Company: Southern California Gas Company (U 904 G)
Proceeding: 2024 General Rate Case
Application: A.22-05-015 /-016 (consolidated)
Exhibit: SCG-210

REBUTTAL TESTIMONY OF

LARRY T. BITTLESTON AND STEVE HRUBY

(GAS STORAGE OPERATIONS AND CONSTRUCTION)

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

May 2023

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REBUTTAL TESTIMONY OF LARRY T. BITTLESTON AND STEVE HRUBY (GAS STORAGE OPERATIONS AND CONSTRUCTION)

I. SUMMARY OF DIFFERENCES

TOTAL O&M - Constant 2021 ($000)			
	Base Year 2021	**Test Year 2024**	**Change**
SOCALGAS	43,473	47,782	4,309
CAL ADVOCATES	43,473	47,782	4,309
PCF [1]	N/A	N/A	N/A

TOTAL CAPITAL - Constant 2021 ($000)					
	2022	**2023**	**2024**	**Total**	**Difference**
SOCALGAS	206,195	163,279	146,550	516,024	
CAL ADVOCATES	206,195	163,279	146,550	516,024	0
PCF	145,135	109,688	85,083	339,906	(176,118)

II. INTRODUCTION

This rebuttal testimony regarding Southern California Gas Company's (SoCalGas's) request for Gas Storage Operations and Construction addresses the following testimony from other parties:

- The Public Advocates Office of the California Public Utilities Commission (Cal Advocates) as submitted by Dao A. Phan (Exhibit CA-03), dated March 27, 2023.
- The Public Advocates Office of the California Public Utilities Commission (Cal Advocates) as submitted by Stacey Hunter (Exhibit CA-20), dated March 27, 2023.
- The Utility Reform Network (TURN), as submitted by Adria Tinnin (Exhibit TURN-03), dated March 2023.

[1] In its testimony, Protect Our Communities Foundation (PCF) recommends reductions to SoCalGas's O&M revenue requirement and not to its forecasted costs. PCF did not provide workpapers supporting this calculation. Accordingly, there is no PCF forecast reduction recommendation to be included in the summary table.

- The Utility Reform Network (TURN) and Southern California Generation Coalition (SCGC), as submitted by Catherine E. Yap (Exhibit TURN-SCGC-05), dated March 27, 2023
- Protect Our Communities Foundation (PCF), as submitted by Bill Powers (PCF-01), dated March 27, 2023.
- The Utility Reform Network (TURN), as submitted by Garrick Jones (Exhibit TURN-10), dated March 2023.

As a preliminary matter, the absence of a response to any particular issue in this rebuttal testimony does not imply or constitute agreement by SoCalGas with the proposal or contention made by these or other parties. The forecasts contained in SoCalGas's direct testimony, performed at the project level, are based on sound estimates of its revenue requirements at the time of testimony preparation.

A. Cal Advocates

The following is a summary of Cal Advocates' positions on Gas Storage Operations and Construction:[2]

- Cal Advocates does not take issue with SoCalGas's request for non-shared or shared Gas Storage Operations and Construction O&M expenses. Cal Advocates also does not take issue with SoCalGas's request for Gas Storage Operations and Construction capital expenditures.
- Cal Advocates recommends that SoCalGas's Honor Rancho Compressor Modernization (HRCM) project be removed from the Post-Test Year (PTY).
- Cal Advocates proposes a $12.6 million reduction of SoCalGas's request to recover capital expenditures incurred to complete the Aliso Canyon Turbine Replacement (ACTR) project.

[2] Ex. CA-03 (Testimony of Dao Phan on behalf of Cal Advocates - SCG Gas Operations, Part 2), March 27, 2023, at 4-6, 27-30; Ex. CA-20, (Testimony of Stacey Hunter on behalf of Cal Advocates – Post-Test Year Ratemaking), March 27, 2023, at 20-22.

B. The Utility Reform Network (TURN)

The following is a summary of TURN's positions on Gas Storage Operations and Construction:[3]

- TURN opposes the hydrogen refueling station portion of the HRCM project which is part of the ARE PTY component.
- TURN does not specifically object to the four fleet vehicle additions included within the Gas Storage Operations direct testimony (Ex. SCG-10-R); however, TURN recommends a disallowance to the Test Year forecast for SoCalGas based on the elimination of Planned Replacements and Vehicle Additions.[4]

C. The Utility Reform Network – Southern California Generation Coalition (TURN-SCGC)

The following is a summary of TURN-SCGC's positions on Gas Storage Operations and Construction:[5]

- For the HRCM project, TURN-SCGC recommend the Commission direct SoCalGas to only complete the compressor upgrade, which includes replacing the compressors, the compressor building and obtaining a new electrical interconnection with Southern California Edison Company (SCE) to accommodate the electric motor driven compressors.
- TURN-SCGC claim that the microgrid activities and costs should be excluded from the HRCM project due to undemonstrated need.

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[3] Ex. TURN-3 (Prepared Testimony of Adria Tinnin on behalf of TURN - Addressing Equity Issues Related to San Diego Gas & Electric Company and Southern California Gas Company in Their Test Year 2024 General Rate Case) March 27, 2023, at 11-12, 23-24, 27-28; Ex. TURN-10 (Prepared Testimony of Garrick Jones on behalf of TURN - Addressing SDG&E and SoCalGas Fleet Services and Compensation Benefits), March 27, 2023, at 3-7.

[4] This rebuttal testimony will address the overall business justification of the four Fleet Vehicle Additions, while SoCalGas's Fleet Services rebuttal testimony (Exhibit SCG-218) addresses the cost forecast.

[5] March 27-2023, TURN-SCGC-05. Prepared Testimony of Catherine Yap Addressing the Proposal of San Diego Gas & Electric Company and Southern California Gas Company in Their Test Year 2024 General Rate Case Related to Honor Rancho Compressor Station, pp. 1-6.

- TURN-SCGC assert that the Advanced Renewable Energy (ARE) projects (hydrogen production, storage, blending and fueling station) are outside of scope of utility services and should be rejected.

D. Protect Our Communities Foundation (PCF)

The following is a summary of PCF's position on Gas Storage Operations and Construction:[6]

- PCF contends SoCalGas's Aliso Canyon Natural Gas Storage Facility (Aliso Canyon) and its associated operating expenses are no longer necessary to assure natural gas reliability in the Los Angeles Basin.

III. REBUTTAL TO PARTIES' O&M PROPOSALS

No parties took issue with SoCalGas's forecast for non-shared or shared Gas Storage Operations and Construction O&M expenses. TURN does not specifically object to the four fleet vehicle additions included within the Gas Storage Operations direct testimony (Exhibit SCG-10-R); however, TURN recommends a disallowance to the Test Year forecast for SoCalGas based on the elimination of Planned Replacements and Vehicle Additions. PCF mistakenly contends Aliso Canyon and its associated operating expenses are no longer necessary to assure natural gas reliability in the Los Angeles Basin and recommends a reduction to the O&M revenue requirement rather than forecasted costs.

A. Non-Shared Services O&M

NON-SHARED O&M - Constant 2021 ($000)			
	Base Year 2021	**Test Year 2024**	**Change**
SOCALGAS	43,473	47,782	4,309
CAL ADVOCATES	43,473	47,782	4,309
PCF[7]	N/A	N/A	N/A

[6] Ex. PCF-01 (Prepared Direct Testimony of Bill Powers, P.E. on Behalf of the Protect Our Communities Foundation), March 27, 2023, at 22.

[7] In its testimony, PCF recommends reductions to SoCalGas's O&M revenue requirement and not to its forecasted costs. PCF did not provide workpapers supporting this calculation. Accordingly, there is no PCF forecast reduction recommendation to be included in the summary table.

1. TURN

TURN opposes SoCalGas's Lease and Licensing forecasted costs,[8] arguing that the incremental business need has not been justified and that SoCalGas routinely forecasts more vehicle replacement counts than it achieves. The forecasted costs for fleet vehicles are sponsored in SoCalGas's Fleet testimony of Michael Franco (*see* Exhibit SCG-18-R), however, the business justifications for the incremental vehicles are spread across multiple witness areas.

This rebuttal testimony demonstrates the business justification for four incremental fleet vehicles, which are forecasted in our direct testimony to support operational activities of the organization. Fleet vehicles are essential to supporting aboveground storage field operations rounds and maintenance activities. As part of their job functions, employees are required to travel to different work locations with various tools and equipment. For example, employees visit numerous wellsites to perform various activities including, but not limited to, conducting pressure and leakage surveys, patrolling field lines, lubricating valves, cleaning lines, disposing of pipeline drips, injecting corrosion inhibitors, and maintaining well pressure monitors, alarms and gauges. These employees have a wide area to travel to for operations and maintenance. The approximate area for each field is 3,600 acres for Aliso Canyon, 600 acres for Honor Rancho, 295 acres for La Goleta and 40 acres for Playa del Rey. These operations and maintenance activities are critical to maintaining the safety and reliability of gas storage infrastructure, and the fleet vehicles forecasted in our direct testimony are necessary to complete these essential functions.

2. PCF

PCF claims that Aliso Canyon and its operating expenses are no longer necessary to assure natural gas reliability in the Los Angeles Basin.[9] PCF recommends that annual operating expenses of approximately $100 million be removed, including that the O&M revenue requirement (rather than forecasted costs) be reduced by approximately $46 million each year.[10] In Attachment 2 of its testimony, titled Aliso Canyon Storage Facility 2022-2024 GRC Operational Costs, PCF provided calculations depicting only capital costs and provided no

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[8] Ex. TURN-10 (Garrick Jones) at 3-15.

[9] Ex. PCF-01 (Bill Powers) at 22.

[10] *Ibid*.

calculus for how it arrived at its recommendation to reduce the O&M revenue requirement. Other than PCF's mistaken and unquantified O&M recommendation, no other party opposed SoCalGas's Non-Shared Operating and Maintenance (O&M) Storage Facilities forecast. Moreover, as explained further herein, PCF inappropriately raises issues outside the scope of this General Rate Case (GRC) and attaches testimony from a separate proceeding in an attempt to support its mistaken position that Aliso Canyon could be closed before the winter of 2023/2024. Accordingly, PCF's recommendation should be rejected.

IV. REBUTTAL TO PARTIES' CAPITAL PROPOSALS

TOTAL CAPITAL - Constant 2021 ($000)					
	2022	**2023**	**2024**	**Total**	**Difference**
SOCALGAS	206,195	163,279	146,550	516,024	-
CAL ADVOCATES	206,195	163,279	146,550	516,024	0
PCF	145,135	109,688	85,083	339,906	(176,118)

Other than PCF, no parties took issue with SoCalGas's request for Gas Storage Operations and Construction capital expenditures. PCF mistakenly claims that Aliso Canyon and its associated operating expenses are no longer necessary to assure natural gas reliability in the Los Angeles Basin and recommends that annual operating expenses of approximately $100 million be removed.[11] In Attachment 2 of its testimony, titled Aliso Canyon Storage Facility 2022-2024 GRC Operational Costs, PCF provides what it surmises to be the routine capital operating expenses for Aliso Canyon and recommends a reduction of approximately $60 million per year.

PCF inappropriately raises issues outside the scope of this GRC and attaches testimony from a separate proceeding in an attempt to support its mistaken position that Aliso Canyon could be closed before the winter of 2023/2024. Pursuant to Senate Bill (SB) 380, the Commission opened Investigation (I.) 17-02-002 to determine the feasibility of minimizing or eliminating the use of Aliso Canyon while still maintaining energy and electric reliability for the region. Whether Aliso Canyon is necessary for reliability is being considered in that open proceeding, and the Commission has yet to make a determination as to the feasibility of minimizing or eliminating the use of Aliso Canyon.

Moreover, on September 23, 2022, the Assigned Commissioner's Ruling in I.17-02-002 provided that: "Given the circumstances today, it is undeniable that the availability of gas at

[11] *Id*. at 22.

Aliso Canyon influences the price of gas and what customers pay for gas and electricity. Aliso Canyon is currently needed to support just and reasonable gas and electricity rates, natural gas system reliability, and energy security. Aliso Canyon cannot be immediately closed without potentially severe consequences for millions of Californians who rely on natural gas for essential services."[12] The Commission has found that Aliso Canyon is currently needed for reliability. PCF's mistaken recommendations should be rejected, and the Commission should recognize PCF's testimony inappropriately raises issues outside the scope of the GRC.

V. POST TEST YEAR CAPITAL

A. Honor Rancho Compressor Station Modernization (HRCM) Project

The HRCM Project consists of two components; the Principal component and the Advanced Renewable Energy (ARE) component. SoCalGas is prioritizing the execution of the Principal component to comply with South Coast AQMD Rules 1110.2 and 1100. SoCalGas estimates the Principal component will be placed into service in Q1 2027, followed by the ARE component in Q1 2028. Due to the expected completion date of the Principal component being forecasted beyond 2024, the associated revenue requirement is captured in the PTY Ratemaking proposal sponsored by Khai Nguyen (Exhibit SCG-240).

