emission reductions will not be utilized, and the owner/operator will not seek to bank the emissions reduction credits from the existing engine once it is replaced. Instead, the owner/operator is proposing to use ERCs.

SCG-SN is an existing Major Source for NOx, CO, VOC's and PM10/2.5, with a PTE that exceeds the major source thresholds for these pollutants. The source is NOT a Major Source for SOx. Also, and since all PM is from combustion, it is determined that all PM is PM10 and all PM10 is PM2.5.

SCG-SN is proposing to offset the engines NOx, CO, VOC and PM10 emissions using ERC's, which they currently own. The ERCs are documented on Certificate 0083 (see Appendix D for copy) and wholly owned by SCG. These ERCs were originally generated at their SG Blythe Compressor facility due to replacing some of their Internal Combustion Engines during the 2001 time frame.

The SCG Blythe Compressor (SCG BCS) Station Facility is located outside the Federal Ozone nonattainment Area (FONA) as is the SCG South Needles facility. The proposed ERC's are located within same air basin and located in an area with the same ozone attainment status,

therefore the ERC's are eligible for use by the SCG South Needles facility to offset the PTE from the proposed engine.

Further, there is no applicable Reasonably Available Control Technology (RACT) for these areas of the Mojave Desert Air Basin, therefore a RACT reduction analysis is not applicable and not required and the ERCs can be used on a pound per pound basis.

2. Determination of Nonattainment NSR Requirements

[District Rule 1302(C)(2)]

a. BACT Evaluation

[District Rule 1302(C)(2)(a)]

Best Available Control Technology (BACT) is required for each new or Modified Permit Unit at a Modified Facility that emits, or has the Potential to Emit, twenty-five (25) tons per year or more of any Nonattainment Air Pollutant or its Precursors (District Rule 1303(A)(3)). SCG-SN, has a facility PTE in excess of twenty-five (25) tons per year for the Nonattainment Air Pollutants and Precursors of NO_x, and VOCs, greater than 15 tpy for PM₁₀, and greater than 100 tpy for CO; it is a minor source for SO_x. Since the facility is a major source for NO_x, CO, VOC, and PM₁₀, BACT must be applied to all new equipment.

b. The proposed new engine, a One new IC ENGINE, EMERGENCY SPARK-IGNITED (SI), AUXILIARY; BACT for this new engine is determined to be a three-way catalysts/non-selective catalytic reduction for NO_x, CO and VOC emission reductions and the use of Natural Gas is BACT for PM₁₀; facility is a minor source of SO_x. This new engine shall be BACT equipped as required by Regulation XIII.

This engine is classified as an emergency engine, and therefore, BACT emission levels have been established for this class and category obtained by the San Joaquin Valley Unified Air Pollution District for an Emergency Gas-Fired IC Engine; see screen print from their BACT determination, specifically as applicable to a 4SRB Engine type. Website; see: <https://www.valleyair.org/busind/pto/bact/chapter3.pdf>.

Table 1 BACT Requirements from SJVUAPCD:

| Emergency Gas-Fired IC Engine | | | |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------|
| Pollutant | Achieved in Practice or contained in the SIP | Technologically Feasible | Alternate Basic Equipment |
| VOC | 1) LEAN BURN: 206 ppmv @ 15% O2 (1.0 g/bhp-hr) 2) RICH BURN: 60 ppmv @ 15% O2 (0.29 g/bhp-hr) | | |
| SOx | Natural Gas, LPG, or Propane as fuel | | |
| PM10 | Natural Gas, LPG, or Propane as fuel | | |
| NOx | 1) LEAN BURN: < 500 BHP: 1.0 g/bhp-hr ≥ 500 BHP: 0.5 g/bhp-hr 2) RICH BURN: 25 ppmv @ 15% O2 (0.44 g/bhp-hr) | | |
| CO | 2.0 g/bhp-hr | | |

b. Offsets Evaluation

[District Rule 1302(C)(3)]

Offsets are required for any new or modified Facility which has the Potential to Emit a Regulated Air Pollutant in an amount greater than or equal to the thresholds for the Nonattainment Air Pollutants and their Precursors specified in District Rule 1303 (B)(1). The offset threshold is 100 tons per year for CO, 15 tons per year for PM10, 25 tons per year for NOx, 25 tons per year for SOx, and 25 tons per year for VOC. It is proposed to utilize NOx, VOC and PM10 ERCs from Certificate 0083. Since there are no direct PM10 Credits on Certificate 0083, it is proposed to use NOx for PM10 at an Interpollutant Ratio of 2 to 1 (2:1) NOx for PM10. SOx and CO will not be offset as the District is in attainment for these air pollutants.

Table 2, below, summarizes the current Certificate ERC Balance and those which will remain once the proposed engine is permitted; accordingly, a new Certificate will be issued with the remaining emission balances. It is noted that a portion of the ERCs are also being used to offset emissions from a proposed engine at North Needles. That proposed action is currently in its comment periods’.

| Category | Pollutant - Pounds per Year | | |
|---------------------------------------------------------------|-----------------------------|--------|------|
| | NOx | VOC | PM10 |
| Certificate 0083 ERCs | 1,284,361 | 13,696 | NA |
| Proposed Engine PTE for North Needles District Permit B013454 | 800 | 800 | NA |
| Proposed Engine PTE for South Needles District Permit E013453 | 27 | 18 | 2 |
| Proposed South Needles Engine; NOx for PM10 at 2:1 Ratio | 4 | NA | NA |
| Certificate Balance | 1,283,531 | 12,879 | |

Note: CO and SOx emissions are not offset as the entire District is attainment for these Air Pollutants

3. Determination of Requirements for Toxic Air Contaminants [District Rule 1302(C)(5)]

a. New Source Review for Toxic Air Contaminants, District Rule 1320

Pursuant to District Rule 1320 – New Source Review for Toxic Air Contaminants, SCG-SN is subject to both State and Federal Toxic New Source Review, as SCG-SN is a Modified Facility which has the potential to emit Toxic Air Contaminants, and contains Emissions Units which are subject to an Airborne Toxic Control Measure (State T-NSR). SCG-SN does have the potential to emit 10 tons per year of a single Hazardous Air Pollutant (Federal T-NSR) and/or 25 tpy of a combination of HAPs.

Pursuant to the requirements of District Rule 1320, an applicability analysis of state and federal air toxic regulations was conducted for the proposed equipment (State T-NSR and Federal T-NSR, respectively). The State T-NSR and Federal T-NSR analyses are described below:

Section (E)(1)(b) of District Rule 1320 requires that if any ATCM applies to the proposed equipment, the requirements of that ATCM shall be added to the District permit.

This new equipment is NOT subject to any State ATCM.

Pursuant to District Rule 1320, section (E)(2), State T-NSR also requires an Emission Unit Prioritization Score to be calculated utilizing the most recently approved CAPCOA Facility Prioritization Guidelines, the most recently approved OEHHA Unit Risk Factor for cancer potency factors, and the most recently approved OEHHA Reference Exposure Levels (REL’s) for non-cancer acute factors, and non-cancer chronic factors. Therefore, and pursuant to District Rule 1320 a Prioritization Score (PS) is calculated for this New emissions device based on the proposed potential to emit values. The results for this 1 – Proposed New IC ENGINE, EMERGENCY SPARK-IGNITED (SI), AUXILIARY emission unit is provided below:

Table 3 Prioritization Scores from Proposed Engine

| | Cancer Priority | Acute Non-cancer Priority | Chronic Non-cancer Priority |
|--------------------|-----------------|---------------------------|-----------------------------|
| New SI 4SRB Engine | 0.0005 | 0.0046 | 0.0000 |

Distance to receptor nearest receptor is greater than 7500 meters.

The Cancer Prioritization Score from the proposed engine, quantified using HARP2, is 0.0005, which by definition is considered a “Low Priority” emission source, and the associated health risk is considered acceptable.

The Acute Non-Cancer Priority Score from the proposed engine is 0.0046, which is defined as a “Low Priority” emission source, and the associated health risk is considered acceptable.

The Chronic Non-Cancer Priority Score from the proposed engine is 0.0000, which is defined as a “Low Priority” emission source, and the associated health risk is considered acceptable.

4. Control of Toxic Air Contaminants from Existing Sources, District Rule 1520

Pursuant to District Rule 1520, the applicant submitted a 2018 Comprehensive Emission Inventory Report (CEIR), which was inputted into the HOTSPOTS ANALYSIS AND REPORTING PROGRAM EMISSION INVENTORY MODULE VERSION 2.1.0, (HARP2) Software program for subsequent analysis and results.

This methodology is consistent with the 2016 CAPCOA Facility Prioritization Guidelines, and is based on a receptor greater than 7500 meters.

The Table below summarizes the SCG-SN post-modification prioritization scores. As shown, the carcinogenic Prioritization Score is less than one (1), therefore, SCG SN is categorized as an “Low Priority” facility as defined by District Rule 1320, section (E)(2)(b). Therefore, no Contemporaneous Risk Reduction is required as a result of adding the proposed engine. Nonetheless, the proposed engine will have add-on controls considered to be Toxics Best Available Control Technology, T-BACT, through the use of a 3-Way Catalytic Emission Reduction System and associated Air Fuel Ratio Control System.

Table 4 Facility Prioritization Scores, Includes PTE from Proposed Engine

| | Cancer Priority | Acute Noncancer Priority | Chronic Noncancer Priority |
|----------------------------|-----------------|--------------------------|----------------------------|
| Proposed Modified Facility | 0.0056 | 0.0046 | 0.0001 |

Distance to receptor; nearest receptor is greater than 7500 meters.

The facility's highest Cancer Prioritization Score, quantified using HARP2, is 0.0056, which by definition, is considered an "Low Priority", and the associated health risk is considered acceptable.

The facility Acute Non-Cancer Priority score is 0.0046, which is defined as "Low Priority" and the associated health risk is considered acceptable.

The facility Chronic Non-Cancer Priority score is 0.0001, which is defined as "Low Priority" and the associated health risk is considered acceptable.

5. Federal T-NSR:

Pursuant to section (F)(1) of District Rule 1320, the Modified Facility/Emissions Unit was analyzed to determine if any current, enforceable Maximum Achievable Control Technology (MACT) standards apply to the affect Emission Units

Federal NSPS, 40 CFR Part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines is applicable to the proposed engine, which must comply with the emission standards as summarized in Table 1 of Subpart JJJJ as shown below.

For full Regulations, see: <https://www.ecfr.gov/cgi-bin/text-idx?node=sp40.7.60.jjji>

NSPS, Subpart JJJJ requires that this Stationary Emergency SI Engines, and is in the range $100 \leq HP < 500$, must meet the following emission rate limitations as indicated in Table 1 of Subpart JJJJ as shown below:

Table 1 to Subpart JJJJ of Part 60—NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

| Engine type and fuel | Maximum engine power | Manufacture date | Emission standards ^a | | | | | |
|-------------------------------------------------------------------------------------------------|----------------------|------------------|---------------------------------|-----|------------------|-----------------------------|-----|------------------|
| | | | g/HP-hr | | | ppmvd at 15% O ₂ | | |
| | | | NO _x | CO | VOC ^d | NO _x | CO | VOC ^d |
| Non-Emergency SI Natural Gas ^b and Non-Emergency SI Lean Burn LPG ^b | 100≤HP<500 | 7/1/2008 | 2.0 | 4.0 | 1.0 | 160 | 540 | 86 |
| | | 1/1/2011 | 1.0 | 2.0 | 0.7 | 82 | 270 | 60 |
| Non-Emergency SI Lean Burn Natural Gas and LPG | 500≤HP<1,350 | 1/1/2008 | 2.0 | 4.0 | 1.0 | 160 | 540 | 86 |
| | | 7/1/2010 | 1.0 | 2.0 | 0.7 | 82 | 270 | 60 |
| Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350) | HP≥500 | 7/1/2007 | 2.0 | 4.0 | 1.0 | 160 | 540 | 86 |
| | | 7/1/2010 | 1.0 | 2.0 | 0.7 | 82 | 270 | 60 |
| Landfill/Digester Gas (except lean burn 500≤HP<1,350) | HP<500 | 7/1/2008 | 3.0 | 5.0 | 1.0 | 220 | 610 | 80 |
| | | 1/1/2011 | 2.0 | 5.0 | 1.0 | 150 | 610 | 80 |
| | | 7/1/2007 | 3.0 | 5.0 | 1.0 | 220 | 610 | 80 |
| | | 7/1/2010 | 2.0 | 5.0 | 1.0 | 150 | 610 | 80 |
| Landfill/Digester Gas Lean Burn | 500≤HP<1,350 | 1/1/2008 | 3.0 | 5.0 | 1.0 | 220 | 610 | 80 |
| | | 7/1/2010 | 2.0 | 5.0 | 1.0 | 150 | 610 | 80 |
| Emergency | 25<HP<130 | 1/1/2009 | ≤10 | 387 | N/A | N/A | N/A | N/A |
| | | | 2.0 | 4.0 | 1.0 | 160 | 540 | 86 |

Table 5: Comparison of Emission requirements of Subpart JJJJ and the proposed engine.

| Emission Standards | | |
|--------------------|----------------------|-----------------------------------------------------------------|
| Pollutant | Subpart JJJJ g/HP-hr | Proposed Emissions (Emergency Gas Fired IC Engine BACT) g/HP-hr |
| NO _x | 2.0 | 0.44 |
| CO | 4.0 | 2.0 |
| VOC | 1.0 | 0.29 |

The emissions from the proposed engine is well below the requirements of subpart JJJJ, therefore, the proposed engine meets the emissions requirements of Subpart JJJJ.

Furthermore, 40 CFR Part 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines is Applicable to the proposed engine.

For full text, see: <https://www.ecfr.gov/cgi-bin/text-idx?c=ecfr;rgn=div6;view=text;node=40%3A14.0.1.1.1.1;idno=40;sid=e94dcfde4a04b27290c445a56e635e58;cc=ecfr>

§63.6602 of Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

§63.6590(c), *Stationary RICE subject to Regulations under 40 CFR Part 60*. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. Since the proposed engine meets the requirements of Subpart JJJJ, no further requirements apply for such engines under this part, §63.6590(c)(4), **(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions; (Facility is a HAP Major Source)**

Therefore the proposed engine meets the requirements of NESHAP Subpart ZZZZ by meeting the requirements of NSPS Subpart JJJJ.

Pursuant to the requirements in District Rule 1302 B(1)(a)(ii), an analysis of Alternative Siting is not required as the proposed equipment is not a Federal Major Modification as defined in District Rule 1302.

District Rule 1302, Procedure

District Rule 1302(B)(1)(ii), Requirements for Facilities Requiring Offsets; requires the applicant of all new and modified Facilities requiring offsets pursuant to District Rule 1303(B):

1. To provide an alternative siting analysis including an analysis of alternative sites, sizes and production processes pursuant to 42 U.S.C. §7503(a)(5) (Federal Clean Air Act §173(a)(5)). Such analysis shall be functionally equivalent to that required pursuant to Division 13 of the California Public Resources Code (commencing with section 21000).

Since the proposed change is not a Federal Major Modification, the requirements of Rule 1302(B)(1)(a)(ii) a.1 and a.2 do not apply; see discussion below.

2. Provide a statewide compliance certification stating that all Facilities which are under the control of the same person (or persons under common control) in the State of California are in compliance with all applicable emissions limitations and standards under the Federal Clean Air Act and the applicable implementation plan for the air district in which the other Facilities are located.

Since the proposed change is not a Federal Major Modification, the requirements of Rule 1302(B)(1)(a)(ii) a.1 and a.2 do not apply; see discussion below.

3. Provide a District Rule 1310 applicability analysis sufficient to show that the Facility or Modification is or is not a Federal Major Facility or a Federal Major Modification as defined in District Rule 1310(C).

The PTE from the proposed engine is significantly lower than the Federal Major Modification threshold, therefore the proposed modification is NOT a Federal Major Modification and District Rule 1310 is NOT applicable; see Table 6 below for emission threshold and comparison with proposed engine PTE.

4. Demonstrate that the requirements of subsections (B)(1)(a)(ii) a.1 and a.2 shall not apply if the Facility or Modification has been determined to not be a Federal Major Facility or a Federal Major Modification as defined in District Rule 1310(C)(6) and (7) or the Facility has previously applied for and received a valid Plantwide Applicability Limit (PAL) pursuant to the provisions of District Rule 1310(F).

The PTE from the proposed engine is significantly lower than the Federal Major Modification threshold, therefore the proposed modification is NOT a Federal Major Modification and District Rule 1310 is NOT applicable; see Table 6 below for emission threshold and comparison with proposed engine PTE.

Additionally, and since the change is not a Federal Major Modification, the requirements of Rule 1302(B)(1)(a)(ii) a.1 and a.2 do not apply.

District Rule 1310, Table 2, summarizes Federal Significant Emissions Increase Threshold quantities. For full text, see: <http://mdaqmd.ca.gov/home/showdocument?id=486>

District Rule 1310, Table 2

| <u>POLLUTANT</u> | <u>EMISSION RATE</u> (Within an attainment or unclassified area) | <u>EMISSION RATE</u> (Within an ozone nonattainment area) | <u>EMISSION RATE</u> (Within a moderate PM ₁₀ nonattainment area) |
|---------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------|
| Carbon Monoxide (CO) | 100 tpy | 100 tpy | 100 tpy |
| Lead (Pb) | 0.6 tpy | 0.6 tpy | 0.6 tpy |
| Oxides of Nitrogen (NO _x) | 40 tpy | 40 tpy | 40 tpy |
| PM ₁₀ | 15 tpy | 15 tpy | 15 tpy |
| Volatile Organic Compounds (VOC) | 40 tpy | 40 tpy | 40 tpy |
| Sulfur Dioxide (SO ₂) | 40 tpy | 40 tpy | 40 tpy |

SCG-SN is located within a Federal attainment/unclassified area, therefore the Emission Rates of column 1 are applicable. The proposed emission increases are well below the Federal Significant Emissions Increase Thresholds as shown in the Table below.

| Equipment | Proposed District Permit Number | Pollutant Emissions (tons/year) | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------|-------|-------|-------|-------|-------|
| | | CO | NOX | PM10 | PM2.5 | SOx | VOC |
| Caterpillar natural gas engine, turbocharged and aftercooled with NSCR, powering a Reciprocating Compressor | E013453 | 0.061 | 0.013 | 0.001 | 0.001 | 0.000 | 0.009 |
| PSD NEI Threshold | | 100 | 40 | 15 | 10 | 40 | 40 |
| Significant Emissions Increase (SEI)? | | NO | NO | NO | NO | NO | NO |
| NEI: Net Emissions Increase | | | | | | | |
| Equipment Rating (BHP) = | 276 | | | | | | |
| Maximum Fuel Consumption BTU/bhp | 7418.00 | | | | | | |
| Calculated MMBTU/hr | 2.04737 | | | | | | |
| MMBTU/Yr | 204.74 | | | | | | |
| Maximum Annual Operations (Hours) | 100 | | | | | | |
| Grams per pound | 453.592 | | | | | | |
| Calculated fuel consumption using HHV (MMscf/hr) | 0.002007 | | | | | | |
| Calculated fuel consumption using HHV (MMscf/yr) | 0.201 | | | | | | |
| 1. Emission Factors for NO _x , CO, and VOC based on the SJVAPCD BACT Guidelines; emissions, offsets, and associated permit conditions will reflect those values. The applicable BACT Guideline can be seen at by scrolling to page 3.1.5, using the following link: https://www.valleyair.org/busind/pto/bact/chapter3.pdf . | | | | | | | |
| Please note that these emission rates are Lower than those required by NSPS, Subpart JJJJ; NO _x of 2.0 g/Hp-hr, CO of 4.0 g/Hp-hr, and VOC of 1.0 g/Hp-hr: Link: https://www.ecfr.gov/cgi-bin/text-idx?node=sp40.7.60.jjjj | | | | | | | |
| 2. Emission Factors for SO _x , PM Condensable based on AP-42 Table 3.2-3 (4SRB engines): https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s02.pdf | | | | | | | |

**6. Determination of Requirements for Prevention of Significant Deterioration
[District Rule 1302(C)(6)]**

a. PSD Analysis

Rule 1302(B)(1)(a)(i)c requires that any application for an ATC or modification to a Permit to Operate (PTO) includes: "A District Rule 1600 applicability analysis sufficient to determine whether the Facility or Modification is or is not a new PSD Major Source or a PSD Major Modification as defined in District Rule 1600(B) using the procedures set forth in 40 CFR 52.21 (a)(2)."

The SCG-SN is located in an area designated as attainment or unclassified for all National Ambient Air Quality Standards (NAAQS). Therefore, the SCG-SN is potentially subject to PSD for all criteria pollutants. SCG-SN is an existing PSD Major Source for CO, NOx, VOCs, and PM10, since the facility PTE is greater than 250 tpy for these two pollutants, CO and NOx. However, SCG-SN does not have a PSD permit since permitting of most of the emissions units' pre-dates PSD regulations.

Emissions from the proposed new engine are compared with PSD Significant Emissions Increases (SEI) thresholds for each PSD regulated pollutant to determine if additional PSD analysis and/or requirements are triggered. This comparison is summarized in Table 7 below.

Table 7, PSD Analysis

| Equipment | Proposed District Permit Number | Pollutant Emissions (tons/year) | | | | | |
|-------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------|-------|-------|-------|-------|-------|
| | | CO | NOX | PM10 | PM2.5 | SOx | VOC |
| Caterpillar natural gas engine, turbocharged and aftercooled with NSCR, powering a Reciprocating Compressor | E013453 | 0.061 | 0.013 | 0.001 | 0.001 | 0.000 | 0.009 |
| PSD NEI Threshold | | 100 | 40 | 15 | 10 | 40 | 40 |
| Significant Emissions Increase (SEI)? | | NO | NO | NO | NO | NO | NO |
| NEI: Net Emissions Increase | | | | | | | |

The results of the emissions comparison with the appropriate pollutant PSD thresholds is that the modification DOES NOT trigger the PSD Significant Increase Thresholds, therefore no further PSD analysis is required.

b. NAAQS Impact Analysis

District Rule 1302, section (D)(5)(b)(iv) requires that any new or Modified Facility located in an area classified by USEPA as attainment or unclassifiable shall determine if the Facility will cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS). The proposed modification, discussed herein, through implementation of BACT, will not contribute to a violation of the NAAQS.

7. Rules and Regulations Applicable to the Proposed Project

District Rules

Rule 201/203 – *Permits to Construct/Permit to Operate*. Any equipment which may cause the issuance of air contaminants must obtain authorization for such construction from the Air Pollution Control Officer. SCG-SN is in compliance with this rule as they appropriately applied for a District permit for all new equipment and maintains District permits for all residing equipment.

Rule 204 – *Permit Conditions*. To assure compliance with all applicable regulations, the Air Pollution Control Officer (Executive Director) may impose written conditions on any permit. The District has imposed permit conditions to ensure SCG-SN complies with all applicable regulations.

Rule 206 – *Posting of Permit to Operate*. Equipment shall not operate unless the entire permit is affixed upon the equipment or kept at a location for which it is issued and will be made available to the District upon request.