1. Cal Advocates

Cal Advocates proposes that "SCG should be directed to remove this request from its PTY and that it should be required to file the Honor Rancho Compressor Modernization as a separate application."[13] Cal Advocates bases these recommendations on flawed logic and bad assumptions. Cal Advocates centers its argument to remove HRCM Project from PTY ratemaking on the assumption that the project will not be completed on schedule. Cal Advocates contends that, "[t]he completion date is estimated by SCG in the final attrition year and given even limited delays would likely push the completion date out to the next GRC cycle."[14] Cal Advocates is mistaken. The planning for this project is well underway, and SoCalGas does not anticipate delays in meeting the construction completion date.

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[12] I.17-02-002, Assigned Commissioner's Ruling Entering Into The Record Energy Division Proposal and Ordering Testimony, September 23, 2022, at 8.

[13] Ex CA-20 (Stacey Hunter) at 22.

[14] *Ibid*.

To further demonstrate that this project is being managed to meet its proposed timeline, SoCalGas submitted and received approval in November 2021 for the Facility-Wide Engine Modernization Compliance Plan (FWEMCP). SoCalGas also submitted a Permit to Construct (PTC) in June 2022 which is expected to be approved approximately 24 months from the application filing date. SoCalGas will have 36 months from SCAQMD issuance of the PTC to complete the project to meet the emission limits specified in Rule 1110.2. In addition, strict compliance deadlines mandated by South Coast Air Quality Management District (SCAQMD)—compliance with Rule 1100[15] (Implementation Schedule for NOx Facilities) and Rule 1110.2[16] (Emissions from Gaseous and Liquid-Fueled Engines)—fall within the PTY timeframe and are driving timely completion of this project. Therefore, the Commission should find SoCalGas's expected completion date of the Principal component achievable and the HRCM project should not be removed from the proposed PTY ratemaking.

Cal Advocates also argues that the HRCM project should be removed from the PTY ratemaking because "[t]here is little support within SCG's testimony or workpapers for a project of this magnitude, just two line items in the PTY testimony and limited support in the Gas Storage and Operations testimony."[17] Cal Advocates is incorrect. SoCalGas has provided detailed information on project definition, scope, cost, schedule, and sustainability goals of the HRCM Project in Exhibit SCG-10-R (Testimony of Larry T. Brittleston and Steve Hruby – Gas Storage Operations and Construction).[18] Furthermore, SoCalGas has provided a copy of the Honor Rancho Compressor Modernization PTC application (147-pages) in response to data request TURN-SCGC-SCG-01, Q1.4, which was submitted on January 12, 2023.[19]

Cal Advocates also claims that, "[w]ith an estimated revenue requirement of $92.3 million in 2027, this project meets the Commission's threshold of $75M to require a separate

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[15] SCAQMD Rule 1100, Implementation Schedule for NOx Facilities (Amended January 10, 2020), "The purpose of this rule is to establish the implementation schedule for RECLAIM and former RECLAIM facilities that are transitioning to a command-and-control regulatory structure."

[16] SCAQMD Rule 1110.2, Emissions from Gaseous- and Liquid-Fueled Engines (Amended November 1, 2019).

[17] Ex. CA-20 (Stacey Hunter) at 22.

[18] *See* Ex. SCG-10-R (Revised Direct Testimony of Larry T. Brittleston and Steve Hruby), August 2022, Appendix E, at LTB SH E-1 (Honor Rancho Compressor Modernization Supplemental Project Description).

[19] *See* Appendix B

application with the appropriate levels of documentation, support, and review."[20] Cal Advocates fails to acknowledge that the Commission has addressed this issue in Decision (D.) 22-12-021. As indicated in that decision, the HRCM project is exempt from the requirements of filing a separate application due to project costs exceeding $75M threshold per GO-177, Section IV (B) Compliance with Section IV(A)(1).[21] GO-177, Section IV (B) Compliance with Section IV(A)(1) provides that:

> b. projects that have a scheduled in-service date occurring before January 1, 2024 and *projects for which an application for approval has been submitted to an air quality management district for compliance with an environmental rule prior to the effective date of this General Order*.[22]

Pursuant to Ordering Paragraph (OP) 6 of D.22-12-021 and GO-177, SoCalGas filed and served a list of gas infrastructure projects that meet this specific criteria and provided the information identified in GO-177 Section V(C)(2). The HRCM project was among the list of gas infrastructure projects SoCalGas identified as exempt from filing a separate application. In addition, in accordance with OP 7 of D.22-12-021, SoCalGas served and filed the annual report required under GO-177 Section X. That annual report similarly identified the HRCM Project as exempt.

Cal Advocates has failed to demonstrate the HRCM Project should be removed from the 2024 GRC or from the PTY Ratemaking proposal. The HRCM Project should remain in this GRC and the PTY Ratemaking proposal as outlined in the PTY Ratemaking Testimony of Khai Nguyen (Exhibit SCG-240).

2. TURN-SCGC

a. Microgrid

TURN-SCGC recommend "[t]he Commission direct SoCalGas to complete the compressor upgrade, which includes replacing the compressors, the compressor building and obtaining a new electrical interconnection with SCE to accommodate the electric motor driven

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[20] Ex. CA-20 (Stacey Hunter) at 22.

[21] *See* Appendix A, CPUC, General Order 177: Establishing Rules For Application, Notification, and Reporting Requirements for Gas Infrastructure Located in California (Adopted December 1, 2022 by Decision 22-12-021) at 4.

[22] *Ibid*. (emphasis added).

compressors."[23] However, TURN-SCGC contend that SoCalGas has failed to demonstrate a need, cost efficiency, ratepayer benefits and power back-up to justify inclusion of the microgrid in the principal component of the HRCM project and recommend removal of the microgrid from the HRCM project principal component.[24]

TURN-SCGC have failed to consider the operational need and ratepayer benefits resulting from the construction of the microgrid. On-site electric generation is necessary for operations at Honor Rancho. SoCalGas maintains development and modernization of the existing on-site electric generation system will result in improved operational flexibility, reduced emissions, and seamless interconnection with the new SCE electric service/substation. Construction of the microgrid is an essential component of the HRCM project and will support the increased administrative and auxiliary equipment electric loads. The Commission should approve the HRCM project in its entirety for the reasons described below.

i. Microgrid and fuel cell/capacitor storage system are necessary to support the added electrical loads.

The microgrid and fuel cell/capacitor energy storage system is a necessary component of the HRCM project to adequately supply the increasing administrative and auxiliary system electric loads. Uninterrupted electric supply to administrative and auxiliary systems is required for the safe and reliable operation of gas injection and withdrawal equipment, control valves and instrumentation, plant emergency shut down (ESD) devices, and other critical equipment power loads. The new fuel cell/capacitor storage system will allow SoCalGas to transition from existing, undersized gas-fueled engines used for onsite electric generation to lower emission solid oxide fuel cells to meet Honor Rancho's increased administrative and auxiliary power loads following the HRCM project completion.

ii. Grid integration and operational resiliency.

The electric grid in California relies on the flexibility of dispatchable electrical generation provided, in part, by natural gas fired generators. Natural gas storage enables these generators to both ramp up (storage withdrawal) and ramp down (storage injection). The need for this flexibility, and accordingly, a resilient compressor system at Honor Rancho, can coincide with

[23] Ex. TURN-SCGC-05 (Catherine E. Yap) at 1.

[24] *Id*. at 2.

events that disrupt local electric power (e.g., PSPS events and critical calls for grid demand reductions). While the new fuel cell/capacitor storage system is designed to meet Honor Rancho's increased day-to-day administrative and auxiliary equipment electric loads critical for safe and reliable operation of the facility, it will also be capable of providing electricity to these systems in the event of planned or unplanned electric-grid service interruption.

SoCalGas has historically generated electricity on-site at Honor Rancho due to the critical role of the facility in maintaining reliable gas supply to the customers, including utility-scale electric generators. The capability of Honor Rancho to generate and distribute electricity independent of the electric grid is critical now more than ever. Honor Rancho is in the CPUC Tier 3 – Extreme PSPS SCE High Fire Risk Area (HFRA) and, thus, subject to electric curtailment, which may lead to disruption in operations and the ability to supply gas to customers. Moreover, the development and modernization of the microgrid and fuel cell/capacitor storage system provides Honor Rancho the ability to transition to and from grid power. The system may also help avoid peak hour electric pricing by utilizing electricity generated on-site from the microgrid and fuel cells during peak periods. In addition, the microgrid and fuel cell/capacitor storage system allows SoCalGas the ability to provide electricity to the grid if electric demand is minimal at Honor Rancho.

b. Advanced Renewable Energy (ARE) Component

TURN-SCGC also assert the following: (1) the ARE component of the HRCM project is outside the scope of Utility Services; (2) ARE produced hydrogen will be used for distribution/transmission to gas utility customers; (3) safety concerns with hydrogen blending; (4) it is improper, unnecessary, and not cost-effective to use ratepayer funds for onsite hydrogen production for use in company fleet vehicles; and (5) involvement in hydrogen production raises significant questions about the impact on a competitive hydrogen production market, and the Commission should not attempt to resolve such issues in the GRC.[25]

TURN-SCGC seem to misunderstand the ARE component of the HRCM project. SoCalGas will not introduce the ARE produced green hydrogen into its transmission system, distribution system, or storage field for customer use. As we explained in our direct testimony, the green hydrogen production would be located onsite and piped directly to a blending skid to

[25] *Id*.

fuel the four new compressor lean-burn engines. ARE produced green hydrogen would also be a fuel source for company vehicles.[26] In addition, the blending of hydrogen is not an unproven or novel process. It is a conventional method used in various heavy industries as well as in industrial production facilities, refineries, and chemical complexes. Blending of ARE produced green hydrogen with natural gas to use as fuel for gas engine driven compressors is supported by Waukesha, the engine manufacturer, up to 12% by volume without any engine modifications. SoCalGas is proposing to blend green hydrogen up to 10% by volume, which is below the engine manufacturer's operating recommendation. Blending of green hydrogen as a fuel source reduces use of hydrocarbon-based fuel and reduces emissions as described in the Gas Storage Operations and Construction testimony.[27]

As identified in the Fleet Services testimony (Exhibit SCG-18-R), SoCalGas is committed to decarbonizing its fleet of vehicles and its equipment to help reduce GHG emissions to 40% below 1990 levels by 2023 and aligning with the Governor's executive orders related to zero emission vehicles. In addition to vehicles and equipment at Honor Rancho, SoCalGas has fleet vehicles and equipment operating out of distribution and transmission bases in the Santa Clarita Valley. The on-site green hydrogen production and fueling facility at Honor Rancho provides the necessary infrastructure to support company fleet vehicles and equipment.

TURN-SCGC also assert that SoCalGas's involvement in hydrogen production raises significant questions about the impact on a competitive hydrogen production market, and the Commission should not attempt to resolve such issues in the GRC.[28] As explained herein, SoCalGas proposes to utilize green hydrogen production from the ARE component for company operations only. Aligning SoCalGas's capital activities with its sustainability goals and investing in ARE will support long-term value for the environment and our customers. As indicated in SoCalGas's Sustainability and Climate Policies testimony (Exhibit SCG-02-R), there is an imperative to reduce GHG emissions, which will require adoption of clean fuels to support affordability, reliability, and resiliency. Given the critical role of SoCalGas and its infrastructure in helping to achieve statewide climate goals, ARE is one of several initiatives the

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[26] Ex. SCG-10-R (Larry Bittleston and Steve Hruby) at LTB SH-11.

[27] *Id*., Appendix E, at LTB SH E-1 (Honor Rancho Compressor Modernization Supplemental Project Description).

[28] Ex. TURN-SCGC-05 (Catherine E. Yap) at 3.

company is proposing in this GRC to support these efforts. TURN-SCGC's proposal to sever the ARE components out of the HRCM project should be disregarded and SoCalGas's HRCM Project should be approved in its totality as requested.

3. TURN

SoCalGas disagrees with TURN's recommendation to reject the proposed hydrogen fueling stations, including the refueling station as part of the ARE component of the HRCM project. TURN states that it is premature for the Commission to authorize hydrogen blending including as proposed in the ARE component of the HRCM project. TURN provides that, "[a]lthough the Honor Rancho station is not located in an Environmental and Social Justice (ESJ) community, its proximity to Valencia High School risks exposing a different type of vulnerable population to increased pollution."[29] In addition, TURN contends the Commission should reject the addition of the blending station to prevent further harming ratepayers and to uphold the ESJ Action Plan[30] and asserts risks associated with hydrogen blending in existing natural gas pipelines.[31]

TURN's primary position for rejecting the Honor Rancho hydrogen refueling station is that Valencia High School is in the proximity of the station, and the hydrogen refueling station risks exposing a different type of vulnerable population to increased pollution. Anticipated emissions at the hydrogen refueling station are negligible. However, the anticipated emissions reductions associated with vehicles using green hydrogen rather than conventional fuels such as gasoline and diesel will occur throughout the entire geographical area where the hydrogen fueled vehicles travel. Moreover, the Honor Rancho green hydrogen refueling station is a component of the larger HRCM project that will result in reductions in greenhouse gas and permitted criteria pollutants emissions. The anticipated environmental impacts of the project are being addressed as part of South Coast AQMD CEQA review of the HRCM Project.[32] SoCalGas provides detailed information regarding anticipated reductions in permitted emissions resulting from

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[29] Ex. TURN-03 (Adria Tinnin) at 12.