Rule 207 – *Altering or Falsifying of Permit*. A person shall not willfully deface, alter, forge, or falsify any issued permit.

Rule 209 – *Transfer and Voiding of Permits*. SCG-SN shall not transfer, whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another. When equipment which has been granted a permit is altered, changes location, or no longer will be operated, the permit shall become void.

Rule 210 – *Applications*. SCG-SN provided all the required information to correctly address the proposed equipment pursuant to this rule, although there were instances in which additional information were required, in which the thirty (30) day clock was restarted.

Rule 212 – *Standards for Approving Permits*. This rule establishes baseline criteria for approving permits by the District for certain projects. In accordance with these criteria, the proposed modifications and application does not cause issuance of air contaminants in violation of Sections 41700 or 41701 of the State Health and Safety code.

Rule 221 – *Federal Operating Permit Requirement*. SCG-SN is in compliance with this rule, as they currently hold and maintain a Federal Operating Permit.

Rule 301 – *Permit Fees*. The proposed equipment will increase SCG-SN annual permit fees by the applicable amounts described in section (E) of this rule.

Rule 401 – *Visible Emissions*. This rule limits visible emissions opacity to less than 20 percent (or Ringlemann No. 1). In normal operating mode, visible emissions are not expected to exceed 20 percent opacity.

Rule 402 – *Nuisance*. This rule prohibits facility emissions that cause a public nuisance. The proposed modifications and associated equipment is required by permit condition to employ good engineering and operational principles in order to minimize emissions and the possibility of a nuisance.

Rule 404 – *Particulate Matter Concentration*. This rule requires that no person exceed the particulate matter concentration provided in Table 404(a). Since Natural Gas is the only fuel that will be combusted by the proposed engine, the emitted particulate concentration will comply with the requirements of this rule.

Rule 405 – *Solid Particulate Matter – Weight*. This rule requires that no person exceed the particulate matter process weights provided in Table 405(a). Since Natural Gas is the only fuel that will be combusted by the proposed engine, the emitted Solid Particulate Matter will comply with the requirements of this rule; emissions will not exceed the limits in Table 405(a) and the proposed engine will therefore meet the requirements of this rule.

Rule 408 – *Circumvention*. This rule prohibits hidden or secondary rule violations. The proposed modifications as described are not expected to violate Rule 408.

Rule 430 – *Breakdown Provisions*. Any Breakdown which results in a violation to any rule or regulation as defined by Rule 430 shall be properly addressed pursuant to this rule.

Regulation IX:

Rule 900 – *Standards of Performance for New Stationary Sources (NSPS)*. Rule 900 adopts all applicable provisions regarding standards of performance for new stationary sources as set forth in 40 CFR 60. These regulations are periodically updated to reflect actions published in the Federal Register (FR) by the EPA.

40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines applies to the proposed new engine. This regulation limits allowable emissions from the engine, however, BACT emission requirements are lower than those required by this NSPS, and therefore the proposed engine will comply with the requirements of this NSPS.

Regulation X – *National Emission Standards for Hazardous Air Pollutants*. Pursuant to Regulation X, SCG-SN is required to comply with all applicable ATCMs and under state law, a federal National Emission Standards for Hazardous Air Pollutants (NESHAP) becomes the State ATCM, unless the Air Resources Board (ARB) has already adopted an ATCM for the source category and associated hazardous air pollutant(s). In the case of the proposed new equipment, there are no applicable State ATCM's, however, NESHAP Subpart ZZZZ is applicable and since the proposed engine will be in compliance with NSPS Subpart JJJJ, it will be in compliance with Subpart ZZZZ, as clarified in the subpart.

Regulation XII – Title V Permits

This regulation contains requirements for sources which must have a FOP. SCG-SN currently has a FOP and is expected to comply with all applicable rules and regulations.

Rule 1201 – Federal Operating Permit Definitions.

SCG-SN is defined as a federal Major Facility pursuant to this rule.

Rule 1203 – Federal Operating Permits.

The proposed new engine is subject to New Source Review and is being processed pursuant to District Rule 1302, Procedures, which allows for Significant Modifications to be processed concurrent with NSR actions. This procedure conforms to all applicable provisions of District Regulation XII. Further, this permit modification will be noticed similarly to District Rule 1207 requirements and in accordance with District Rule 1302.

This document represents the preliminary determination for the proposed modifications to SCG-SN FOP. This proposed Significant Modification will also be properly noticed pursuant to District Rule 1207, as required.

Rule 1205 – Modifications of Federal Operating Permits.

The proposed new engine classifies as a Significant Permit Modification to SCG-SN Federal Operating Permit (FOP), and subsequently, this permit modification will be issued in accordance with the provisions of District Rule 1302 pursuant to Rule 1203.

Rule 1207 – Notice and Comment.

This NSR permitting action is being noticed concurrent with the Significant Modification of SCG-SN Federal Operating Permit. Notably, this affords the public the right to petition USEPA to reconsider the decision to not object to the permit action.

Rule 1208 – Certification.

SCG-SN included a Certification of Responsible Official as required with the submitted application for the proposed equipment.

Rule 1211 – Greenhouse Gas Provisions of Federal Operating Permits.

SCG-SN is NOT a Major GHG Facility pursuant to Rule 1211.

Regulation XIII – New Source Review

Rule 1302 – Procedure.

This rule applies to all new or Modified Facilities and requires certain requirements to be fulfilled when submitting an application. All applicable requirements of this rule are discussed in this NSR document as part of the Analysis procedure. Certification of compliance with the Federal Clean Air Act, applicable implementation plans, and all applicable District rules and regulations have been addressed. The Authority to Construct (ATC) application package for the proposed equipment includes sufficient documentation to comply with Rule 1302(D)(5)(b)(ii). Permit conditions for the proposed engine will require compliance with Rule 1302(D)(5)(b)(iii).

Rule 1303 – Requirements. This rule requires BACT and offsets for selected facility modifications. The Proposed engine does trigger BACT and offset requirements and will meet BACT requirements. The proposed engine will be equipped with a NSCR catalytic emission reduction system. Additionally, the engines emissions must be fully offset for NOX, VOC, and PM10/2.5 which will be accomplished through use of their wholly owned ERC document with certification number 0083. See previous sections of this document for additional details.

Rule 1304 – Emissions Calculations. The Proposed Emissions from the proposed modifications were calculated pursuant to section (B)(1)(a) of this rule.

Rule 1310 – Federal Major Facilities and Modifications. Emissions from the proposed new engine are determined to NOT be a Federal Major Modification as calculated in accordance with Rule 1310(E)(1)(a) as the Projected Actual Emissions, calculated pursuant to District Rule 1310 (E)(3)(c), will not exceed the Federal Major Modification Thresholds. Calculation methodologies are similar to those required by District Rule 1304(B)(1)(a).

Rule 1320 – New Source Review for Toxic Air Contaminants. Pursuant to the requirements of District Rule 1302, an applicability analysis of State and Federal air toxic regulations was conducted for the proposed modifications (State T-NSR and Federal T-NSR, respectively) and is discussed in further detail in this document.

Rule 1520 – Control of Toxic Air Contaminants from Existing Sources. This permit action is subject to Rule 1520, as SCG-SN is an existing Major Facility as it has a facility PTE greater than ten (10) tons per year for CO, NO_x, SO₂, PM_{10/2.5}, and VOC, as well as has a PTE to emit a TAC. A facility prioritization analysis was conducted and it was determined that the facility is an Low Priority Facility, and the associated health effects are considered acceptable. See previous sections for additional details.

Regulation XVI, Rule 1600 – Prevention of Significant Deterioration

The purpose of this regulation is to set forth requirements for all new Major PSD Facilities and Major PSD Modifications which emit or have the potential to emit a PSD Air Pollutant pursuant to the requirements of 40 CFR 52.21. The proposed modification does not constitute a new Major PSD Facility or a Major PSD Modification; therefore, PSD does not apply to the proposed project. A detailed discussion of PSD occurs in the above sections of this document.

State Regulations

Regulation XI— Source Specific Standards:

District Rule 1160 —Internal Combustion Engines

This rule does not apply because SCG-SN is not located in a federal ozone non-attainment area.

Regulation XII — Federal Operating Permits

This regulation contains requirements for sources which must have a federal operating permit. The identified changes constitute a significant modification of the Title V permit. Specific requirements of Regulation XII are stipulated as shown below.

Rule 1202 — Applications

This rule designates that official applications will be used as necessary under Regulation XII and outlines the specified information which shall be included on the official application to the Air Pollution Control Officer to determine completeness as well as provides a timeline for that determination. This application includes official District forms. The District has evaluated this permitting action and concluded that the proposed project requires a significant Title V Modification and will be processed as such and in accordance with the procedure specified in the rule.

Rule 1203 — Federal Operating Permits (FOP)

The rule defines the permit operating term, stipulates the process by which FOPs, Significant Modifications to FOPs and Renewals of FOPs shall be issued. This rule further identifies restrictions on issuance, permit contents, operational flexibility, compliance certification, permit shield, and violation of permit conditions. The proposed FOP action is considered a significant permit modification. The District will submit this SOB and Draft Title V FOP to the EPA and CARB and make documents available for public review and comment within the specified comment period in accordance with the procedure outlined in Rule 1203(B)(1).

Rule 1205 — Modifications of Federal Operating Permits

This rule specifies the process by which FOPs are modified. The District will determine if the action constitutes a significant permit modification and will incorporate the changes as required by Regulation XII, as applicable.

Rule 1302 — Procedure

Rule 1302 outlines the procedures for preparing an ATC permit application.

Rule 1303 — Requirements

The BACT and offset requirements of Regulation XIII are addressed in this rule.

The BACT and offset requirements of Regulation XIII are addressed in this rule.

BACT: Any new or modified Permit Unit which emits, or has the Potential to Emit, 25 lbs/day or more of any Nonattainment Air Pollutant shall be equipped with BACT. Plus any new or Modified Facility which emits, or has the Potential to Emit, 25 tpy or more of any Nonattainment Air Pollutant shall be equipped with BACT for each new Permit Unit. BACT will apply to the new engine for NOx and ROC per Rule 1303 (A)(3) since the facility has a PTE > 25 tpy of these non-attainment pollutants.

Offsets: Based on the emissions analysis presented in earlier in this document, the facility is proposing the use of ERCs to offset the non-attainment pollutants. Rule 1305 describes the techniques for calculating the required offsets, including the use of ERCs.

Rule 1304 — Emissions Calculations

The SCG-SN modification involves new equipment installation of one emergency power 4SRB engine. This rule outlines how to account for the associated emission increases.

Rule 1305 —Emissions Offsets

This Rule provides the procedures and formulas to determine the eligibility of, calculate the amount of, and determine the use of Offsets required pursuant to the provisions of District Rule 1303(B). The provisions of this rule have been followed in the netting analysis and a summary of those results are included in this document. Screen shot of that analysis are also provided in the Appendix E of this document. A live Excel spreadsheet is also available for review at the District office upon request.

Rule 1310— Federal Major Facilities and Modifications

This rule sets additional requirements for Federal Major Facilities and Modifications. SCG-SN is an existing major federal source. Nonetheless, the modifications proposed in the SCG-SN project are less than the federal significant emissions increase threshold, thus the project is not a Federal Major Modification, and this rule is not applicable.

Rule 1320 —New Source Review for Toxic Air Contaminants

This rule is applicable to all new, Modified or Relocated Facilities or Permit Units which emit or have the potential to emit any HAP, TAC, or Regulated Toxic Substance. MDAQMD Rule 1320 follows a step-wise process for evaluating applications for compliance with air toxics requirements. The initial steps are outlined below, including applicability of Federal and State T-NSR, and conducting HRAs, if applicable for each EU. Note: The prioritization score for this facility is quantified as Low Priority and therefore an HRA is not required.

Federal T-NSR

The SCG SN facility is currently considered a Major Source of HAP, and subject to Federal T-NSR. MDAQMD Rule 1320 requires that if a facility is subject to Federal T-NSR, any applicable NESHAP standards will apply. The SCG-SN engine is required to comply with any applicable currently enforceable NESHAP standards, or a case-by-case NESHAP standard as determined by the MDAQMD. One MACT standards is applicable to the new engine, Subpart Subpart ZZZZ. The engine will comply with this requirement and NSPS, Subpart JJJJ by being BACT equipped.

State T-NSR Program Analysis (State T-NSR)

This subsection requires the applicant and MDAQMD to identify and include in the permitting analysis any applicable and currently enforceable California Air Toxics Control Measures (ATCM). The proposed natural-gas fired Reciprocating IC Engines are not subject to a California ATCM.

Health Risk Assessment (HRA)

Under the State T-NSR, Rule 1320 requires evaluation of each Emission Unit using prioritization scoring and an HRA if the prioritization score is high. The facility has a prioritization score of less than 1, and therefore an HRA is not required.

Regulation XIV — Emission Reduction Credit Banking

Rule 1402 established an Emission Reduction Credit Registry by which emission reduction credits can be banked by a facility that has met all the applicable requirements of the rule.

Southern California Gas Company previously banked ERCs as documented by Certificate number 0083. A copy of these, Class A Emission Reduction Credits, is shown in Appendix D.

SCG has proposed to use a portion of these credits to offset the proposed new engine.

The MDAQMD has reviewed and approved that request. The remaining portion of the ERCs will be documented with a new Certificate number and the appropriate entries the Registry, which is maintained by the MDAQMD, will also occur.

The emissions, ERC analysis, and ERC balance is shown in greater detail earlier in this document.

Additionally, there is NO adjustment required for these Credits as there is no RACT requirement for this location of the MDAQMD. Therefore, there will be no reduction upon use of the ERCs pursuant to Regulation XIV.

Rule 1520 — Control of Toxic Air Contaminants from Existing Sources

This rule applies on a facility-wide basis requiring public notice and/or risk reduction at elevated levels of health risk for existing facilities based on actual levels of TAC emissions. 2018 emissions inventory resulted in a Prioritization score for Cancer of 0.006. This prioritization score is less than 1. Therefore, the facility is considered an “Low Priority” facility, and the associated health risk is considered acceptable; an HRA is Not Required.

It is further considered that the SCG-SN will employ T-BACT on the proposed engine equipment through the use of NSCR.

Regulation XVI — Prevention of Significant Deterioration (PSD)

This rule is applicable to projects that have emissions of attainment pollutants greater than the new Major PSD Facilities and Major PSD Modifications thresholds. An applicability assessment of PSD has been performed and it is determined that the SCG-SN new engine is not a PSD Major Modification.

8. NSR Preliminary Decision - Conclusion

The District has reviewed the proposed new emission unit application for Southern California Gas South Needles and conducted a succinct written analysis as required by District Rule 1302, section (D)(1)(b) and District Rule 1203, section (B)(1)(a). The District has determined that the proposed equipment and application are in compliance with all applicable District, State, and Federal rules and regulations as proposed and when operated in terms of the permit conditions stated below.

9. Operating Conditions

The following equipment descriptions and operating conditions will be placed on the Authorities to Construct (ATC) for the project and in Part III of SCG-SN FOP. The specific section numbers of the FOP are identified here as well. Note that all new and modified equipment descriptions and permit conditions will be in redline/strikethrough form.

Description: SPARK-IGNITED (SI) NATURAL GAS IC ENGINE, POWERING AN AIR COMPRESSOR (Unit 1A) consisting of: Year of Manufacture; 2019; 4SRB; Engine is Subject to NSPS 40 CFR Part 60 Subpart JJJJ, BACT and Offset Requirements of District Regulation XIII. Facility is a HAP Area Source. Engine is equipped with the following Control Equipment:

Control Device,
 DCL Model 2DC49-6CGS horizontal catalytic converter/silencer
 o 18-32 dBA insertion loss
 o Mounted on cooler
 o (2) DC49 catalytic elements
 o Guaranteed Emissions (g/bhp-hr):
 NOx: 0.44
 CO: 2.0
 VOC: 0.29

RELi E3 Air Fuel Ratio (AFR) Control System

Exhaust Stack is 13.5 feet high and has a 1.167 foot diameter.

Exhaust vents at 1801 Lb/hr and at a temperature of 1004 Degrees F.

Facility elevation is 1342 feet above sea level.

One Caterpillar, NG fired internal combustion engine Model No. G3406TA and Serial No. TBD, Four-Stroke Rich Burn, producing 276 bhp with 6 cylinders at 1800 rpm while consuming a maximum of 2.05 MMBtu/hr.

EMISSIONS RATES

| Emission Type | Est. Max Load | Unit |
|---------------|---------------|-----------|
| CO | 2.000 | gm/bhp-hr |
| NOx | 0.440 | gm/bhp-hr |
| PM10 | 0.033 | gm/bhp-hr |
| PM2.5 | 0.033 | gm/bhp-hr |
| SOx | 0.002 | gm/bhp-hr |
| VOC | 0.290 | gm/bhp-hr |

CONDITIONS:

1. This stationary, spark-ignited, internal combustion engine and control device shall be installed, operated and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum

emissions of contaminants. Unless otherwise noted, this equipment shall also be operated in accordance with all data and specifications submitted with the application for this permit. [40 CFR 60.4243(a)(1), Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines]

2. Engine may operate in response to notification of impending involuntary rotating outage if the area utility has ordered rotating outages in the area where the engine is located or expects to order such outages at a particular time, the engine is located in the area subject to the rotating outage, the engine is operated no more than 30 minutes prior to the forecasted outage, and the engine is shut down immediately after the utility advises that the outage is no longer imminent or in effect.

3. This equipment shall only be fired on natural gas fuel only.
[District Rule 1302(C)(2)(a)]

4. A non-resettable four-digit (9,999) hour timer shall be installed and maintained on this unit to indicate elapsed engine operating time.
[District Rule 1302(C)(2)(a)]

5. This unit shall be limited to use for emergency power, defined as in response to a fire or when commercially available power has been interrupted. In addition, this unit shall be operated no more than 100 hours per year for testing and maintenance, excluding compliance source testing. [40 CFR 60.4243(d), Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, Rule 1320]

6. The o/o shall maintain an operations log for this unit current and on-site (or at a central location) for a minimum of two (2) years, and this log shall be provided to District, State and Federal personnel upon request. The log shall include, at a minimum, the information specified below:

- a. Date of each use and duration of each use (in hours);
- b. Reason for use (testing & maintenance, emergency, required emission testing);
- c. Calendar year operation in terms of fuel consumption (in standard cubic feet or gallons) or total hours; and,
- d. Records of all maintenance and repair actions performed on the engine, the AFRC, and the three-way catalyst.

[40 CFR 60.4245, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines]

7. This unit shall not be used to provide power during a voluntary agreed to power outage and/or power reduction initiated under an Interruptible Service Contract (ISC); Demand Response

Program (DRP); Load Reduction Program (LRP) and/or similar arrangement(s) with the electrical power supplier.

[40 CFR 60.4243(d), Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines]

8. The air-to-fuel ratio controller shall be used in conjunction with the operation of the three-way catalyst, and shall be maintained and operated appropriately to ensure proper operation of the engine and control device to minimize emissions at all times.

[40 CFR 60.4243(g), Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines]

9. A facility wide Comprehensive Emission Inventory (CEI) for all emitted criteria and toxic air pollutants must be submitted to the District, in a format approved by the District, upon District request.

[District Rule 107(b); H&S Code 39607 & 44341-44342; and 40 CFR 51, Subpart A]

C. Title V Permit/FOP – Significant Permit Modification

1. Proposed Changes to FOP

The owner/operator of Southern California Gas Company, South Needles, has submitted an application for Minor Permit Modification in parallel with the application for District Permit modification; this application was subsequently changed to a Major Permit Modification as the engine will be processed as a new emissions source. The District is processing the proposed FOP changes in accordance with procedures specified in District Rule 1302(D)(1)(d). This preliminary decision also serves as the statement of basis and draft FOP.

2. Title V/FOP – Conclusion

The District has reviewed the application and proposed modifications to SCG SN Federal Operating Permit. The District has determined that the proposed modification is in compliance with all applicable District, State, and Federal rules and regulations as proposed when operated in the terms of the operating conditions given herein.

D. Comment Period and Notifications

1. Public Comment

This preliminary determination will be publicly noticed on or before 06-14-19.

The 30-Day Public Commenting Period that will end at COB on 07-15-19.

Noticing Methods include the following, per District Rule 1207 (A)(1)(a) and District Rule 1302(D)(2) and (3):

- Published in newspapers of general circulation - Riverside Press Enterprise (Riverside County) and the Daily Press (San Bernardino County) on or before 06-14-19.
- Mailed and/or emailed to MDAQMD contact list of persons requesting notice of actions (see the contact list following the Public Notice in this Appendix) on or before 06-10-19.

- Posted on the MDAQMD Website at the following link:
<http://www.mdaqmd.ca.gov/permitting/public-notices-advisories/public-notices-permitting-regulated-industry>

2. Notifications

The preliminary determination was submitted via e-mail to EPA and CARB pursuant to District Rule 1207 for a forty-five (45) day review period on or before 06-10-19. The final modified FOP shall be issued on or about 07-25-19.

All correspondence as required by District Rules 1302 and 1207 were forwarded electronically to the following recipients:

Director, Office of Air Division
United States EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
R9airpermits_AV_MD@epa.gov

Chief, Stationary Source Division
California Air Resources Board
P.O. Box 2815
Sacramento, CA 95812
Permits@arb.ca.gov

Field Operations Manager C/O Alison Wong via e-mail
Southern California Gas Company
P.O. Box 2300, Chatsworth CA 91313

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Appendix A Application



Co/Fac: 31/68
Section/Category: Application
Type: APP-N 3 TS App
Date: 12/14/18

Alison Wong
Technical Advisor II
PO Box 2300 SC9314
Chatsworth, CA 91313
Tel: 213.604.4534
AWong2@semprautilities.com

December 14th, 2018

Mojave Desert Air Quality Management District
Attn: Sam Oktay, Air Quality Engineer
14306 Park Avenue
Victorville, CA 92392

**Subject: Southern California Gas Company,
South Needles Compressor Station (FID #3100068)**

Dear Mr. Oktay:

Southern California Gas Company (SoCalGas) is submitting this application for an Authority to Construct (ATC) and minor Title V Permit modification for the South Needles Compressor Station (Facility ID #3100068).

Proposed Project

The proposed project is to replace the existing emergency air compressor with a new emergency air compressor. Specifically, the existing 83 horsepower (hp) emergency natural gas fueled internal combustion engine powering an air compressor (Permit ID #E009234) will be replaced with a new 276 hp emergency natural gas fueled internal combustion engine powering an air compressor. The proposed spark ignition rich-burn turbocharged and aftercooled engine is a Caterpillar model G3406 and will be equipped with a control device, non-selective catalytic reduction (NSCR).

Regulatory Review

The new spark ignition reciprocating internal combustion engine will satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63 Subpart ZZZZ) requirements by complying with the New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines (40 CFR Part 60 Subpart JJJJ) requirements.

Per Rule 1303(A)(3), any new or modified facility which emits, or has the potential to emit, 25 tons per year or more of any nonattainment air pollutant shall be equipped with Best Available

Control Technology (BACT) for each new Permit Unit. The proposed emission rates satisfy BACT requirements for new natural gas fired engines.