[30] *Ibid*.

[31] *Id.* page 28.

[32] The South Coast AQMD permitting process of HRCM is a discretionary action and as such South Coast AQMD complies with CEQA prior to issuing an air permit. (*See* California Code of Regulations, Title 14, Division 6, Chapter 3 [Guidelines for Implementation of the California Environmental Quality Act]).

HRCM Project in its Gas Storage Operations and Construction testimony. (*See* Exhibit SCG-10-R (Larry T. Bittleston and Steve Hruby), Appendix E, Honor Rancho Compressor Modernization Supplemental Project Description, Section V.)

TURN also raises issues regarding risks associated with hydrogen blending into existing natural gas pipelines. As described herein, SoCalGas will not introduce the ARE produced green hydrogen in the transmission or distribution system or in storage for customer use. SoCalGas plans to utilize hydrogen production from the ARE component for company operations only. Moreover, as explained, the blending of hydrogen is not an unproven or novel process. It is a conventional method used in various heavy industries as well as in industrial production facilities, refineries, and chemical complexes. Blending of ARE produced green hydrogen with natural gas to use as fuel for gas engine driven compressors is supported by Waukesha, the engine manufacturer, up to 12% by volume without any engine modifications. SoCalGas is proposing to blend hydrogen up to 10% by volume, which is below the engine manufacturer's operating recommendation. Blending of green hydrogen as a fuel source reduces, through displacement, the use of hydrocarbon-based fuel and reduces emissions as depicted in the Gas Storage Operations and Construction testimony (*See* Exhibit SCG-10-R (Larry T. Bittleston and Steve Hruby), Appendix E, Honor Rancho Compressor Modernization Supplemental Project Description).

VI. ALISO CANYON TURBINE REPLACEMENT (ACTR) REASONABLENESS REVIEW

SoCalGas is seeking authorization to proceed with cost recovery of $21.6 million in capital expenditures incurred to complete the Aliso Canyon Turbine Replacement Project (ACTR). SoCalGas presented this request in two areas of testimony: (1) In Exhibit SCG-10-R, SoCalGas provided detailed information on the costs incurred to demonstrate the reasonableness of the $21.6 million; and (2) in Exhibit SCG-38-R, SoCalGas requests to recover the ending balance as of December 31, 2023 in the Aliso Canyon Memorandum Account (ACMA) which is the capital-related cost (e.g., depreciation, return, taxes) associated with the capital expenditures of $21.6 million.

The Commission established a framework for SoCalGas to recover reasonably incurred costs of completing the ACTR Project, if those costs exceed the amount authorized by the Commission. Specifically, the Commission established that ACTR Project costs in excess of

$275.5 million are to be reviewed for reasonableness in SoCalGas's GRC. D.19-09-051 provided that, "[w]e also find that the request to continue the Aliso Canyon Memorandum Account (ACMA) to record additional capital-related costs in excess of $275.5 million is reasonable. Any recovery sought for such amounts should be subject to a reasonableness review in SoCalGas's next GRC."[33]

Cal Advocates is the only intervenor in this proceeding opposing SoCalGas's request for authorization to recover the $21.6 million in capital expenditures to complete the ACTR project. Cal Advocates opposes SoCalGas's request of $21.6 million in excess cost recovery for its Aliso Canyon Turbine Replacement (ACTR) project[34] and appears to recommend a reduction of $12.6 million; however, this is not clear since the amount varies in its testimony.[35]

Cal Advocates takes issue with only two cost elements of the $21.6 million of costs incurred to complete ACTR: Company Labor ($1.8 million)[36] and Overheads ($2.2 million)[37] totaling $4.0 million of its $12.6 million disallowance recommendation. Cal Advocates does not address the additional $8.4 million in their disallowance recommendation.

With regards to Company Labor, Cal Advocates attempts to support its recommended reduction by arguing SoCalGas did not hire any Full-Time Equivalents (FTEs) specifically for this project. Whether SoCalGas hired FTEs specifically for the ACTR project has no bearing on whether the Company Labor costs incurred to complete the ACTR project were reasonable. The $1.8 million in Company Labor costs were specific to the ACTR project and have not been recovered from any other project or in O&M. SoCalGas engaged a team of qualified and experienced employees (Company Labor) to provide internal support and oversight of the ACTR project. The ACTR project team of technical, management, and field personnel included a project manager, engineering manager, construction manager, environmental compliance manager, safety advisor and storage operations, as well as direct support from project controls,

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[33] D.19-09-051 at 173-174.

[34] Ex. CA-03 (Dao Phan) at 5.

[35] There is an inconsistency with Cal Advocates recommendation: Ex. CA-03 (Dao Phan), at page 27, states, "Cal Advocates recommends $9.000 million, which is $12.600 million lower than SCG's request of $21.600 million for cost overruns associated with the ACTR project." However, on page 28, Cal Advocates cites $9.500 million yet arriving at the same reduction of $12.6 million.

[36] Ex. CA-03 (Dao Phan) at 28.

[37] *Id*. at 29.

contract management, engineering and other specialties. Once the ACTR project was completed, SoCalGas personnel went on to work on other major construction projects, while some filled vacancies in other Company departments. The Code of Federal Regulations (CFR), which is the utility accounting guidance SoCalGas follows, states that the cost of construction work includes labor costs which includes the pay and expenses of employees of the utility engaged on construction work. Furthermore, any costs, such as Company labor, which contribute to the value of the asset can be capitalized, per CFR and Generally Accepted Accounting Principles.

Cal Advocates recommends a $2.2 million reduction to Indirects based on the claim that overhead costs are already included in rate base for the ACTR project.[38] The ACTR project costs include overhead allocations based on direct capital costs, consistent with their classification as Company Labor, Contract Labor, or Purchased Services and Materials. Overhead allocations are those activities and services that are associated with direct costs and benefits, such as payroll taxes and pension and benefits, or costs that cannot be economically direct-charged, such as Administrative and General overheads. The overhead allocations adhere to the methodology established by the Federal Energy Regulatory Commission (FERC) and were derived using the Commission authorized methodology.[39] Increases in overhead costs are due to the increases in direct capital costs described in our direct testimony. These costs are not captured in rate base as Cal Advocates erroneously states.

VII. CONCLUSION

The activities and projects described herein are necessary for SoCalGas to achieve its goals of maintaining the safety and reliability of essential gas storage infrastructure. The expenditures presented in our direct testimony (Exhibit SCG-10-R) and further described in this rebuttal testimony are required to maintain safety while cost-effectively meeting customer needs, in compliance with mandated regulatory requirements.

- SoCalGas's non-shared and shared O&M forecast activities or costs for Gas Storage and Construction were unopposed, other than PCF's mistaken and inappropriate recommendation regarding Aliso Canyon; therefore,

[38] *Ibid*.

[39] *See* Ex. SCG-31-2R (Second Revised Prepared Testimony of Dana E. Watson (Depreciation)), November 2022.

SoCalGas's forecasts are reasonable and should be adopted by the Commission.

- SoCalGas's capital forecast activities for Gas Storage and Construction from 2022 through 2024 were unopposed, other than PCF's mistaken and inappropriate recommendation regarding Aliso Canyon; therefore, these costs should be adopted by the Commission as reasonable.
- No parties disputed the HRCM Project's compressor upgrade. The new microgrid and fuel cell/capacitor storage system of the HRCM Project is development and modernization of the existing on-site electric generation system providing improved operational flexibility, emissions reductions, and interconnection with the electric grid and should be approved as part of HRCM Project's Principal Component.
- The Commission has already made a determination that HRCM is exempt from filing a separate application under GO-177.
- The HRCM Project's in service date falls within the PTY timeframe, hence the HRCM Project revenue requirement should appropriately remain in PTY ratemaking proposal.
- The ARE component of the HRCM Project is one of several initiatives that SoCalGas is proposing in this GRC to support California in achieving its statewide climate goals.
- SoCalGas has demonstrated the reasonableness of $21.6 million in Capital expenditures to complete ACTR. Our direct and rebuttal testimonies (Exhibit SCG-10-R, Exhibit SCG-210) support SoCalGas's request for authorization to recover $21.6 million in costs that exceeded the previously authorized cost of the project.
- PCF's claim that the Aliso Canyon Storage Facility is no longer needed to assure natural gas reliability in the Los Angeles Basin is unsupported and any discussion of this issue is outside the scope of this GRC and is being addressed in I.17-02-002. The Commission should ignore PCF's claim and the associated recommendations to reduce O&M and capital costs.

This concludes our prepared rebuttal testimony.

APPENDIX A
GLOSSARY OF TERMS

APPENDIX A

GLOSSARY OF TERMS

ACRONYM	DEFINITION
ACMA	Aliso Canyon Memorandum Account
ACTR	Aliso Canyon Turbine Replacement
AFUDC	Allowance for Funds Used During Construction
AQMD	Air Quality Management District
ARE	Advanced Renewable Energy
CFR	Code of Federal Regulations
CPCN	Certificate of Public Convenience and Necessity
CPUC	California Public Utility Commission
ESJ	Environmental and Social Justice
FTE	Full-Time Equivalent
FWEMCP	Facility-Wide Engine Modernization Compliance Plan
GO	General Order
GRC	General Rate Case
HFRA	High Fire Risk Area
HRCM	Honor Rancho Compressor Modernization
NOx	Nitrogen Oxides
O&M	Operations and Maintenance
OP	Ordering Paragraph
PCF	Protect Our Communities Foundation
PDR	Playa del Rey
PSPS	Public Safety Power Shutoffs
PTC	Permit to Construct
PTY	Post-Test Year
RECLAIM	Regional Clean Air Incentive Market
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCG	Southern California Gas
SCGC	Southern California Generation Coalition
SDG&E	San Diego Gas & Electric
SoCalGas	Southern California Gas
TURN	The Utility Reform Network
TY	Test Year

APPENDIX B

SoCalGas's Attachment to Data Response to TURN-SCGC-SCG-01_Q1_4_REDACTED

Attachment: TURN-SCGC-SCG-01_Q1_4-REDACTED

[redacted]
Air Quality Group Manager
Environmental Services
1650 Mountainview Ave
Oxnard, CA 93030
[redacted]

June 3, 2022

Mr. [redacted]
South Coast Air Quality Management District
21865 Copley Ave.
Diamond Bar, CA 91765

Subject: SoCalGas Honor Rancho Storage Field (FID #005973)
Permit to Construct (PTC) Application Package for
Honor Rancho Compressor Modernization Project

Dear Mr. [redacted]

SoCalGas is pleased to submit this Permit to Construct (PTC) application package for the Honor Rancho Compressor Modernization (HRCM) Project at the Honor Rancho Storage Field (FID #005973). The purpose of the Project is to comply with the sunset of the South Coast Air Quality Management District (South Coast AQMD) Regional Clean Air Incentives Market (RECLAIM) program for oxides of nitrogen (NOx) requirements, as well as achieve measurable and significant air quality benefits for southern California. Specifically, the HRCM Project is being conducted for compliance associated with Rule 1110.2 "Emissions from Gaseous and Liquid-Fueled Engines" and Rule 1100 "Implementation Schedule for NOx Facilities."

The enclosed PTC application package has been prepared in accordance with the requirements of Rule 1100(d)(7) and is consistent with the associated Facility-Wide Engine Modernization Compliance Plan (FWEMCP) approved by the South Coast AQMD in November 2021. As specified in the FWEMCP, the five existing compressor gas lean-burn engines totaling 27,500 horsepower (HP) will be replaced with four compressor gas lean-burn engines totaling 20,000 HP and two electric driven compressors totaling 11,000 HP.

SoCalGas recently set a goal of achieving net zero greenhouse (GHG) emissions in our operations and the energy delivered to our customers by 2045. The HRCM Project is consistent with SoCalGas's climate goals, as well as supportive of California's ambitious climate change policies. As part of SoCalGas's commitment toward a sustainable energy future, the proposed Project has been designed to exceed the percentage of total horsepower using a zero-emission technology required for FWEMCP eligibility as set forth in South Coast AQMD Rules 1110.2/1100.