Per Rule 1303(C)(1)(a), the project does not trigger offsets since the increase in net emissions of each of ROG and NOx does not exceed 25 tons when aggregated with all other increases in emissions from the facility during the past five years.

Proposed Emissions

The proposed emissions have been calculated based on emission guarantees provided by the manufacturer. The proposed criteria pollutant emission limits satisfy BACT and 40 CFR Part 60 Subpart JJJJ requirements. Estimates emissions are summarized in the table below. Detailed emission calculations and assumptions are provided in Appendix D.

| Emissions | NOx | CO | VOC | SOx | PM10 |
|-------------------------------------------|-------|-------|-------|--------|-------|
| Emissions for Testing/Maintenance (lb/hr) | 0.09 | 0.37 | 0.09 | 0.001 | 0.05 |
| Emissions for Testing/Maintenance (tpy) | 0.005 | 0.018 | 0.005 | 0.0001 | 0.002 |

The following completed forms are enclosed as Appendix A:

- General Application Form
- Application for Authority to Construct and Permit to Operate
- Title V-Permit Amendment/Modification

see Revised Emission Estimates at end of Application Package.

A copy of the current permit (#E009234) is provided as Appendix B.

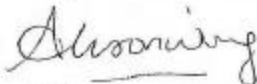
Manufacturer's literature for the proposed equipment is included as Appendix C.

Please also find enclosed check No. 1862820 in the amount of \$535 for application fee.

6/2/19

Please contact me at 213-604-4534 or awong2@semprautilities.com if you require more information or have any questions.

Sincerely,



Alison Wong
Technical Advisor II-Transmission
Environmental Services

Enclosures

1. Appendix A – MDAQMD Application Forms
2. Appendix B – PTO E009234
3. Appendix C – Manufacturer's Literature
3. Appendix D - Emission Calculations

Appendix A
MDAQMD Application Forms



MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
 14306 Park Avenue, Victorville, CA 92392-2310
 (760) 245-1661 Email: Engineering@mdaqmd.ca.gov

www.mdaqmd.ca.gov
Brad Poiriez
 Executive Director

GENERAL APPLICATION FORM

PLEASE TYPE OR PRINT

REMIT \$274.00 WITH THIS DOCUMENT (\$156.00 FOR CHANGE OF OWNER)

Section 1: Owner Information

| | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------|------------------------|
| a. Permit To Be Issued To (company name): SOUTHERN CALIFORNIA GAS COMPANY | | b. Federal Tax ID #: 44-011410 | |
| c. Mailing/Billing Address (for above company name) include city, state, and zip code: PO BOX 2300, CHATSWORTH, CA 91313 | | | |
| d. Facility or Business License Name (for equipment location): SOUTH NEEDLES COMPRESSOR STATION | | | |
| e. Facility Address - Location of Equipment (if same as for company, enter "Same"): 11 MILES SOUTH OF NEEDLES, CA ON HWY 95, 92363 | | Equip. Coordinates (lat/long): UTM (km) 718.729E / 3841.635N | |
| f. Contact Name: Justin Griffie | Title: Station Maintenance Supervisor | Email Address: Jgriffie@scomprautilities.com | Phone: 760-243-6581 |
| General Nature of Business: Natural Gas Compression and Transmission | | Company NAICS: | |
| Type of Organization (check one): <input type="checkbox"/> Individual Owner <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation <input checked="" type="checkbox"/> Utility <input type="checkbox"/> Local Agency <input type="checkbox"/> State Agency <input type="checkbox"/> Federal Agency | | | |

Section 2: Nature of Application

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Application is hereby made for the following equipment: Caterpillar natural gas engine, turbocharged and aftercooled (EMERGENCY AIR COMPRESSOR) | |
| Application is for what type of permit: <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Modification <input type="checkbox"/> Change of Owner | For modification or change of owner: N/A Current Permit Number |
| Do you claim Confidentiality of Data? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (attach explanation; specify which information provided is confidential) | |

Section 3: Equipment Information

| | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|
| Equipment Description (give a brief description of the equipment and/or process): The air compressor is used as a "starter" for the main natural gas compressors for the station's process flow. | | |
| Manufacturer: CATERPILLAR | Model: 3406TA | Serial Number: |
| Add-on Air Pollution Control Equipment? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Note, most APCE require a separate application) | | |
| If yes: Manufacturer: | Model: DC49-6CG | Serial #: CARB EO#: |
| Type: (specify): NSCR, 3 WAY | | |
| Stack Data: Exhaust Stack Height from Ground: >13.5 feet Exhaust Stack Diameter: 1.167 feet | | |
| Stack is: <input type="checkbox"/> horizontal <input checked="" type="checkbox"/> vertical <input type="checkbox"/> open <input type="checkbox"/> weather cap | | |
| Vent Data: Exhaust Temp. 1004 °F Maximum Exhaust Rate (CFM): 400 | | |

-For District Use only-

| | | | |
|---------------------------------|------------------------|---------------------------|-----------------------------------|
| Application Number: MD122700 | Invoice Number: N/A | Permit Number: E013453 | Company/Facility Number: 31/48 |
|---------------------------------|------------------------|---------------------------|-----------------------------------|

already applied to separate app.

Updated based on revised emission factors.
Lu only 6/6/19

Section 4: Emissions Data

Emission Factor Basis (attach any source specified): _____

Manufacturer Source Test MDAQMD Default USEPA AP-42
 Other (please specify) _____

Emissions Data:

| Pollutant | Pre-Control Max. Emissions | Units | Post Control Max. Emissions | Units |
|------------------|----------------------------|-------|-----------------------------|-------|
| NO _x | | | 0.268 | lb/hr |
| NMHC | | | 0.176 | lb/hr |
| CO | | | 1.217 | lb/hr |
| PM ₁₀ | | | 0.0203 | lb/hr |
| SO _x | | | 0.0012 | lb/hr |

Toxic Pollutants – Please include a list of all toxic air pollutants and their emission rates if known.

Section 5: Operation Information

Fuel Consumption: 7.4 at Max Rated Load gal/hour SCF/hour MMBtu/hr

Typical Load: 90%

Facility Annual Operation by Quarters (percent):
 Uniform OR _____ % Jan-Mar _____ % Apr-Jun
 _____ % Jul-Sep _____ % Oct-Dec

Expected Operating Hours of Equipment
 24 Hrs/Day 7 Days/Wk 52 Wk/Yr Total
 Annual Hours (90% HOUSE OPERATING USE)

Section 6: Receptor Information

Distance (Feet) and direction to the property line of closest: >6500' Residence >6500' Business >8500' School

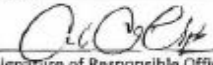
Name of Closest School (K-12) _____

if the proposed ICE operates within 1,000 feet of a school site and operation results in the emission of hazardous air pollutants, a public notice will be required at the expense of the applicant (CH&S 42301.6)

*Please note, District Staff may contact you for further information. Failure to provide additional information as requested in a timely manner may result in delays in the processing of this permit application.

Section 7: Certification

I hereby certify that all information contained herein is true and correct.

| | | | |
|------------------------------|------------------------------------|--------------------------------------------------------------------------------------|-------------|
| CARLOS GAETA | FIELD OPERATIONS MANAGER |  | 12/11/2018 |
| Name of Responsible Official | Official Title | Signature of Responsible Official | Date Signed |
| Phone: 760-243-6574 | Email: CAGAETA@SEMPRAUTILITIES.COM | | |

Application Submittal Instructions:

- Submit completed application to Engineering@mdaqmd.ca.gov
 - Pay the corresponding application fee of \$274 per permit for new permit (or \$156 for change of owner) via check or credit card.
 - Payment by check:
 Make check payable to the Mojave Desert AQMD
 Mail the check with a copy of this completed application to:
 Mojave Desert AQMD
 14306 Park Avenue
 Victorville, CA 92392
 - Payment by credit card:
 Pay online at our website: <http://www.mdaqmd.ca.gov/>
 Click "Pay Fees"
 Please note a surcharge applies for all credit card payments.
 - If payment is made online via credit card, please email the receipt to Engineering@mdaqmd.ca.gov
- Should you have any additional questions, please, do not hesitate to contact the permitting division at 760-245-1661, or via email at Engineering@mdaqmd.ca.gov

Mojave Desert Air Quality Management District

TITLE V – PERMIT AMENDMENT / MODIFICATION

I. PERMIT ACTION (Check appropriate box)

- ADMINISTRATIVE AMENDMENT
 MINOR MODIFICATION
 SIGNIFICANT MODIFICATION
 OFF-PERMIT CHANGE

5/16/19

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 1. FACILITY NAME: SOUTHERN CALIFORNIA GAS | |
| 2. FACILITY ID: 00069 <i>schn</i> | |
| 3. TITLE V PERMIT NO: 3100069 | |
| 4. TYPE OF ORGANIZATION: <input type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input checked="" type="checkbox"/> Utility | |
| 5. COMPANY NAME: SOUTHERN CALIFORNIA GAS | |
| 6. COMPANY MAILING/BILLING ADDRESS: STREET/P.O. BOX: PO BOX 2300 SC9314 | |
| CITY: CHATSWORTH STATE: CA 9-DIGIT ZIP CODE: 91313 | |
| 7. FACILITY ADDRESS: STREET: 11 MILES SOUTH OF NEEDLES, ON HWY 95 | PROPOSED DATE OF INSTALLATION: |
| CITY: NEEDLES STATE: CA 9-DIGIT ZIP CODE: 92363 | |
| 8. DISTANCES (FEET AND DIRECTION) TO CLOSEST: FENCELINE: RESIDENCE: 1766 S BUSINESS: 1560' S SCHOOL: >6500' | |
| 9. GENERAL NATURE OF BUSINESS: PUBLIC UTILITY | |
| 10. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary) The proposed modification is to remove the existing natural gas IC engine, air compressor (Permit ID #B009211) and replace with a new unit. The new unit consists of Caterpillar natural gas engine, turbocharged and aftercooled. | |
| 11. PERSON TO CONTACT FOR INFORMATION ON THIS APPLICATION: | |
| NAME: ALISON WONG | PHONE NUMBER: 213-604-4534 |
| TITLE: TECHNICAL ADVISOR | EMAIL: AWONG2@SEMPRAUTILITIES.COM |

14306 Park Avenue, Victorville, CA 92392 | Tel: (760)245-1661

Revised: January 8, 2013

Form 1202-N Title V Modification

II. COMPLIANCE CERTIFICATION (Read each statement carefully and check all for confirmation):

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the foregoing is correct and true:


Signature of Responsible Official

11/20/2018
Date

Carlos Gaeta
Name of Responsible Official (please print)

Field Operations Manager
Title of Responsible Official (please print)

SCG
- NW
BSS
6/6/19

✓ **For AQMD Use Only:**

| | | |
|------------|---------------------------------------|------------------------------|
| DATE STAMP | DISTRICT PERMIT APPLICATION NO: _____ | COMPANY / FACILITY ID: _____ |
|------------|---------------------------------------|------------------------------|

Mojave Desert Air Quality Management District

TITLE V – PERMIT AMENDMENT / MODIFICATION

I. PERMIT ACTION (Check appropriate box)

- ADMINISTRATIVE AMENDMENT
 MINOR MODIFICATION
 SIGNIFICANT MODIFICATION
 OFF-PERMIT CHANGE

500 2/2/19

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| 1. FACILITY NAME: <u>SOUTHERN CALIFORNIA GAS</u> | |
| 2. FACILITY ID: <u>00068</u> ✓ | |
| 3. TITLE V PERMIT NO: <u>3100068</u> | |
| 4. TYPE OF ORGANIZATION: <input type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input checked="" type="checkbox"/> Utility | |
| 5. COMPANY NAME: <u>SOUTHERN CALIFORNIA GAS</u> | |
| 6. COMPANY MAILING/BILLING ADDRESS: STREET/P.O. BOX: <u>PO BOX 2300 SC9314</u> | |
| CITY: <u>CHATSWORTH</u> STATE: <u>CA</u> 9-DIGIT ZIP CODE: <u>91313</u> | |
| 7. FACILITY ADDRESS: STREET: <u>11 MILES SOUTH OF NEEDLES, ON HWY 95</u> | PROPOSED DATE OF INSTALLATION: |
| CITY: <u>NEEDLES</u> STATE: <u>CA</u> 9-DIGIT ZIP CODE: <u>92363</u> | |
| 8. DISTANCES (FEET AND DIRECTION) TO CLOSEST: FENCELINE: _____ RESIDENCE: <u>1766 S</u> BUSINESS: <u>1560' S</u> SCHOOL: <u>>6500'</u> | |
| 9. GENERAL NATURE OF BUSINESS: <u>PUBLIC UTILITY</u> | |
| 10. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (Include Permit #'s if known, and use additional sheets if necessary) The proposed modification is to remove the existing natural gas IC engine, air compressor (Permit ID #B006211) and replace with a new unit. The new unit consists of Caterpillar natural gas engine, turbocharged and aftercooled. | |
| 11. PERSON TO CONTACT FOR INFORMATION ON THIS APPLICATION: | |
| NAME: <u>ALISON WONG</u> | PHONE NUMBER: <u>213-604-4534</u> |
| TITLE: <u>TECHNICAL ADVISOR</u> | EMAIL: <u>AWONG2@SEMPRAUTILITIES.COM</u> |

II. COMPLIANCE CERTIFICATION (Read each statement carefully and check all for confirmation):

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:


Signature of Responsible Official

12-11-18
Date

Carlos Gaeta
Name of Responsible Official (please print)

Field Operations Manager
Title of Responsible Official (please print)

For AQMD Use Only:

| | | |
|------------|------------------------------------------|-----------------------------------|
| DATE STAMP | DISTRICT PERMIT APPLICATION NO: _____ | COMPANY /FACILITY ID: _____ |
|------------|------------------------------------------|-----------------------------------|

Appendix B
PTO E009234



MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT

14306 Park Avenue, Victorville, CA 92392-2310
760.245.1661 – 800.635.4617 – FAX 760.245.2022

PERMIT TO OPERATE

E009234

Operation under this permit must be conducted in compliance with all information included with the initial application, initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If a copy is posted, the original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: OCTOBER 2019

OWNER OR OPERATOR (Co. #31)

Southern California Gas - MDAQMD
9400 Oakdale Avenue
Chatsworth, CA 91313

EQUIPMENT LOCATION (Fac. #68)

SCG - South Needles
on Hwy 95, 11 miles South of
Needles, CA 92363

Description:

IC ENGINE, EMERGENCY SPARK-IGNITED (SI), AUXILIARY consisting of: Year of Manufacture: pre-June 2006; Uncertified, 4SRB, located at a HAP Major Source

One Waukesha, NG fired internal combustion engine Model No. VRG330U and Serial No. 399781, producing 83 bhp with 6 cylinders at 2200 rpm while consuming a maximum of 648 scf/hr with a heat input rating of 0 MMBTU/H. This equipment powers a Ingersol-Rand Compressor Model No. HSOA and Serial No. T-40 MO238 D88A, rated at 250 psi.

EMISSIONS RATES

| Emission Type | Est. Max Load | Unit |
|---------------|---------------|-----------|
| CO | 0.557 | lbs/MMBtu |
| NOx | 0.847 | lbs/MMBtu |
| PM10 | 0.0 | lbs/MMBtu |
| SOx | 0.001 | lbs/MMBtu |
| TOG | 1.47 | lbs/MMBtu |

CONDITIONS:

1. Owner/Operator shall ensure this equipment complies with applicable Title V Part II and Part III conditions. [Rule 204]
2. This equipment shall be installed, operated and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of contaminants. Unless

Fee Schedule: 7 (g) Rating: 1 device SIC: 4922 SCC: 20100202 Location/UTM(Km): 719E/3842N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

Southern California Gas - MDAQMD
PO Box 2300, SC 9314
Chatsworth, CA 91313-2300

By: 
Brad Poiriez
Air Pollution Control Officer

otherwise noted, this equipment shall also be operated in accordance with all data and specifications submitted with the application for this permit. [40 CFR 63.6025(e), 40 CFR 63.6005]

3. A non-resettable four-digit (0,999) hour timer shall be installed and maintained on this unit to indicate elapsed engine operating time. [17 CCR 93113 and 40 CFR 63.6025(f)]

4. This unit shall only be fired on natural gas. [1302(C)(2)(iv), Rule 431]

5. Owner/operator must meet the following requirements no later than October 18, 2013:

a. Change oil and filter every 1400 hours of operation or annually, whichever comes first. O/o may utilize an oil analysis program as described in 63.6025(f) in order to extend this requirement.

b. Inspect spark plugs every 1400 hours of operation or annually, whichever comes first;

c. Inspect all hoses and belts every 1400 hours of operation or annually, whichever comes first, and replace as necessary; and

d. Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63.6603, 40 CFR 63 Subpart ZZZZ, Table 2c and Table 6(9)]

6. The owner/operator (o/o) shall maintain a operations log for this unit current and on-site, either at the engine location or at a on-site location, for a minimum of five (5) years, and for another year where it can be made available to the District staff within 5 working days from the District's request, and this log shall be provided to District, State and Federal personnel upon request. The log shall include, at a minimum, the information specified below:

a. Date of each use and duration of each use (in hours);

b. Reason for use (leaking & maintenance, emergency, required emission testing);

c. Records of maintenance; and

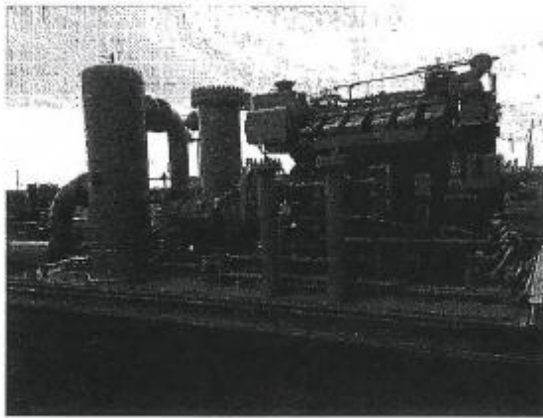
d. Calendar year operation in terms of fuel consumption (in ocf or equivalent) and total hours. [1302(C)(2)(a), 40 CFR 63.6655(a)]

7. The owner/operator shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63.6605 (f)]

8. This unit shall be operated no more than 100 hours per year for maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. [40 CFR 63.6646(f)]

9. This unit is subject to the requirements of 40 CFR 63 Subpart ZZZZ (RICE NESHAPs). In the event of conflict between conditions and the referenced regulatory citation, the more stringent requirements shall govern. [Rule 201]

Appendix C
Manufacturer's Literature



TECHNICAL DESCRIPTION

UECQ 15418-5A



SCOPE OF WORK

PACKAGED ENGINE DRIVE ROTARY SCREW COMPRESSOR

Complete UEC rotary screw compressor package, with a single compressor and driver mounted on a steel skid and containing necessary on-skid wiring, piping, and controls, as described below. All external power, electrical disconnects, motor starters, cooling water or air, foundations, installation, and other interconnecting requirements shown on submittal drawings are supplied by others.

CONDITIONS OF SERVICE

| | |
|------------------------------------|----------------|
| Location: | California |
| Elevation (FASL): | 495 |
| Service: | Instrument Air |
| Discharge Pressure: | 250 PSIG |
| Capacity (minimum per compressor): | 500 SCFM |
| Inlet Temperature: | 125°F |

PERFORMANCE GUARANTEE

Customer responsibility to confirm conditions of service is correct, prior to award of order. Should the conditions vary dramatically from above, design of the equipment may be inefficient or incapable of meeting the required conditions of service.

Package has been designed for design point(s) as provided. No additional points or ranges have been considered beyond shown. It is recommended that the customer provide a design range for the most robust package. Should any additional points be required, please contact your UEC representative.

LeROI rated capacity and power are typically guaranteed to a tolerance of $\pm 5\%$.

PACKAGE STUDIES

The following package studies are typically performed by a 3rd party consulting firm:

- | | |
|---------------------------------------------|--------------|
| 1. Torsional analysis | Included |
| 2. Structural / skid analyses (not typical) | Not included |

Torsional study – The outcome of this study will examine the suitability of the driver and coupling, and determine if a flywheel or others charges are required. Typically provided for drivers approximately 500 BHP and larger for rotary screw applications, if not requested by customer.

Structural / skid study – The outcome of this study will examine the suitability of the structural skid supporting the compressor package and determine if additional bracing or alternate beam members are required. Typically not provided for rotary screw compressor packages.

Study Impact – After each study is completed, any required changes will be documented, minimized and submitted to the customer for change order. If customer chooses not to accept recommended changes as a result of performed studies, customer assumes liability for any issues related thereto.

ENGINE

Caterpillar natural gas engine, turbocharged and aftercooled as described below:

| | |
|------------------------|-------------|
| Engine Model | G3406 |
| Nominal BHP | 276 |
| Operating Speed Range | 1400 – 1800 |
| BHP at Site Conditions | 276 |
| Power Cylinders | Inline-6 |
| Engine Technology | Rich Burn |

- Engine mounted flywheel with 1:1 barring device
- Engine mounted with Rotachock (or equal) mounts

ENGINE OIL SYSTEM

- Pneumatic pre-lube pump
- Simplex oil filter
- *Engine oil day tank, mounted on-skid*

ENGINE WATER SYSTEM

- Engine driven water pumps
- Engine mounted, two stage (JW & SCAC) plate-fin aftercooler
- Jacket and auxiliary water expansion tanks (shipped loose) complete with level gauge and switch mounted on top of cooler with *OSHA approved caged ladder, work platform and handrails* with access to both expansion tanks and catalysts
- *Isolation butterfly valves provided at inlet and outlet of each cooler section (AUX and EJW)*

ENGINE FUEL SYSTEM

- PECO or equal fuel filter complete with level gauges, level switch and manual drain valves
- Fuel gas shut off valve
- Electronically controlled fuel valve
- Fisher fuel gas pressure control valve
- 2"-150#RF manual isolation valve
- Fuel gas cone strainer at skid edge
- Threaded, conventional spring type relief valve
- RELI E3 AFR system installed by others

ENGINE AIR SYSTEM

- One (1) TDI turbine starter
- Supply air pressure provided by customer – to confirm air supply and pressure available

ENGINE INTAKE/EXHAUST SYSTEM

- Engine supplied air cleaner (shipped loose)
- DCL Model 2DC49-6CGS horizontal catalytic converter / silencer
 - 18-32 dBA insertion loss
 - Mounted on cooler
 - (2) DC49 catalytic elements
 - Guaranteed emissions (g/bhp-hr):
 - ~~NO_x: 0.15~~
 - ~~CO: 0.60~~
 - ~~VOC: 0.15~~
- *See New Guaranteed emissions for South Needles; attached*
- **Carbon steel exhaust piping between engine and silencer/catalytic converter**
- One (1) vertical and one (1) horizontal flex connector on exhaust piping
- Structural steel support for on-skid intake and exhaust piping, as required (off-skid by others)

ENGINE INSTRUMENTATION

In addition to manufacturer's standard instrumentation, UEC shall supply as follows:

- One (1) vibration transmitter
- Two (2) engine water pressure indicators, one per each AUX and EJW section
- One (1) engine oil pressure indicator
- Two (2) fuel gas pressure indicators, one each upstream and downstream of fuel filter
- Two (2) engine water temperature elements, one per each AUX and EJW section
- Four (4) engine water temperature gauges, upstream and downstream of AUX and EJW cooler