The proposed Project consists of six primary components: 1) a compressor system upgrade that will replace five compressor gas lean-burn engines with four compressor gas lean-burn engines and two electric driven compressors (EDCs), including ancillary equipment; 2) hydrogen electrolyzers, hydrogen storage, and fuel blending equipment to integrate green hydrogen into compressor combustion fuel; 3) a green hydrogen vehicle fueling station for company vehicles; 4)

an electric microgrid comprised of an energy storage system (ESS) and a natural gas-fueled solid oxide fuel cell (SOFC) system to provide base load and standby electricity; 5) other site improvements, including one new compressor building; and 6) a new Southern California Edison (SCE) substation and electrical interconnection to support the increased electric load.[1]

To process this application, the following South Coast AQMD forms are included as part of this submittal:

- Form 400-A (Replacement Compressor Gas Lean-Burn Engines 1 to 4 and their associated emission control systems) – *Application Form for Permit or Plan Approval*
- Form 400-A (Aqueous Urea Storage Tank) – *Application Form for Permit or Plan Approval*
- Form 400-A (RECLAIM/Title V Permit Amendment) – *Application Form for Permit or Plan Approval*
- Form 400-CEQA – *California Environmental Quality Act (CEQA) Applicability*
- Form 400-E-5 *(Emission control systems for compressor gas lean-burn engines 1 to 4) – Selective Catalytic Reduction (SCR) System, Oxidation Catalyst and Ammonia Catalyst*
- Form 400-E-13b (Replacement Compressor Gas Lean-Burn Engines 1 to 4) – *Non-Emergency Internal Combustion Engine*
- Form 400-PS (Replacement Compressor Gas Lean-Burn Engines 1 to 4) – *Plot Plan and Stack Information Form*

The total fee associated with this submittal has been calculated according to Rule 301. Enclosed, please find a check in the amount of $35,795.79. Should you have any questions or require additional information, please contact me at [redacted]

Sincerely,

[redacted]

[redacted]

[1] The implementation of the project components related to advanced renewable energy which include hydrogen electrolyzers, hydrogen storage, and fuel blending equipment to integrate green hydrogen into compressor combustion fuel, as well as a new green hydrogen vehicle fueling station for company vehicles is anticipated to occur subsequent to California Public Utility Commission (CPUC) review and approval via the General Rate Case submitted to CPUC on May 16, 2022.

SoCalGas

Honor Rancho Storage Field
25205 West Rye Canyon Road
Valencia, CA 91355

South Coast AQMD
Facility ID: 005973

June 2022

Prepared by:

Yorke ENGINEERING, LLC
www.YorkeEngr.com

Office Locations:
Los Angeles, Orange County,
Riverside, Ventura, San Diego, Fresno, Merced,
Bakersfield, Berkeley, San Francisco

Tel: (949) 248-8490
Fax: (949) 248-8499

Applications for Permits to Construct: Honor Rancho Compressor Modernization Project

Applications for Permits to Construct: Honor Rancho Compressor Modernization Project

Prepared for:

SoCalGas
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Valencia, CA 91355

South Coast AQMD Facility ID: 005973

June 2022

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List of Acronyms and Abbreviations

4SLB	Four Stroke Lean Burn
30-DA	30-Day Average
AA	Annual Average
AAQS	Ambient Air Quality Standard
AB	Assembly Bill
A/N	Application Number
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ASC	Ammonia Slip Catalyst
BACT	Best Available Control Technology
BARCT	Best Available Retrofit Control Technology
BHP	Brake Horsepower
Btu	British Thermal Unit
CA	California
CAAQS	California Ambient Air Quality Standard
CalARP	California Accidental Release Prevention
CAM	Compliance Assurance Monitoring
CAS No.	Chemical Abstract Service Number
CEMS	Continuous Emissions Monitoring System
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
Conc.	Concentration
dscf	Dry Standard Cubic Feet
EDC	Electric-Driven Compressor
EIR	Environmental Impact Report
EPA	[United States] Environmental Protection Agency
EPC	Engineering/Procurement/Construction
ESS	Energy Storage System
FCEV	Fuel Cell Electric Vehicle
FR	Federal Register
FRP	Fiberglass Reinforced Polymer
FWEMCP	Facility-Wide Engine Modernization Compliance Plan
g	Gram
GHG	Greenhouse Gas
gr	Grain

H_2O	Water
HAE	Historical Actual Emissions
HAP	Hazardous Air Pollutant
HHV	Higher Heating Value
HIA	Acute Hazard Index
HIC	Chronic Hazard Index
HP	Horsepower
hr	Hour
HRA	Health Risk Assessment
HRCM	Honor Rancho Compressor Modernization
HSC	Health and Safety Code
lb	Pound
lb-mol	Pound-Mole
ID	Identification
MAC	Maximum Annual Controlled
MDU	Maximum Daily Uncontrolled
MHC	Maximum Hourly Controlled
MHU	Maximum Hourly Uncontrolled
MICR	Maximum Individual Cancer Risk
MM	Million
mm Hg	Millimeters of Mercury
MT	Metric Ton
MV	Molar Volume
MW	Molecular Weight
N_2	Nitrogen
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standard
NEI	Net Emissions Increase
NESHAP	National Emission Standards for Hazardous Air Pollutants
NH_3	Ammonia
No.	Number
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
O_2	Oxygen
PGM	Precious Group Metal
PLC	Programmable Logic Controller
PM_{10}	Respirable Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
ppm	Parts per Million

ppmv	Parts per Million by Volume
ppmvd	Parts per Million by Volume, Dry
PTC	Permit to Construct
PTE	Potential to Emit
RECLAIM	Regional Clean Air Incentives Market
RICE	Reciprocating Internal Combustion Engine
RMP	Risk Management Plan
RMS	Root Mean Squared
RTC	RECLAIM Trading Credit
scf	Standard Cubic Foot
scfm	Standard Cubic Feet per Minute
SCR	Selective Catalytic Reduction
SEA	Subsequent Environmental Assessment
SoCalGas	Southern California Gas Company
SOFC	Solid Oxide Fuel Cell
SO_2	Sulfur Dioxide
SO_x	Sulfur Oxides
TAC	Toxic Air Contaminant
TPY	Tons per Year
VOC	Volatile Organic Compound
yr	Year
°C	Degrees Centigrade
°F	Degrees Fahrenheit
$\mu g/m^3$	Micrograms per Cubic Meter
%	Percent

Applications for Permits to Construct: Honor Rancho Compressor Modernization Project

1.0 INTRODUCTION

SoCalGas, as a wholly owned subsidiary of Sempra, supports the South Coast Air Quality Management District (South Coast AQMD)'s air pollution reduction goals, as well as California's ambitious climate goals. SoCalGas owns and operates an integrated gas transmission system consisting primarily of pipelines, compressor stations, storage facilities, and other appurtenant facilities. As part of the effort to support California's climate change goals and our mission to become the cleanest, safest, and most innovative energy company in America, SoCalGas is focused on improving air quality, decarbonizing energy supplies, and reducing operational emissions by modernizing key facilities.

SoCalGas proposes to modernize the Honor Rancho Storage Field. The Honor Rancho Storage Field is located at 25205 West Rye Canyon Road in Valencia,[1] California, within the South Coast AQMD. SoCalGas is submitting this application package to request Permits to Construct (PTCs) for the proposed Honor Rancho Compressor Modernization Project (HRCM Project). The HRCM Project is designed to comply with South Coast AQMD regulations and to help California meet its climate commitment goals by incorporating SoCalGas's long-term strategy to decarbonize Honor Rancho Storage Field's overall energy demand.

In particular, the HRCM Project is being conducted for compliance associated with the sunset of the South Coast AQMD Regional Clean Air Incentives Market (RECLAIM) program for oxides of nitrogen (NO_x), including Rule 1110.2 "Emissions from Gaseous and Liquid-Fueled Engines" and Rule 1100 "Implementation Schedule for NOx Facilities." In accordance with the requirements of Rule 1100(d)(7), SoCalGas submitted a Facility-Wide Engine Modernization Compliance Plan (FWEMCP) in December 2020 to meet the Rule 1110.2 NO_x emission limits through the replacement of existing compressor gas lean-burn engines at the Honor Rancho Storage Field. The FWEMCP, which requires that at least 20% of the total replaced horsepower (HP) use a zero-emission technology, was approved by the South Coast AQMD in November 2021. As specified in the FWEMCP, the five existing compressor gas lean-burn engines will be replaced with four compressor gas lean-burn engines and two electric driven compressors. Each PTC application for the proposed permitted equipment in the approved FWEMCP is due to the South Coast AQMD by July 1, 2022, so this PTC application package submittal is timely.

Construction of the HRCM Project will begin upon issuance of the PTCs, assuming all other required permits have been secured, with planned operation of the replacement compressor gas lean-burn engines and electric driven compressors (EDCs), as well as ancillary equipment within the timelines provided in Rule 1100(d)(7).

The HRCM Project requires an amendment to the facility RECLAIM permit and a significant revision to the facility Title V permit. This application package includes a project description (Section 2), equipment descriptions for those devices that require South Coast AQMD permits (Section 3), emissions estimates (Section 4), and regulatory compliance review (Section 5).

[1] Valencia is a neighborhood within the City of Santa Clarita in Los Angeles County.

Supplemental information, including South Coast AQMD application forms, the approved FWEMCP, supplemental equipment information, emission calculations, and health risk assessment, is provided as appendices.

1.1 Facility Information

1.1.1 Facility Background Information

SoCalGas's Honor Rancho Storage Field, located in Valencia, California, plays a key role in meeting the region's energy needs by providing customers safe and reliable natural gas throughout the year, including power generation customers during peak electricity use periods. The facility's main compressor plant includes five 5,500 HP Enterprise Delaval HVA16C compressor gas lean-burn engines that are used to compress gas for injection into the Honor Rancho Storage Field wells. The facility also includes five natural gas-fueled rich-burn engines that provide additional compression capacity (two units rated at 738 HP each) and electrical generation (three units rated at 818 HP each). The existing rich-burn engines are being retrofitted to meet South Coast AQMD Rule 1110.2 requirements per separate PTCs issued to SoCalGas in November 2021.

1.1.2 Facility Contact Information

SoCalGas owns and operates the Honor Rancho Storage Field. The applicant contact information is provided in Table 1-1.

Table 1-1: Contact Information

Applicant's Name:	SoCalGas
Responsible Official Contact Information:	Lawrence T. Bittleston Jr. Storage Operations Manager II (818) 701-3475 LBittleston@socalgas.com
Applicant Contact Information:	Karin Fickerson Air Quality Group Manager (213) 238-3263 Kfickerson@socalgas.com
Facility Contact Information:	Ify Mordi Principal Environmental Specialist (818) 429-7337 Imordi@socalgas.com
Facility ID:	005973
SIC Code:	4923: Natural Gas Transmission and Distribution
Mailing Address:	25205 West Rye Canyon Road Valencia, CA 91355
Equipment Location:	25205 West Rye Canyon Road Valencia, CA 91355

1.1.3 Facility Location and Layout

The facility is located at 25205 West Rye Canyon Road in Valencia, CA. Land use in the immediate vicinity of the site is commercial/industrial use to the east and south of the

facility. Property to the west includes the North County Correctional Facility and commercial/industrial usage. The area to the north is the Pitchess Detention Center, along with undeveloped land. The nearest residential property is approximately 3,600 feet to the east of the proposed project location. The nearest non-residential sensitive receptor is approximately 1,800 feet to the east of the proposed project location. The nearest commercial/industrial property is approximately 1,500 feet to the east of the proposed project location. There are no schools within 1,000 feet of the facility. An aerial photograph of the site and surrounding properties is provided as Figure 1-1 and an aerial view of the proposed HRCM Project is provided as Figure 1-2. A detailed site diagram is provided in Appendix A.

1.2 Proposed Permit Actions

SoCalGas is requesting the following permit actions:

- PTCs for four 5,000 HP Waukesha 16V275GL compressor gas lean-burn engines;
- PTCs for four emissions control systems for the compressor gas lean-burn engines, each consisting of a Selective Catalytic Reduction (SCR) system and an oxidation catalyst;
- PTC for one 8,000-gallon aqueous urea storage tank; and
- Facility RECLAIM/Title V Permit amendment.

The forms included with this submittal are listed in Table 1-2 and are provided in Appendix B.

Figure 1-1: Aerial View of Honor Rancho Storage Field and Surrounding Area

Red line = SoCalGas property boundary

Red crosses = Replacement Compressor Gas Lean-Burn Engine Stacks

Red rectangle = New Compressor Building

Dark blue structures = Existing Buildings. Existing compressor building is the northernmost building.

Figure 1-2: Aerial View of HRCM Project

Table 1-2: South Coast AQMD Forms Accompanying This Application

Device	Permit Action	Form	
Replacement Compressor Gas Lean-Burn Engine 1	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-13b	Non-Emergency Internal Combustion Engine
		400-PS	Plot Plan and Stack Information Form
Control System for Compressor Gas Lean-Burn Engine 1	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-5	Selective Catalytic Reduction (SCR) System and Oxidation Catalyst
Replacement Compressor Gas Lean-Burn Engine 2	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-13b	Non-Emergency Internal Combustion Engine
		400-PS	Plot Plan and Stack Information Form
Control System for Compressor Gas Lean-Burn Engine 2	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-5	Selective Catalytic Reduction (SCR) System and Oxidation Catalyst
Replacement Compressor Gas Lean-Burn Engine 3	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-13b	Non-Emergency Internal Combustion Engine
		400-PS	Plot Plan and Stack Information Form
Control System for Compressor Gas Lean-Burn Engine 3	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-5	Selective Catalytic Reduction (SCR) System and Oxidation Catalyst
Replacement Compressor Gas Lean-Burn Engine 4	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-13b	Non-Emergency Internal Combustion Engine
		400-PS	Plot Plan and Stack Information Form
Control System for Compressor Gas Lean-Burn Engine 4	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-5	Selective Catalytic Reduction (SCR) System and Oxidation Catalyst
Aqueous Urea Storage Tank	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-18	Storage Tank
Facility Permit	Amendment	400-A	Application Form for Permit or Plan Approval
		500-A2	Title V Application Certification
Project	–	400-CEQA	California Environmental Quality Act (CEQA) Applicability

2.0 PROJECT DESCRIPTION

SoCalGas proposes to modernize the Honor Rancho Storage Field. The HRCM Project will modernize the facility by replacing aging equipment to support compliance with RECLAIM sunset requirements, as well as to help California meet its climate goals. The HRCM Project aligns with SoCalGas's long-term decarbonization strategy. The following project components are being proposed in support of this decarbonization strategy. A microgrid, comprised of a Solid Oxide Fuel Cell (SOFC) system and Energy Storage System (ESS), will be installed to support decarbonization of the supply of energy to the project. Additionally, the HRCM Project will include electrolyzers that produce green hydrogen that would be integrated into the compressor combustion fuel which will further reduce carbon emissions. The Project will also provide a station to fuel SoCalGas's Fuel Cell Electric Vehicles (FCEVs). Finally, the project will include electric driven compressors.

2.1 Purpose, Need, and Objectives of Proposed Project

SoCalGas is focused on demonstrable and measurable commitments to improve air quality and modernize the Honor Rancho Storage Field. The purpose of the HRCM Project is to modernize the Honor Rancho Storage Field through the installation of new equipment and innovative technology that will achieve measurable reductions in NO_x emissions, comply with South Coast AQMD regulations, and help California meet its climate commitment goals. The objectives of the HRCM Project are:

- Achieve compliance with the South Coast AQMD emissions requirements of Rules 1110.2/1100 (stationary engines) and the approved FWEMCP (provided in Appendix C);
- Enhance reliability by modernizing aging equipment and ancillary systems; and
- Help California and SoCalGas meet their climate goal[2] by:
  - Installing a microgrid including a super capacitor and/or battery energy storage system (ESS) and a solid oxide fuel cell (SOFC) system to generate electricity to support auxiliary and administrative electrical loads while reducing the need for onsite, combustion engine electricity generation;
  - Installing electrolyzers to produce green hydrogen;[3]
  - Integrating green hydrogen into compressor combustion fuel; and
  - Reducing emissions from company fleet vehicles by providing green hydrogen to fuel our growing fleet of hydrogen fuel cell vehicles.

[2] See Assembly Bill 32, Global Warming Solutions Act of 2006 (September 27, 2006); Senate Bill 32, Global Warming Solutions Act of 2006: Emissions Limit (September 8, 2016); Executive Order B-30-15 (April 29, 2015); and Executive Order B-55-18 To Achieve Carbon Neutrality (September 10, 2018).
SoCalGas has committed to achieve net-zero greenhouse gas (GHG) emissions in its operation and delivery of energy by 2045. See https://www.socalgas.com/sites/default/files/2021-03/SoCalGas_Climate_Commitment.pdf.

[3] The implementation of the hydrogen project components which include hydrogen electrolyzers, hydrogen storage, and fuel blending equipment to integrate green hydrogen into compressor combustion fuel, as well as a new green hydrogen vehicle fueling station for company vehicles is anticipated to occur subsequent to California Public Utility Commission (CPUC) review and approval via the General Rate Case submitted to CPUC on May 16, 2022.

2.2 Overview

The proposed HRCM Project consists of six primary components: 1) a compressor system upgrade that will replace five compressor gas lean-burn engines with four compressor gas lean-burn engines and two electric driven compressors (EDCs), including ancillary equipment; 2) hydrogen electrolyzers, hydrogen storage, and fuel blending equipment to integrate green hydrogen into compressor combustion fuel; 3) a green hydrogen vehicle fueling station for company vehicles; 4) an electric microgrid comprised of an ESS and a natural gas-fueled SOFC system to provide base auxiliary load and standby electricity; 5) other site improvements, including a new compressor building; and 6) a new Southern California Edison (SCE) substation and electrical interconnection to support the increased electric load. Once the replacement equipment has been proven to operate in compliance with emission standards during various load conditions and seasonal variations onsite, the existing compressor assets to be retired will be shut down and isolated to accommodate future decommissioning. Additionally, some of the decommissioned equipment could be removed, and some of the existing buildings could be partially demolished or demolished to grade.

The following sections provide a description of the proposed improvements to the facility. Specific details regarding the replacement compression equipment are included in Section 3 of this application package.

2.2.1 Proposed Facility Improvements

The proposed compressor station improvements include replacing the five existing 5,500 HP compressor gas lean-burn engines with four 5,000 HP replacement compressor gas lean-burn engines with post-combustion emissions control systems. The existing compressor building will be decommissioned, and a new compressor plant containing the compressor gas lean-burn engines and EDCs will be installed. The new building and equipment will be referred to as Plant 2. Detailed information regarding the specific compression equipment is included in Section 3 of this application package. Hydrogen electrolyzers and fuel blending equipment will integrate green hydrogen into compressor combustion fuel and a green hydrogen vehicle fleet fueling station will be installed for company vehicles. Additionally, a microgrid will be installed to manage the electrical loads of the facility. The modernized facility will include the following replacement equipment subject to South Coast AQMD permitting:

- Four replacement compressor gas lean-burn engines, each rated at 5,000 HP, with post-combustion emission control systems; and
- One aboveground 8,000-gallon aqueous urea storage tank.

Ancillary equipment will also be installed, including the following equipment not subject to permitting by the South Coast AQMD:

- Two EDCs, each approximately 5,500 HP;
- Green hydrogen generation, storage, and blending equipment;
- Green hydrogen fueling station for company vehicles;
- Microgrid comprising an ESS and a SOFC system to generate electricity to support auxiliary and administrative electrical loads while reducing the need for onsite, combustion engine electricity generation; and

- Compression support equipment, including cooling towers, a lube oil system, tanks, filters/separators; and control, electrical, and instrumentation equipment.

The HRCM Project includes a SOFC system as the primary power source for station administrative and auxiliary loads. This fuel cell system operates with natural gas as a fuel source. The fuel cell system can operate in parallel with utility grid power as well as independent of the utility grid and will be able to address station loads in the event of a power failure. Moreover, there will be a backup electrical storage system in the form of a super capacitor and/or battery ESS that can support an independent microgrid, whenever needed. Once the fuel cell system is functioning and proven to provide support as intended, the existing three rich-burn engine generators at the Honor Rancho Storage Field will be re-permitted for low-use or back-up emergency use.

2.2.2 Hydrogen Integration

The HRCM Project includes the integration of green hydrogen into the natural gas fuel stream for the purpose of combustion in the gas compressors and the use of green hydrogen as fuel for company fleet vehicles. Green hydrogen will be produced via the electrolysis of water, which occurs through an electrochemical reaction. This reliable process can produce ultra-pure green hydrogen in a non-polluting manner when renewable electricity (in this case, renewable electricity purchased from the grid) is used in the electrolysis process. Green hydrogen used for engine fuel will be piped to a Blending Skid, which will blend the hydrogen with pipeline natural gas to produce blended natural gas including up to 10% hydrogen by volume for combustion in the compressor gas lean-burn engines. In addition, green hydrogen will be piped to a fleet fueling station. Typically, hydrogen from the electrolyzers will be compressed and stored onsite in pressure vessels before it is utilized either by the blending skid or fueling station. This storage allows both the compressors and fueling station to continue to use hydrogen when production equipment needs service and allows operational flexibility to shut down the electrolyzers during peak demand hours, reducing operational cost and unnecessary strain on the electrical grid. The green hydrogen fueling station will include separate compressed gaseous hydrogen cylinders for direct dispensing to vehicles.

2.2.3 Startup, Commissioning, and Commencement of Operation

The existing compressor gas lean-burn engines that support the Honor Rancho Facility are critical to ensuring the reliability of the natural gas storage and delivery system during the transition to the replacement compressors. SoCalGas has identified distinct phases of the transition process which include startup, commissioning, and the commencement of modernization operations. Each of these will occur for the equipment proposed during time periods that may overlap but are expected to extend for a total of 6 to 12 months from the first fire of the replacement equipment. This application includes the request for startup, commissioning, and commencement of operation activities to be included in the PTC for the HRCM Project, described as follows:

- Startup will occur for up to 90 days after first fire for each replacement compressor gas lean-burn engine per Rule 1313 provisions. During this phase, the existing equipment will remain as the primary devices to maintain facility function. Operation of the existing engines are expected to serve normal operations while

intermittent concurrent operation of the replacement equipment may occur. After the initial 90-day start-up period, the existing engines and the replacement engines will not be operated simultaneously, and SoCalGas will accept a permit condition to ensure simultaneous operation does not occur.

- The commissioning period includes tuning and performing load testing of the engines; and then subsequently installing and tuning of the emission control equipment. This period is followed by source testing to evaluate compliance with the permitted emission limits. Once the engines demonstrate compliance with the permitted emission limits and SoCalGas takes ownership of the equipment from the engineering/procurement/construction (EPC) contractor, operations may commence as dictated by the SoCalGas Gas Control department. Commissioning activities are expected to occur for up to 150 hours and up to 180 days from the initial startup. The 90 days of startup would coincide with the first 90 days of commissioning.
- Commencement of operation will consist of the replacement equipment operating as the primary devices to maintain facility function. During this phase, concurrent operation of the existing and replacement engines will not occur. However, the existing engines will remain for the time period allowed per the provisions in Rule 1100(d)(7) in case the replacement units become inoperable or malfunction. The existing compressor gas lean-burn engines would be permanently removed from service per the timelines outlined in Rule 1100(d)(7).

3.0 EQUIPMENT DESCRIPTION

3.1 Compressor Gas Lean-Burn Engines

3.1.1 Basic Equipment

The HRCM Project will install four 5,000 HP Waukesha Model 16V275GL natural gas-fired compressor gas lean-burn engines, each with emission control systems consisting of SCR and an oxidation catalyst. Ancillary equipment, including interstage coolers, inlet air filters, cooling towers, and exhaust stacks will be installed. Each compressor gas lean-burn engine will be equipped with a continuous emissions monitoring system (CEMS).

Equipment specifications are listed in Table 3-1. Additional equipment information, including manufacturer's brochures and specification sheets, is provided in Appendix D.

Table 3-1: Equipment Information

Parameter	Data
Make	Waukesha
Model	16V275GL
Power	5,000 HP
Heat Rate	36.84 MMBtu/hr

3.1.2 Emission Control Equipment

The replacement natural gas-fired compressor gas lean-burn engines will each be equipped with an emissions control system comprising an SCR and an oxidation catalyst. The catalyst housing at the engine exhaust encloses the two catalyst beds. The first catalyst in the sequence is the oxidation catalyst. The SCR catalyst follows the oxidation catalyst. The NO_x reducing reagent will be 32.5% urea by weight in an aqueous solution. The aqueous urea tank will be filled via an unloading skid and truck. Urea solution will be pumped to a common header line via a single pump (with an additional pump in standby to ensure reliable SCR operation).

Aqueous urea will be directly injected into the ducts via nozzles, upstream of the SCR catalyst and downstream of the oxidation catalyst. The heat from the duct will cause the urea to chemically transform via thermal hydrolysis into ammonia, carbon dioxide, and water. Aqueous urea injection will be controlled by a predictive feedforward trim based on a curve generated during commissioning. Feedback adjustments will be based on stack NO_x measurements from the CEMS.

The control equipment specifications are summarized in Table 3-2; additional details are provided in Appendix D.

Table 3-2: Control Equipment Specifications

Catalyst	Proposed Catalyst Description	Active Ingredient
Oxidation Catalyst	DCL DC5B	Platinum
SCR Catalyst	Cormetech CM21-HT	Titanium-Tungsten

3.1.3 Continuous Emissions Monitoring System

A CEMS will be installed for NO_x and oxygen (O_2) monitoring in accordance with RECLAIM requirements (South Coast AQMD Rule 2012) and/or Rules 218.2 and 218.3, depending on when the facility exits RECLAIM. The NO_x CEMS will control urea solution feed to the SCR using a feedback loop. The CEMS have not been specified yet; CEMS applications will be submitted at a later date.

3.1.4 Operating Schedule

The equipment operating schedule is shown in Table 3-3.

Table 3-3: Operating Schedule

Parameter	Maximum
Hours/Day	24
Days/Week	7
Weeks/Year	52

3.2 Aqueous Urea Storage Tank

Aqueous urea will be stored in an 8,000-gallon vertical aboveground storage tank. The aqueous urea will have a nominal concentration of 32.5% by weight. The tank will be installed in secondary containment.