COUPLING AND GUARD

- Rexnord or equal, double-flexing spacer coupling (or equal) with dry type, carbon steel flex pack initially sized for a minimum 1.5 service factor and verified by the torsional analysis
- OSHA compliant full drive guard covering flywheel and coupling, with view port for determining unit rotation and designed for ease of removal

Revised Emission Rates Received via e-mail
 on 6-4-19. *See copy 6/5/19*

Air Compressor / Caterpillar 3406 Engine.
 Southern California Gas
 Southern Needles Compressor Station

| MINE-X [®] Catalytic Silencer (Table 2) (South Needles) | | |
|-------------------------------------------------------------------|------------------------------------------------------------------------|-------|
| Application | Gas Compression | |
| Engine Model | CAT 3406TA | |
| Engine Mechanical Power | 276 hp | |
| Fuel | Natural Gas (FQNG) | |
| Exhaust Flowrate | 1801 lb/h | |
| Exhaust Temperature | 1004 deg. F | |
| Catalytic Silencer Model | Critical Grade | |
| Catalyst Model | 2-DC49-6CG5 | |
| Number of Elements | 2 | |
| Coating Code | 0Y / 300 cpsl | |
| Housing Material | Stainless Steel | |
| Silencer Material | Carbon steel | |
| Silencer Grade | DCL Critical 18-32 dBA | |
| Jacket Diameter (Approx.) | 26 inches | |
| Overall Length (Approx.) | 56 inches | |
| Inlet Connection | 6 inches | |
| Outlet Connection | 6 inches | |
| Flow Direction | Horizontal | |
| Stack included | Yes | |
| Backpressure | 6.5" w.c. | |
| Pre-Catalyst Emissions | NOx | 15.41 |
| g/bhp-h | CO | 15.41 |
| | NMNEHC | 0.18 |
| | PM | NA |
| | SOX | NA |
| | Post-Catalyst | NOx |
| g/bhp-h | CO | 2 |
| | NMNEHC | 0.29 |
| | PM | NA |
| | SOX | NA |
| Limited Warranty | (doc. X0000-0000-K1) one year or 8000 hours operation, whichever first | |
| Additional Notes | | |



Appendix D
Emission Calculations

Prepared by: Samuel J Oklav, PE
 Date: 06-05-19

Table 1: Emission Calculations for Proposed Emergency Air Compressor (South Needles)

| Emissions | Pollutant | | | | | | | | | |
|-------------------------------------------|------------------|-----------------|------------------|------------------|-----------------|----------------|---------------|----------------|----------------|---------------|
| | NOx (gpm/bhp-hr) | CO (gpm/bhp-hr) | VOC (gpm/bhp-hr) | SOx (gpm/bhp-hr) | PM (gpm/bhp-hr) | NOx (lb/MMBtu) | CO (lb/MMBtu) | VOC (lb/MMBtu) | SOx (lb/MMBtu) | PM (lb/MMBtu) |
| Emission Factor ^{1,2} | 0.440 | 2.000 | 0.290 | 0.0020 | 0.033 | 0.133 | 0.594 | 0.046 | 0.000588 | 9.91E-03 |
| Emissions | NOx | CO | VOC | SOx | PM10 | NOx | CO | VOC | SOx | PM10 |
| Emissions for Testing/Maintenance (lb/hr) | 0.26773 | 1.21695 | 0.17646 | 0.0013089 | 0.0203 | 0.2677296 | 1.2169527 | 0.1764581 | 0.0012039 | 0.0202894 |
| Emissions for Testing/Maintenance (lb/Yr) | 26.773 | 121.695 | 17.646 | 0.320 | 2.029 | 26.773 | 121.695 | 17.646 | 0.320 | 2.029 |
| Emissions for Testing/Maintenance (t/yr) | 0.013 | 0.061 | 0.009 | 0.000 | 0.001 | 0.013 | 0.061 | 0.009 | 0.000 | 0.00101 |

Equipment Rating (BHP) = 276
 Maximum Fuel Consumption BTU/bhp-hr 7438.00
 Calculated MMBTU/hr 2.04787
 MMBTU/Yr 204.74
 Maximum Annual Operations (Hours) = 100
 Grams per pound 453.592

Calculated fuel consumption using HHV (MMscf/yr) 0.002607
 Calculated fuel consumption using LHV (MMscf/yr) 0.201


1. Emission Factors for NOx, CO, and VOC based on the SJVAPCD BACT Guidelines AND Manufacturers Guaranteed Emissions; emissions, offsets, and associated permit conditions will reflect those values. The applicable BACT Guideline can be seen at by scrolling to page 5.1.5, using the following link: <https://www.safeclear.com/business/bact/bact/cheater3.pdf>

Please note that these emission rates are lower than those required by NSPS, Subpart III; NOx of 2.0 g/Hp-hr, CO of 4.0 g/Hp-hr, and VOC of 1.0 g/Hp-hr: [Link: https://www.epa.gov/air-quality/air-quality-standards-for-new-source-performance-nsps](https://www.epa.gov/air-quality/air-quality-standards-for-new-source-performance-nsps)

2. Emission Factors for SOx, PM Condensable based on AP-42 Table 3.2-3 (4IRB engines): <https://www3.epa.gov/ttn/cat1/qar42/qar42final/qar42.pdf>

| | NOx | CO | VOC | SOx | PM |
|---------------------------------|----------|----------|---------|--------|--------|
| HARP Emission Factor (lb/MMscf) | 133.3810 | 608.2866 | 87.9116 | 0.5998 | 10.882 |
| Emissions lb/yr (Checks) | 26.77 | 121.70 | 17.65 | 0.12 | 2.03 |

THIS CHECK CONTAINS MULTIPLE FRAUD DETERRENT SECURITY FEATURES. DO NOT ACCEPT UNLESS BLUE AND GREEN ARE PRESENT.



SoCalGas
A Sempra Energy utility

P.O. Box 20777 Los Angeles, CA 90030-0777

ACCOUNTS PAYABLE

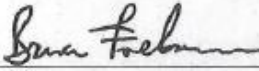
Wells Fargo
Minneapolis, MN 55479

N9301-0
1

| VENDOR NO | CHECK NO | DATE | AMOUNT |
|-----------|----------|----------|---------------|
| 67408 | 1862819 | 12/11/18 | *****\$535.00 |


PAY: FIVE HUNDRED THIRTY-FIVE USD

TO THE ORDER OF: MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
14306 PARK AVENUE
VICTORVILLE CA 92392-2310


 VOID AFTER SIX MONTHS

THE BACK OF THIS DOCUMENT HAS A WATERMARK - HOLD AT ANGLE TO VIEW

⑈01862819⑈ ⑆0612097561⑆ 2079900420230⑈



SoCalGas
A Sempra Energy utility

P.O. Box 20777 Los Angeles, CA 90030-0777

PLEASE RETAIN THIS STATEMENT FOR YOUR RECORDS

ACCOUNTS PAYABLE

| NAME | Vendor No | Check No | Date | Amount |
|---------------------------|-----------|----------|----------|---------------|
| MOJAVE DESERT AIR QUALITY | 67408 | 1862819 | 12/11/18 | *****\$535.00 |

| YOUR REFERENCE | DATE | PO | ITEM | VOUCHER | GROSS | DISCOUNT | AMOUNT PAID |
|-----------------|----------|----|------|------------|--------|----------|-------------|
| PERMIT APPL FEE | 12/07/18 | | | 1901379933 | 535.00 | 0.00 | 535.00 |

Appendix B Public Notice

Noticing Methods include the following, per District Rule 1302(D)(2) and (3):

- Published in newspapers of general circulation - *Riverside Press Enterprise* (Riverside County) and the *Daily Press* (San Bernardino County) on or before 06-14-19.
- Mailed and/or emailed to MDAQMD contact list of persons requesting notice of actions (see the contact list following the Public Notice in this Appendix).
- Posted on the MDAQMD Website at the following link, and as shown below:
<http://www.mdaqmd.ca.gov/permitting/public-notices-advisories/public-notices-permitting-regulated-industry>

NOTICE OF PRELIMINARY DETERMINATION

NOTICE IS HEREBY GIVEN THAT the Southern California Gas Company (SCG), South Needles Compressor Station, located on Hwy 95, 11 miles South of Needles, CA 92363. Is proposing to replace their existing IC ENGINE, EMERGENCY SPARK-IGNITED (SI), AUXILIARY air compressor with a new air compressor. Specifically, the existing 83 horsepower (hp) natural gas fueled internal combustion engine powering an air compressor (District Permit E009234) will be replaced with a new 276 hp natural gas fueled internal combustion engine powering an air compressor. The proposed spark ignition rich-burn turbocharged and aftercooled engine is a Caterpillar model G3406 and will be equipped with a control device that includes a non-selective catalytic reduction (NSCR) system, and an associated Air Fuel Ratio Control System. The proposed new engine will be a new emission source at an existing Major Source facility. The applicant has proposed that the engine be permitted for 100 hours for testing and maintenance purposes. Therefore, the engines emissions must be fully offset based on a potential operational schedule of 100 hours per year; emergency use is not limited. Since the engine is to be located at an existing Major Source, the applicant has proposed that the emissions be offset through the partial use of Emission Reduction Credits (ERCs) that are wholly owned by the SCG Company documented as Class A Emission Reduction Credits, further documented as Certificate Number 0083. These emission credits will be used to offset ALL emissions types for which the facility is a Major Source of, namely NOx, VOCs, and PM10. NOX will be used to offset PM10 at an interpollutant ratio of 2:1, NOx for PM10. CO will not be offset as the District is in attainment for this Air Pollutant. Additionally, and since the facility is an existing Major Source for NOX, CO, VOCs, and PM10, the engine will be equipped with Best Available Control Technology (BACT). As such, the engine shall be equipped with a Non-Selective Catalytic Reduction (NSCR) and Air Fuel Controller, in order to achieve the maximum emission reductions for this class and category of device.

Concurrently, the applicant has submitted a Title V Permit modification application for their Federal Operating Permit (3100068) pursuant to the provisions of the Mojave Desert Air Quality Management District (MDAQMD) Regulation XII. The proposed facility changes require the MDAQMD to perform a thorough New Source Review (NSR), pursuant to District regulation XIII.

The MDAQMD has reviewed the proposal, analyzed the emissions and control equipment associated with the new equipment and determined that the modified facility will continue to operate in compliance with all District, State, and Federal requirements once the modification is complete.

Since the engine is also a source of Toxic Air Contaminants, a Health Risk Analysis was conducted, and it has been concluded that the Health Risks associated with the modified facility operations will be acceptable per the 2016 OEHHA Guidelines.

REQUEST FOR COMMENTS: Interested persons are invited to submit written comments and/or other documents regarding the terms and conditions of the proposed NSR modification, and the associated Federal Operating Permit. If you submit written comments, you may also request a public hearing on the NSR action and proposed modification to the Federal Operating Permit. To be considered, comments, documents and requests for public hearing must be submitted no later than 4:00 P.M. on July 14, 2019, to the MDAQMD, at the address listed below.