3.3 Ancillary Equipment

Ancillary equipment will also be installed, including the following equipment not subject to permitting by the South Coast AQMD:

- Two EDCs, each approximately 5,500 hp;
- Green hydrogen generation, storage, and blending equipment;
- Green hydrogen fueling station for company vehicles;
- Microgrid comprising a natural gas fueled SOFC system and super capacitor and/or battery ESS to generate electricity to support auxiliary and administrative electrical loads. This system will both improve the station reliability and reduce emissions compared to traditional combustion-based power generation.
- Compression support equipment, including cooling towers, a lube oil system, tanks, filters/separators; and control, electrical, and instrumentation equipment.

These devices are not subject to permit by the South Coast AQMD; this list is provided in Appendix E for informational purposes to identify the full scope of the HRCM Project.

4.0 EMISSIONS

The HRCM Project will emit criteria pollutants and toxic air contaminants (TACs) that are associated with combustion of natural gas or blended natural gas in the compressor gas lean-burn engines. Criteria pollutants are composed of NO_x, carbon monoxide (CO), volatile organic compounds (VOCs), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and sulfur oxides (SO_x). While the new compressor gas lean-burn engines will emit these air contaminants, the HRCM Project will result in a reduction of potential to emit for air contaminants including criteria pollutants and TACs, with the exception of ammonia emissions, which will increase due to ammonia slip associated with SCR operation.

4.1 Compressor Gas Lean-Burn Engines

4.1.1 Criteria Pollutants – Methodology

Emission standards for NO_x, CO, and VOC are derived from rule requirements and BACT determinations (see Section 5.7.1). PM_{10} and SO_x emissions are based on South Coast AQMD default emission factors. The emission standards that are presented as concentrations [e.g., parts per million by volume, dry (ppmvd)] are converted to units of pounds per million standard cubic feet (lb/MMscf) according to Equation 1.

$$EF\left(\frac{lb}{MMscf}\right) = \left(\frac{ppm}{10^6}\right) \times HHV \times F - Factor \times Mol\ Wt \times \left(\frac{20.9}{20.9 - O_2\ Conc}\right) / MV \qquad \text{(Eq. 1)}$$

Where:

HHV = Higher Heating Value (= 1,050 Btu/scf)

F-Factor = 8,710 scf/MMBtu

Mol Wt = Molecular weight

O_2 Conc = Oxygen correction (= 15%)

MV = Molar Volume (379 scf/lb-mol at 60°F)

Emission standards that are presented in units of pounds per million British thermal units (lb/MMBtu) are converted to units of lb/MMscf using Equation 2.

$$EF\left(\frac{lb}{MMscf}\right) = EF\left(\frac{lb}{MMBtu}\right) \times HHV \qquad \text{(Eq. 2)}$$

The resulting emission factors are summarized in Table 4-1.

Table 4-1: Criteria Pollutant Emission Factors

Pollutant	Emission Standard (ppmvd @ 15% O_2)	Emission Factor (lb/MMscf)	Basis
NO_x	11	43.3	Rule 1110.2, BACT
CO	70	168	BACT
VOC	30	41.0	Rule 1110.2, BACT
PM_{10}	–	10.00	South Coast AQMD Default
SO_x	–	0.60	South Coast AQMD Default

4.1.2 Sample NO_x Emission Calculations

The NO_x emission calculation methodology is explained below. The NO_x emissions from one compressor gas lean-burn engine are shown to illustrate the methodology and assumptions used in the calculations. The calculations for the remainder of the pollutants are similar; only the emission factor changes.

Average hourly uncontrolled and controlled emissions have no regulatory significance and are not calculated. Maximum hourly uncontrolled and maximum daily uncontrolled emissions have no regulatory significance and are not calculated.

Maximum Hourly Controlled (**MHC**)

Hourly controlled emissions are based on the maximum fuel consumption rate and the controlled NO_x emission factor (converted to units of lb/MMscf using the HHV of the fuel).

$$MHC\ (lb/hr) = MMBtu/hr \times NOx\ EF\ (lb/MMscf) \div HHV\ (Btu/SCF)$$

MHC = (36.84 MMBtu/hr x 43.3 lb/MMscf) / 1,050 Btu/scf = 1.52 lb/hr

Maximum Daily Controlled (**MDC**)

Daily controlled emissions are based on the maximum hourly controlled emission rate for 24 hours per day.

$$MDC\ (lb/day) = MHC \times 24\ hr/day$$

MDC = 1.52 lb/hr x 24 hr/day = 36.4 lb/day

Average Annual (**AA**)

Annual Average (controlled) emissions are based on the maximum daily controlled emissions for 365 days per year.

$$AA = MDC \times 365\ day/yr$$

AA = 36.40 lb/day x 365 day/yr = 13,292 lb/yr

30-Day Average (**30-DA**)

The 30-DA is based on 30 days of operation per month.

$$30\text{-}DA = \frac{MDC \times 30\ day/mo}{30\ day/mo}$$

30-DA = 36.40 lb/day x 30/30 = 36.4 lb/day

4.1.3 Summary of Criteria Pollutant Emissions

Criteria pollutant emissions for one compressor gas lean-burn engine are summarized in Table 4-2; emissions for the remaining units are identical. Detailed calculations are provided in Appendix F.

Table 4-2: Summary of Criteria Pollutant Emissions – One Engine

Pollutant	MHC (lb/hr)	MDC (lb/day)	AA (lb/yr)	30-DA (lb/day)
NO_x	1.52	36.4	13,292	36.4
CO	5.88	141	51,487	141
VOCs	1.44	34.5	12,609	34.5
PM_{10}	0.35	8.4	3,073	8.4
SO_x	0.02	0.51	184	0.51

4.1.4 Toxic Air Contaminant Emissions – Methodology

TAC emissions will occur due to the combustion of natural gas in the compressor gas lean-burn engines. Emission factors for combustion contaminants are default emission factors from the South Coast AQMD Annual Emission Report program.[4] A control efficiency for the oxidation catalyst of 80%[5] is applied to the published factors to estimate hourly and annual controlled TAC emissions. TAC emission factors are summarized in Table 4-3.

In addition, ammonia will be emitted via ammonia slip due to operation of the SCRs. The ammonia emission factor was calculated based on an ammonia slip of 10 parts per million by volume (ppmv) (see Section 5.7.1.1 and Appendix G). The concentration limit was converted to an emission factor using Equation 1, with the result being 14.54 lb/MMscf.

4.1.5 Sample TAC Emission Calculations

TAC emissions were calculated using the emission factors from Table 4-3. Sample calculations for benzene emissions from one compressor gas lean-burn engine are presented below to illustrate the methods and assumptions used in the calculations. The calculations for the remaining TACs are similar.

[4] South Coast Air Quality Management District, AB 2588 Quadrennial Air Toxics Emissions Inventory Reporting Procedures, Annual Emissions Reporting Program, June 2020, Appendix B, Table B-1 values except compounds not found in natural gas, do not have a test method, or do not have risk factors per the California Office of Environmental Health Hazard Assessment (OEHHA).

[5] Based on the average hazardous air pollutant (HAP) control efficiency specified by DCL for oxidation catalysts. Source: https://www.dcl-inc.com/catalyst-specifications/.

Table 4-3: TAC Emission Factors

Pollutant	CAS No.	Uncontrolled Emission Factor (lb/MMscf)
Benzene	71432	0.449
1,3-Butadiene	106990	0.272
Formaldehyde	50000	53.9
Benzo(b)fluoranthene	205992	0.000169
Chrysene	218019	0.000707
Naphthalene	91203	0.0759
Acetaldehyde	75070	8.53
Ammonia	7664417	14.54
Ethylbenzene	100414	0.0405
n-Hexane	110543	1.13
Methanol	67561	2.55
Styrene	100425	0.0241
Toluene	108883	0.416
Xylene	1330207	0.188

Maximum Hourly Uncontrolled (**MHU**)

Hourly uncontrolled emissions are based on the maximum fuel consumption rate (converted to units of MMscf using the HHV of the fuel) and the uncontrolled emission factor.

$$MHU\ (lb/hr) = MMBtu/hr \times Benzene\ EF\ (lb/MMscf) \div HHV\ (Btu/scf)$$

MHU = (36.84 MMBtu/hr x 0.449 lb/MMscf) / 1,050 Btu/scf = 1.58 E-02 lb/hr

Maximum Hourly Controlled (**MHC**)

The controlled emissions were calculated by applying the control efficiency for the oxidation catalyst of 80% to the uncontrolled emissions.[6]

$$MHC = MHU\ x\ (1 - CE)$$

MHC = 1.58 E-02 x (1 – 0.80) = 3.15 E-03 lb/hr

Maximum Annual Controlled (**MAC**)

Annual emissions are based on the maximum hourly emissions for 8,760 hours per year.

$$MAC\ (lb/yr) = MHC\ x\ 8{,}760\ hr/yr$$

MAC = 3.15 E-03 lb/hr x 8,760 hr/yr = 27.6 lb/yr

4.1.6 TAC Emissions Summary

TAC emissions are summarized for one engine in Table 4-4; emissions for the other three engines are identical. Detailed emission calculations are provided in Appendix F.

[6] The control efficiency is not applied to the ammonia emissions.

Table 4-4: Summary of TAC Emissions – One Compressor Gas Lean-Burn Engine

Pollutant	MHU (lb/hr)	MHC (lb/hr)	MAC (lb/yr)
Benzene	1.58E-02	3.15E-03	2.76E+01
1,3-Butadiene	9.54E-03	1.91E-03	1.67E+01
Formaldehyde	1.89E+00	3.78E-01	3.31E+03
Benzo(b)fluoranthene	5.93E-06	1.19E-06	1.04E-02
Chrysene	2.48E-05	4.96E-06	4.35E-02
Naphthalene	2.66E-03	5.33E-04	4.66E+00
Acetaldehyde	2.99E-01	5.98E-02	5.24E+02
Ammonia	5.10E-01	5.10E-01	4.47E+03
Ethylbenzene	1.42E-03	2.84E-04	2.49E+00
n-Hexane	3.96E-02	7.93E-03	6.95E+01
Methanol	8.95E-02	1.79E-02	1.57E+02
Styrene	8.45E-04	1.69E-04	1.48E+00
Toluene	1.46E-02	2.92E-03	2.56E+01
Xylene	6.60E-03	1.32E-03	1.16E+01

4.2 Aqueous Urea Storage Tank

The 8,000-gallon aqueous urea storage tank will have negligible emissions. Liquid urea solution will be delivered by the supplier via an unloading skid and truck. Urea has a very low vapor pressure (1.2×10^{-5} mm Hg at 25°C) at ambient temperature, and thus, fugitive emissions will be negligible. Further, although urea decomposes to ammonia at high temperatures in the engine exhaust streams, ammonia emissions at ambient temperature will be negligible.

5.0 RULE COMPLIANCE EVALUATION

5.1 Regulation II – Permits

5.1.1 Rule 212, Standards for Approving Permits and Issuing Public Notice

Rule 212(c) requires public notice for:

- (c)(1) A project requesting installation of a new source or modification of an existing source, if the source is located within 1,000 feet of the outer boundary of a school;
- (c)(2) A project resulting in a new or modified facility with onsite emission increases exceeding any of the daily maximums from Rule 212(g); or
- (c)(3) A project requesting installation of a new source or modification of an existing source, if the emission increases result in exposure to Maximum Individual Cancer Risk (MICR) greater than or equal to the applicable thresholds in (c)(3)(A), or substances that pose a potential risk of nuisance.

None of the criteria for issuing public notice are triggered. As discussed in Section 1.1.3, the HRCM Project sources are not located within 1,000 feet of the outer boundary of a school.

Rule 212(g) lists daily maximum emissions changes associated with the project for criteria pollutants.[7] The daily emissions changes are compared to the Rule 212(g) thresholds in Table 5-1. As shown, the daily emissions changes resulting from the HRCM Project are less than the rule limits for NO_x, CO, VOC, PM_{10}, and SO_x.

Table 5-1: Rule 212(g) Threshold Comparison

Pollutant	Rule 212(g) Threshold (lb/day)	Project Change[7] (lb/day)	Exceed Threshold? (Yes/No)
NO_x	40	-2,765	No
CO	220	-2,251	No
VOC	30	-55	No
PM_{10}	30	-13.4	No
SO_x	60	-0.8	No

Rule 212(c)(3)(A) requires public notification for any new or modified permit unit if the increase in emissions of toxic air contaminants results in a maximum individual cancer risk (MICR) greater than or equal to one in a million ($1x10^{-6}$). As shown in Section 5.8, the MICR for each replacement compressor gas lean-burn engine is less than one in a million based on a Tier 4 health risk assessment. Thus, public notice is not required under Rule 212(d).