PETITION FOR REVIEW: The NSR action and Draft Federal Operating Permit are subject to review and approval by USEPA and the CARB. If the USEPA and CARB do not object to the proposed permit and Statement of Legal and Factual Basis, and the MDAQMD has not addressed a public comment in a satisfactory manner, the public may petition USEPA, Region IX, Operation Permits Section at 75 Hawthorne Street, San Francisco, CA 94105 within 60 days after the end of the USEPA review period for USEPA to reconsider its decision not to object to the permit. **AVAILABILITY OF DOCUMENTS:** The proposed Federal Operating Permit, as well as the application and other supporting documentation are available for review at the MDAQMD offices, 14306 Park Avenue, Victorville, CA 92392. In addition, these documents are available on the MDAQMD website and can be viewed at following link: <http://www.mdaqmd.ca.gov/permitting/public-notices-advisories/public-notices-permitting-regulatedindustry>. Please contact Samuel J Oktay, PE, Air Quality Engineer II, at the address above, or (760) 245-1661, extension 1610, or at soktay@mdaqmd.ca.gov with additional questions pertaining to this action and/or corresponding documents. *Traducción en español esta disponible por solicitud. Por favor llame: (760) 245-1661 x1610*

Mr. Larry Trowsdale
mchsi
951 E Skylark Ave
Ridgecrest, CA 93555

Chief, Planning Division
California Air Resources Board
P.O. Box 2815
Sacramento, CA 95812

Mr. Mike Sword
Planning Div Mgr, Clark Co Dept of Air Q and
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Las Vegas, NV 89118

Environmental Manager
Duffield Marine, Inc.
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Adelanto, CA 92301

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High Desert Power Project LLC
19000 Perimeter Rd
Victorville, CA 92394

Ms. Carol Kaufman
Metropolitan Water District
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Los Angeles, CA 90012

Mr. John F. Espinoza
HES Manager, Molycorp Minerals, LLC
HC-1 Box 224
Mountain Pass, CA 92366

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NDCNR, Env Prot Div (Air)
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South San Francisco, CA 94080-7037

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Chief Marketing Officer, Element Markets,
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Houston, TX 77027

Mr. Glen King
Environmental Manager, Luz Solar Partners
43880 Harper Lake Road
Harper Lake, CA 92347

Mr. David Rib
Environmental Manager, Mitsubishi Cement
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Lucerne Valley, CA 92356-9691

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Senior EHS Analyst, NASA/Goldstone DSCC
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Fort Irwin, CA 92310

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Mr. Anoop Sukumaran
Environmental Engineer, Searles Valley
P.O. Box 367
Trona, CA 93592-0367

Director, Air Division (Attn: AIR-3)
United States EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Mr. Ramon Campos
Environmental Compliance Manager, Blythe
P.O. Box 1210
Blythe, CA 92226

City Manager
City of Barstow
220 East Mountain View, Suite A
Barstow, CA 92311

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HS&E Manager, Ducommun Aerostructures
4001 El Mirage Road
Adelanto, CA 92301

Ms. Christine Grandstaff
Evolution Markets
27801 Golden Ridge Lane
San Juan Capistrano, CA 92675

Mr. Mike Plessie
HQB N B CO, NREA MCAGCC
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Twentynine Palms, CA 92278-8110

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Mobile Pipe Lining & Coating, Inc
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National Park Service, Air Resources Div
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Lakewood, CO 80228

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Senior Gas Engineer, PG&E (Attn: Air)
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San Francisco, CA 94120

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Air Quality Team Lead, SoCalGas
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Oxnard, CA 93030

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Senior Engineer, Yorke Engineering, LLC
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San Juan Capistrano, CA 92675

Air Program Manager
Environmental Division, USMC MCLB
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Metropolitan Water District
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Los Angeles, CA 90012

Ms. Lisa Beckham
United States EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Bureau of Indian Affairs
1451 Research Park Drive, Suite 100
Riverside, CA 92507

Andrew Salas
Chairman, Gabriel Band of Mission Indians -
PO Box 393
Covina, CA 91723

Chief, San Gabriel Band of Mission Indians
PO Box 693
San Gabriel, CA 91778

Ms. Sheri Haggard
Supervising Permit Engineer, MDAQMD
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Victorville, CA 92392

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Senior Air Quality Tech Specialist, Southern
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Rosemead, CA 91770

Ms. Angela Harrell
Elementis Specialties
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Newberry Springs, CA 92365

Ms. Jenna Latt
CARB/Office of Ombudsman
9480 Telstar Avenue, Annex 1
El Monte, CA 91731

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EH&S Manager, OMYA (California), Inc.
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Lucerne Valley, CA 92356

Mr. Joseph Hower
Principal, Air Sciences, Ramboll Environ
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Los Angeles, CA 90017

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Permit Engineer, Mojave Desert AQMD
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Victorville, CA 92392

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Division Chief, San Bernardino County EHS
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San Bernardino, CA 92415-0160

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Specialist - Permitting, Kinder-Morgan
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Orange, CA 92868

Mr. John Vidic
Air Program Manager, USAF 412
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Edwards AFB, CA 93524

Mr. Dan Guillory
Environmental Contact, Metropolitan Water
P O Box 54153
Los Angeles, CA 90054

Ms. Jessica Gammett
Environmental Manager, CalPortland
19409 National Trails Hwy
Oro Grande, CA 92368

Appendix C Emission Calculations

Table 1: Emission Calculations for Proposed Emergency Air Compressor (South Needles)

| Emissions | Pollutant | | | | |
|-------------------------------------------|-----------------|----------------|-----------------|-----------------|----------------|
| | NOx (gm/bhp-hr) | CO (gm/bhp-hr) | VOC (gm/bhp-hr) | SOx (gm/bhp-hr) | PM (gm/bhp-hr) |
| Emission Factor ^{1,2} | 0.440 | 2.000 | 0.290 | 0.0020 | 0.033 |
| Emissions | NOx | CO | VOC | SOx | PM10 |
| Emissions for Testing/Maintenance (lb/hr) | 0.26773 | 1.21695 | 0.17646 | 0.0012039 | 0.0203 |
| Emissions for Testing/Maintenance (lb/Yr) | 26.773 | 121.695 | 17.646 | 0.120 | 2.029 |
| Emissions for Testing/Maintenance (tpy) | 0.013 | 0.061 | 0.009 | 0.000 | 0.001 |

| | | | | | |
|--------------------------------------------------|----------|--|--|--|--|
| Equipment Rating (BHP) = | 276 | | | | |
| Maximum Fuel Consumption BTU/bhp-hr | 7418.00 | | | | |
| Calculated MMBTU/hr | 2.04737 | | | | |
| MMBTU/Yr | 204.74 | | | | |
| Maximum Annual Operations (Hours) = | 100 | | | | |
| Grams per pound | 453.592 | | | | |
| Calculated fuel consumption using HHV (MMscf/hr) | 0.002007 | | | | |
| Calculated fuel consumption using HHV (MMscf/yr) | 0.201 | | | | |

1. Emission Factors for NOx, CO, and VOC based on the SJVAPCD BACT Guidelines; emissions, offsets, and associated permit conditions will reflect those values. The applicable BACT Guideline can be seen at by scrolling to page 3.1.5, using the following link:
<https://www.valleair.org/busind/pto/bact/chapter3.pdf>.

Please note that these emission rates are Lower than those required by NSPS, Subpart JJJJ; NOx of 2.0 g/Hp-hr, CO of 4.0 g/Hp-hr, and VOC of 1.0 g/Hp-hr:
[Link: https://www.ecfr.gov/cgi-bin/text-idx?node=sp40.7.60.iiij](https://www.ecfr.gov/cgi-bin/text-idx?node=sp40.7.60.iiij)

2. Emission Factors for SOx, PM Condensable based on AP-42 Table 3.2-3 (4SRB engines):
<https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s02.pdf>

| | NOx | CO | VOC | SOx | PM |
|----------------------------------|----------|----------|---------|--------|---------|
| HARP Emission Factor (Lbs/MMscf) | 133.3830 | 606.2866 | 87.9116 | 0.5998 | 10.1082 |
| Emissions Lbs/Yr (Checks) | 26.77 | 121.70 | 17.65 | 0.12 | 2.03 |

Appendix D: Certificate of Ownership, Class A Emissions Reduction Credits, Front Side

| | |
|--------------------------|-----------------------------------|
| Certificate Number: 0083 | Effective Date: December 14, 2010 |
| | Expiration Date: N/A |

Certificate of Ownership

This certifies that

Southern California Gas Company

owns the following Class "A" Emission Reduction Credits:

1,284,361 pounds NO_x
50,596 pounds CO
13,696 pounds VOC

This Certificate of Ownership is issued pursuant to Regulation XIV of the Mojave Desert Air Quality Management District.

See Reverse for Terms and Conditions.

| | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------|------------|
| <u>Method of Reduction</u> <input type="checkbox"/> Shutdown <input checked="" type="checkbox"/> Modification <input type="checkbox"/> Other: |  | <hr/> Eldon Heaston Executive Office | <hr/> Date |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------|------------|

Appendix D: Certificate of Ownership, Class A Emissions Reduction Credits, Back Side

TERMS AND CONDITIONS

1. This Certificate of Ownership is issued by the Mojave Desert Air Quality Management District pursuant to District Regulation XIV.
2. Name and address of the ERC owner(s) is as follows:

Southern California Gas Company
Mail Location GT23H2
555 W. Fifth Street
Los Angeles, CA 90013-1011
3. This ERC Certificate does not constitute an instrument, security or any other form of property.
4. Ownership of the ERC is held in the same manner as the owner(s) hold title to the source of the ERC. The owner(s) of this ERC as listed herein has the exclusive right to use or authorize the use, transfer, conveyance or otherwise encumber these ERCs subject only to applicable provisions of State and Federal Law or Regulation, and/or District Rules and Regulations. ERCs may be transferred in whole or in part by written conveyance or by operation of law from one person to another in accordance with the provisions contained in District Rule 1402.
5. A voluntary transfer of ownership in whole or in part shall be performed according to the procedures specified in District Rule 1402. Upon transfer of ownership in whole or in part, this Certificate shall be surrendered to the Mojave Desert Air Quality Management District.
6. Any encumbrances against ERCs shall be promptly reported to the Mojave Desert Air Quality Management District Air Pollution Control Officer who may require the surrender of the Certificate pursuant to provisions specified in District Rule 1402.

FOR DISTRICT USE ONLY

Appendix E

Offsets and ERC Certificate 0083 Balance Calculation

Table 2: ERC Certificate 0083, Class A Emission Reduction Credits

| Category | Pollutant - Pounds per Year | | |
|---------------------------------------------------------------|-----------------------------|---------------|------|
| | NOx | VOC | PM10 |
| Certificate 0083 ERCs | 1,284,361 | 13,696 | NA |
| Proposed Engine PTE for North Needles District Permit B013454 | 800 | 800 | NA |
| Proposed Engine PTE for South Needles District Permit E013453 | 27 | 18 | 2 |
| Proposed South Needles Engine; NOx for PM10 at 2:1 Ratio | 4 | NA | NA |
| Certificate Balance | 1,283,531 | 12,879 | |

Note: CO and SOx emissions are not offset as the entire District is attainment for these Air Pollutants

Appendix F

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.1.5*

Last Update: 07/16/2018

Emergency Gas-Fired IC Engine

| Pollutant | Achieved in Practice or contained in the SIP | Technologically Feasible | Alternate Basic Equipment |
|-----------|------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------|
| VOC | 1) LEAN BURN: 206 ppmv @ 15% O2 (1.0 g/bhp-hr) 2) RICH BURN: 60 ppmv @ 15% O2 (0.29 g/bhp-hr) | | |
| SOx | Natural Gas, LPG, or Propane as fuel | | |
| PM10 | Natural Gas, LPG, or Propane as fuel | | |
| NOx | 1) LEAN BURN: < 500 BHP: 1.0 g/bhp-hr ≥ 500 BHP: 0.5 g/bhp-hr 2) RICH BURN: 25 ppmv @ 15% O2 (0.44 g/bhp-hr) | | |
| CO | 2.0 g/bhp-hr | | |

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

See: <https://www.valleyair.org/busind/pto/bact/chapter3.pdf>