5.1.2 Rule 218 Series, Continuous Emission Monitoring

The provisions of the Rule 218 series will apply to the CEMS on the replacement compressor gas lean-burn engines once the facility exits the NO_x RECLAIM program. If

[7] Project change is the post-project replacement compressor gas lean burn engine PTE less the pre-project existing compressor gas lean burn engine PTE per the Rule Implementation Guidance – Rule 212, December 19, 2006.

the facility is subject to RECLAIM requirements at the time of installation, the NO_x CEMS will initially meet the requirements of Rule 2012 (see Section 5.9.3). Once the facility exits the RECLAIM program and is no longer subject to Rule 2012, the CEMS will satisfy the Rule 218.2 and 218.3 requirements.

5.1.3 Rule 219, Equipment Not Requiring a Written Permit Pursuant to Regulation II

The purpose of this rule is to identify equipment, processes, or operations that emit small amounts of air contaminants that shall not require written permits, unless such equipment, process, or operation is subject to subdivision (s) – Exceptions. In addition, exemptions from written permit requirements in this rule are only applicable if the equipment, process, or operation is in compliance with subdivision (t) of the rule.

The HRCM Project will construct and/or install new buildings, hydrogen generating and distributing equipment, and equipment to support the replacement compression equipment. The list of equipment that does not require a permit, along with the Rule 219 permit exemption applicable to each device, is provided in Appendix E.

5.2 Regulation III – Fees; Rule 301, Permit Fees

The application processing fees were determined using Rule 301. The identical equipment discount available via Rule 301(c)(1)(E) is applied to three compressor gas lean-burn engines and associated control systems. Application fees are summarized in Table 5-2.

Table 5-2: Application Fees

Equipment/Item	Rule 301 Description	Schedule	Requested Permit Action	Fee
Replacement Compressor Gas Lean-Burn Engine 1	IC Engine, Other, >500 HP	C	Permit Processing	$6,104.08
Control System for Compressor Gas Lean-Burn Engine 1	Control Systems, two in series	C	Permit Processing	$6,104.08
Replacement Compressor Gas Lean-Burn Engine 2	IC Engine, Other, >500 HP	C, identical	Permit Processing	$3,052.04
Control System for Compressor Gas Lean-Burn Engine 2	Control Systems, two in series	C, identical	Permit Processing	$3,052.04
Replacement Compressor Gas Lean-Burn Engine 3	IC Engine, Other, >500 HP	C, identical	Permit Processing	$3,052.04
Control System for Compressor Gas Lean-Burn Engine 3	Control Systems, two in series	C, identical	Permit Processing	$3,052.04
Replacement Compressor Gas Lean-Burn Engine 4	IC Engine, Other, >500 HP	C, identical	Permit Processing	$3,052.04
Control System for Compressor Gas Lean-Burn Engine 4	Control Systems, two in series	C, identical	Permit Processing	$3,052.04
Aqueous Urea Storage Tank	Storage Tank	A	Permit Processing	$2,421.40
			Subtotal	$32,941.80
			Facility Permit Amendment (Rule 301, Table VII)	$2,853.99
			Total	**$35,795.79**

5.3 Regulation IV – Prohibitions

5.3.1 Rule 401, Visible Emissions

Rule 401 prohibits the discharge into the atmosphere from any single source of emissions whatsoever for any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (b)(1)(A) of this rule.

The compressor gas lean-burn engines will burn natural gas or blended natural gas; therefore, visible emissions are not expected from these sources. Visible emissions are not expected from the aqueous urea storage tank. Compliance is expected.

5.3.2 Rule 402, Nuisance

Rule 402 prohibits the discharge of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

The compressor gas lean-burn engines will burn natural gas or blended natural gas and will operate using emissions controls for NO_x, CO, VOCs, and organic TACs. Nuisance is not expected as a result of operating the aqueous urea storage tank. Compliance is expected.

5.3.3 Rule 404, Particulate Matter Concentration

Rule 404 prohibits discharge into the atmosphere of particulate matter in excess of the concentration at standard conditions shown in Table 404(a). The rule prohibits the discharge into the atmosphere, from any source, of particulate matter in excess of 450 milligrams per cubic meter (0.196 grain per cubic foot) in discharged gas calculated as dry gas at standard conditions.

The compressor gas lean-burn engines each have emissions of 0.35 pounds per hour and a heat input of 36.84 MMBtu per hour. The stack concentration of PM_{10} is estimated as follows:

$$Stack\ flow = 36.84\frac{MMBtu}{hr} \times 8{,}710\frac{scf}{MMBtu} \times \frac{20.9}{(20.9-15)} = 1{,}136{,}664\ scf/hr$$

$$Stack\ Concentration = 0.35\frac{lb}{hr} \times 7{,}000\frac{gr}{lb} \div 1{,}136{,}664\frac{scf}{hr} = 0.0022\ gr/dscf$$

For a stack flow of 18,944 standard cubic feet per minute (scfm) (= 1,136,664 scf/hr / 60 min/hr), the rule limit is 0.0598 grain per dscf. The stack concentration of PM_{10} from the compressor gas lean-burn engines is 0.0022 grain per dscf; therefore, compliance is demonstrated.

5.3.4 Rule 407, Liquid and Gaseous Air Contaminants

Rule 407 prohibits the discharge into the atmosphere of CO exceeding 2,000 ppmvd averaged over 15 consecutive minutes, or sulfur compounds which would exist as liquid or

gas at standard conditions, calculated as sulfur dioxide (SO_2) and averaged over 15 consecutive minutes, exceeding 500 ppmv. The provisions of this rule do not apply to emissions from stationary engines pursuant to paragraph (b)(1) of the rule.

5.3.5 Rule 409, Combustion Contaminants

Rule 409 prohibits the discharge from the burning of fuel combustion contaminants exceeding 0.23 gram per cubic meter (0.1 grain per cubic foot) of gas calculated to 12% carbon dioxide (CO_2) at standard conditions averaged over a minimum of 15 consecutive minutes. The provisions of this rule do not apply to emissions from internal combustion engines.

5.3.6 Rule 431.1, Sulfur Content of Gaseous Fuels

The purpose of this rule is to reduce SO_x emissions from the burning of gaseous fuels in stationary equipment requiring a Permit to Operate by the South Coast AQMD. This rule prohibits the transfer, sale, or offer for sale for use in the South Coast AQMD of natural gas containing sulfur compounds calculated as hydrogen sulfide in excess of 16 ppmv.

The proposed compressor gas lean-burn engines will combust natural gas or blended natural gas and will comply with the rule requirements.

5.4 Regulation IX – Standards of Performance for New Stationary Sources

Regulation IX, New Source Performance Standards (NSPS), was adopted by reference to the appropriate section of the Code of Federal Regulations (CFR). These regulations are periodically updated to reflect actions published in the Federal Register (FR) by the United States Environmental Protection Agency (EPA). Applicability of and compliance with federal requirements are discussed in Section 5.12.

5.5 Regulation X – National Emission Standards for Hazardous Air Pollutants

Regulation X, National Emission Standards for Hazardous Air Pollutants (NESHAP), was adopted by reference to 40 CFR Parts 61 and 63. These regulations are periodically updated to reflect actions published in the FR by the EPA. Applicability of and compliance with federal requirements are discussed in Section 5.12.

5.6 Regulation XI – Source-Specific Standards

5.6.1 Rule 1100, Implementation Schedule for NO_x Facilities

The purpose of this rule is to establish the implementation schedule for RECLAIM and former RECLAIM facilities that are transitioning to the command-and-control regulatory structure. This rule applies to any owner or operator of a RECLAIM or former RECLAIM facility that owns or operates equipment that meets the applicability provisions specified in Rule 1110.2. Because the Honor Rancho Storage Field is a RECLAIM facility that operates engines that are subject to Rule 1110.2, Rule 1100 applies to the facility and the HRCM Project.

Rule 1100 provides the implementation schedule for the Rule 1110.2 requirements applicable to the existing compressor gas lean-burn engines. Rule 1100(d)(7) provides that the owner or operator of a facility subject to Rule 1110.2 that elects to meet the NO_x emissions limits specified in Rule 1110.2(d)(1) through replacement or removal of all

existing compressor gas lean-burn engines located at a single facility and use a zero-emission technology for at least 20% of the total HP represented by all existing Rule 1110.2 compressor gas lean-burn engines, shall submit an FWEMCP on or before January 1, 2021, and a PTC application by July 1, 2022 for any equipment in the approved FWEMCP.

On or before 36 months after the PTCs are issued, but no later than 6 months from the commencement of operation of the replacement equipment, the existing compressor gas lean-burn engines must be replaced or removed from service. Commencement of operations is when the equipment is turned over from the EPC contractor to SoCalGas. In the event of a delay in the replacement or removal of equipment, the owner or operator of the facility may request a time extension for implementing the FWEMCP in accordance with Section (d)(7)(C)(i).

SoCalGas submitted a FWEMCP in December 2020 (A/N 626209), included in Appendix C for reference. The FWEMCP was approved by the South Coast AQMD in November 2021. The project scope, as outlined in this PTC application, is consistent with that outlined in the FWEMCP and satisfies the Rule 1100 provision to install replacement units with at least 20% of the replaced horsepower with zero emission technology. Each PTC application for the proposed equipment in the approved FWEMCP is due to South Coast AQMD by July 1, 2022, and this PTC application package submission is timely.

5.6.2 Rule 1110.2, Emissions from Gaseous- and Liquid-Fueled Engines

Rule 1110.2 applies to stationary and portable engines rated over 50 HP and imposes NO_x, VOC, and CO emission limits. However, because the Honor Rancho Storage Field is a NO_x RECLAIM facility, the facility was not previously required to comply with the Rule 1110.2 NO_x emission limits.

With the November 2019 rule amendments, the compressor gas lean-burn engines will be required to meet the Rule 1110.2 emission limit for NO_x per the timeline requirements of Rule 1100. It is for this reason that SoCalGas is proposing to replace the existing compressor gas lean-burn engines with the new compressor gas lean-burn engines equipped with state-of-the-art emissions control systems, which will ensure compliance with the newly applicable NO_x limits required by this rule. Compliance with VOC and CO emission limits will be achieved through the use of oxidation catalysts on each replacement engine. The Rule 1110.2 Inspection & Maintenance Plan will be updated to reflect the replacement equipment and new emission requirements. Monitoring for CO and VOC compliance with emission limits will be conducted via periodic CO compliance checks.

Rule 1110.2 exempts new equipment from the NO_x, VOC, and CO emission limits during the period of initial commissioning, provided the operator takes measures to reduce emissions and the duration of the commissioning to the extent possible. The commissioning period will be from startup to the beginning of the commencement of operations and is expected to take place during the first 180 days after startup. The portion of the commissioning period in which the NO_x, VOC, and CO emissions may exceed the permitted emission limits allowed by Rule 1110.2 is up to 150 operating hours for each replacement compressor gas lean-burn engine.

5.7 Regulation XIII – New Source Review

This regulation sets forth pre-construction review requirements for new, modified, or relocated facilities to ensure that the operation of such facilities does not interfere with progress in attainment of the national ambient air quality standards (NAAQS), and that future economic growth within the South Coast AQMD is not unnecessarily restricted. The specific air quality goal of this regulation is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors. In addition to nonattainment air contaminants, this regulation also limits emissions increases of ammonia and Ozone-Depleting Compounds from new, modified, or relocated facilities by requiring the use of BACT.

5.7.1 Rule 1303, Requirements

The BACT, modeling, and offset requirements of Regulation XIII are addressed in this section for emissions of CO, VOC, PM_{10}, and SO_x. Since the facility is still a RECLAIM facility, New Source Review (NSR) requirements for NO_x are discussed in Section 5.9.

5.7.1.1 Best Available Control Technology

SoCalGas is proposing BACT emissions of 30 ppmvd VOC at 15% O_2, based on Rule 1110.2 requirements. SoCalGas is proposing BACT emissions of 70 ppmvd CO at 15% O_2, based on vendor data and review of the BACT databases for natural gas-fired engines. BACT for SO_x and PM_{10} is the use of natural gas fuel. Because the proposed compressor gas lean-burn engines will be fired on natural gas or blended natural gas, BACT is satisfied. An ammonia slip limit of 10 ppm is proposed. A more exhaustive discussion of the factors influencing the proposed BACT emission limits is provided in Appendix G.

5.7.1.2 Modeling

The modeling requirements for CO and PM_{10} are provided in Rule 1303. Rule 1303 (Appendix A) does not require modeling of VOC and SO_x emissions. Rule 1303(b) requires an applicant for a PTC for a new or modified source which results in a net emissions increase of any nonattainment air contaminant at a facility to substantiate with modeling that the new facility or modification will not cause a violation or make significantly worse an existing violation of any state or national ambient air quality standards at any receptor location, unless otherwise exempt by Rule 1304. The HRCM Project meets the definition of source replacement, as discussed in Section 5.7.2, which provides an exemption from modeling requirements.

5.7.1.3 Offsets

Emission offsets are required as specified in Rule 1303, unless otherwise exempt. The HRCM Project meets the definition of source replacement, as discussed in Section 5.7.2, which provides an exemption from offsets.

5.7.2 Rule 1304, Exemptions

The HRCM Project qualifies for modeling and offsets exemption pursuant to the source replacement provisions of Rule 1304 as described below.

5.7.2.1 Modeling

Rule 1304(a)(1) exempts a new source that is replacing a functionally identical source, or is a functionally identical modification to a source, from modeling requirements if:

1. There is no increase in maximum rating; and
2. The potential to emit (PTE) of any air contaminant will not be greater from the new source than from the replaced source, when the replaced source was operated at the same conditions and as if current BACT were applied.

The proposed replacement engines are functionally identical to the engines being replaced and there is no increase in individual or cumulative engine HP rating or heat rate. As shown in Table 5-3, each of the replacement compressor gas lean-burn engines has a lower HP rating and lower heat input rating compared to each of the existing compressor gas lean-burn engines.

Table 5-3: Comparison of Pre- and Post-Project Equipment Rating

Engine Type	Number of Engines	Rating (HP)	Heat Rate (MMBtu/hr)
Existing Delavals MU#1 through MU#5 (Permit units D4-D8)	5	5,500 each 27,500 total	41.17 each
Replacement Compressor Gas Lean-burn Engines	4	5,000 each 20,000 total	36.84 each

As shown Table 5-4, the post-project PTE will not be greater for any air contaminant from the replacement compressor gas lean-burn engines than the BACT-adjusted PTE from the existing compressor gas lean-burn engines. Therefore, the HRCM Project is exempt from modeling requirements by satisfying the exemption criteria specified in Rule 1304(a)(1). South Coast AQMD staff preliminarily reviewed the proposed Rule 1304(a)(1) replacement exemption applicability and agreed that the proposed HRCM Project qualifies as a replacement and is therefore exempt from modeling.

Table 5-4: Comparison of Pre- and Post-Project BACT-Adjusted PTE (TPY)

Calculation Basis	CO	VOC	SO_x	PM_{10}
Pre-Project BACT-Adjusted PTE[1]	143.9	35.2	0.5	8.6
Post-Project PTE[1]	103.0	25.2	0.4	6.1
Change in BACT-Adjusted PTE[1]	-40.9	-10.0	-0.1	-2.5

1. Post-project PTE and pre-project BACT-Adjusted PTE are calculated as specified in Rule 1304(a)(1) and are based on existing and proposed compressor gas lean-burn engine emissions only.

5.7.2.2 Offsets

As shown in Section 5.7.2.1, the HRCM Project meets the requirements of the replacement exemption for offsets specified in Rule 1304(a)(1). The HRCM Project is being conducted to comply with South Coast AQMD rule requirements and does not result in an increase in the maximum rating of the equipment. Additionally, as a regulatory compliance project, the HRCM Project qualifies for the offset exemption per Rule 1304(c)(4).

5.7.3 Rule 1313, Permits to Operate

Rule 1313 provides additional requirements for permits to operate. As discussed in Section 5.7.2, the proposed HRCM Project meets the South Coast AQMD requirements for a functionally identical replacement. Per 1313(d): "Start-up: for a new source or modification which will be a replacement, in whole or part, for an existing source on the same or contiguous property, a maximum of 90 days may be allowed as a start-up period for simultaneous operation of the subject sources."

The start-up period, defined by the District to have a maximum duration of 90 days, is part of the longer commissioning period which typically takes 3 to 6 months. The commissioning period includes tuning and performing load testing of the engines; and then subsequently installing and tuning of the emission control equipment. This period is followed by source testing to evaluate compliance with the permitted emission limits. Once the engines demonstrate compliance with the permitted emission limits and SoCalGas takes ownership of the equipment from the EPC contractor, operations may commence as dictated by the SoCalGas Gas Control department.

Throughout the 90-day startup period, as allowed by Rule 1313(d), the existing engines and the replacement engines may operate concurrently. The existing engines will remain for the time period allowed per the provisions in Rule 1100(d)(7) in case the replacement units become inoperable or malfunction.

5.7.4 Rule 1325, Federal $PM_{2.5}$ New Source Review Program

Rule 1325 applies to any new major polluting facility, major modifications to a major polluting facility, and any modification to an existing facility that would constitute a major polluting facility in and of itself that will emit $PM_{2.5}$ or its precursors, as defined in the rule, located in areas federally designated pursuant to 40 CFR Part 81.305 as nonattainment for $PM_{2.5}$. $PM_{2.5}$ precursors as defined in Rule 1325 are NO_x, SO_x, VOC, and ammonia (NH_3). A Major Polluting Facility means, on a pollutant-specific basis, any emissions source located in a federal $PM_{2.5}$ nonattainment area which has actual emissions of or the PTE for $PM_{2.5}$ or its precursors at or above 70 tons per year (TPY) per pollutant. Although the Honor Rancho Storage Field $PM_{2.5}$ PTE is currently approximately 10.6 TPY which is less than the 70 TPY threshold, the existing facility PTE for NO_x is over 530 TPY; thus, the facility is deemed an existing major polluting facility of NO_x.

With respect to major modifications, this rule applies on a pollutant-specific basis to emissions of $PM_{2.5}$ and its precursors in areas federally designated as nonattainment for $PM_{2.5}$, for which 1) the source is major, 2) the modification results in a significant increase, and 3) the modification results in a significant net emissions increase.

Because the existing facility is deemed a major polluting facility for NO_x, it is necessary to determine if the proposed modification is a significant increase or results in a significant Net Emissions Increase (NEI) of $PM_{2.5}$ or its precursors. This analysis is presented in Table 5-5. As shown in Table 5-5, the HRCM Project results in a decrease in the PTE for $PM_{2.5}$ and its precursors except for NH_3, because NH_3 will be emitted as slip due to the addition of the SCR system to meet Rule 1110.2 NO_x emission requirements. While there will be a small increase in NH_3 emissions, there will be a substantial decrease in $PM_{2.5}$ and the precursors NO_x, SO_2, and VOC that more than compensates for the NH_3 increase,

yielding a substantial reduction overall. When calculating the NEI based on Rule 1306(d)(2)(B) methodology, which requires the use of BACT-adjusted historical Actual Emissions (HAE) for sources that were constructed prior to the implementation of Regulation XIII, the NEI is not significant.

In summary, although the facility is an existing major polluting facility for NO_x, the HRCM Project is not a major modification as it will not cause a significant increase in PTE or NEI of $PM_{2.5}$ or its precursors. Therefore, the provisions of Rule 1325, including the offset requirements, do not apply to the HRCM Project.

Table 5-5: Rule 1325 Significant Increase Thresholds Evaluation

Pollutant	Rule 1325 Significant Increase (TPY)	HRCM Project PTE[1] (TPY)	Change in PTE (Post-Project – Pre-Project)[2] (TPY)	Significant PTE Increase?	HRCM Project NEI[3] (TPY)	Significant NEI?
NO_x	40	26.6	(505)	No	13.8	No
SO_2	40	0.4	(0.1)	No	0.2	No
VOC	40	25.2	(10.0)	No	13.1	No
NH_3	40	8.9	8.9	No	8.9	No
$PM_{2.5}$[4]	10	6.1	(2.4)	No	3.2	No

1. HRCM Project PTE calculations are based on the main compressor gas lean-burn engines only.
2. A comparison of HRCM Project pre-project and post-project PTE is provided in Appendix F.
3. HRCM Project NEI calculations are based on pre-project Rule 1306(c)-Adjusted Historic Emissions compared to post-project PTE as specified in Rule 1306(d)(2)(B). The calculations are provided in Appendix F.
4. $PM_{2.5}$ assumed equal to PM_{10}.

5.8 Regulation XIV – Toxics and Other Non-Criteria Pollutants; Rule 1401, New Source Review for Air Toxics

Rule 1401 imposes limits for maximum individual cancer risk (MICR), cancer burden, and non-cancer acute and chronic hazard indices (HIA and HIC, respectively) from new permit units, relocations, or modifications to existing permit units that emit TACs listed in Table I of this rule. This rule establishes allowable risks for permit units requiring new permits pursuant to Rule 201 or 203.

The HRCM Project is expected to result in TAC emissions from the combustion of natural gas and blended natural gas, and ammonia emissions due to ammonia slip. Potential health risk impacts are evaluated using the Tier 4 methodology and the South Coast AQMD Risk Tool (V1.103) R040919 – South Coast AQMD Procedure 8.1. The distances to the nearest residential and commercial receptors are 3,600 feet and 1,500 feet, respectively. The nearest non-residential sensitive receptor is located approximately 1,800 feet to the east of the project site.

A summary of Tier 4 health risk results is provided in Table 5-6. The results presented are the maximum risk results for an individual replacement compressor gas lean-burn engine as required by Rule 1401. A report detailing the health risk assessment (HRA) conducted is provided in Appendix H.

Table 5-6: Summary of Maximum Health Risk Assessment Results for Each Individual Compressor Gas Lean-Burn Engine[1]

Risk Parameter	Result (unitless)	Rule 1401 Threshold (unitless)	Pass/Fail
MICR	5.98E-07	10E-06[2]	Pass
Maximum Cancer Risk - Worker	7.58E-08	10E-06[2]	Pass
HIA – Residential	3.17E-02	1.0	Pass
HIA – Worker	2.81E-02	1.0	Pass
HIC – Residential	3.95E-08	1.0	Pass
HIC – Worker	6.03E-03	1.0	Pass

1. The individual replacement compressor gas lean-burn engine with the highest potential health impact is shown in the table above. The Tier 4 health risk assessment results for each individual compressor gas lean-burn engine are provided in Appendix H along with the total project impacts.
2. The 10-per-million threshold applies when T-BACT is installed. The proposed oxidation catalysts satisfy T-BACT requirements.

5.9 Regulation XX – Regional Clean Air Incentives Market

RECLAIM is a market-based incentive program designed to allow facilities flexibility in achieving emissions reduction requirements for NO_x using methods which include, but are not limited to, add-on controls, equipment modifications, and the purchase of RECLAIM Trading Credits (RTCs). The Honor Rancho Storage Field is an existing NO_x RECLAIM facility.

The South Coast AQMD is transitioning RECLAIM facilities from the RECLAIM market-based program to a command-and-control regime. As such, the South Coast AQMD released a second draft of the RECLAIM Transition Plan (Plan) on December 10, 2020. The Plan indicates that the EPA's position is that RECLAIM facilities cannot exit out of RECLAIM until all Landing Rules are approved by EPA. Therefore, the HRCM Project must continue to comply with Rule 2005, New Source Review for RECLAIM, for NO_x emissions, as well as Regulation XIII, New Source Review, for other criteria pollutants. The Plan also indicates that existing RECLAIM facilities must comply with the Landing Rules once adopted, as well as continuing to comply with the RECLAIM rules.

Applicability of, and compliance with, the RECLAIM rules is discussed herein, assuming that the HRCM Project occurs prior to the sunset of the NO_x RECLAIM program. For the purposes of Regulation XX, a "source" is defined in Rule 2000(c)(71) as "any individual unit, piece of equipment or process which may emit an air contaminant and which is identified, or required to be identified, in the RECLAIM Facility Permit." Therefore, references to "source" in Regulation XX mean an individual emissions unit or process, and not to the entire stationary source or facility.

5.9.1 Rule 2004, Requirements

Rule 2004 establishes the requirements for operating under the RECLAIM program. The Honor Rancho Storage Field is an existing RECLAIM facility and continued compliance with RECLAIM rules is expected.

5.9.2 Rule 2005, New Source Review for RECLAIM

Rule 2005 sets forth pre-construction review requirements for new facilities subject to the requirements of the RECLAIM program, for modifications to RECLAIM facilities, and for

facilities which increase their allocation to a level greater than their starting allocation plus non-tradable RTCs. The purpose of this rule is to ensure that the operation of such facilities does not interfere with progress in attainment of the NAAQS and that future economic growth in the South Coast AQMD is not unnecessarily restricted.

5.9.2.1 Best Available Control Technology

BACT is defined as the most stringent emission limitation or control technique which:

- Has been achieved in practice for such category or class of source;
- Is contained in any state implementation plan approved by the EPA for such category or class of source; or
- Is any other emission limitation or control technique, including process and equipment changes of basic or control equipment, which is technologically feasible for such class or category of source or for a specific source, and cost-effective as compared to Air Quality Management Plan measures or adopted District rules.

Although Rule 1110.2 was adopted as a Best Available Retrofit Control Technology (BARCT) standard, SoCalGas is not aware of any more stringent standard that has been achieved in practice or is technologically feasible and cost-effective for compressor gas lean-burn engines. Therefore, once Rule 1110.2 has been approved into the state implementation plan by the EPA, the NO_x emission limit of Rule 1110.2 (i.e., 11 ppmvd at 15% O_2) will constitute BACT. SoCalGas is proposing to meet 11 ppmvd at 15% O_2; therefore, BACT is satisfied.

5.9.2.2 Modeling

Rule 2005(c)(1)(B) requires a demonstration that the installation of a new source which results in an emission increase of NO_x will not result in a significant increase in the air quality concentration for NO_2. Rule 2005(d) indicates that an increase in emissions occurs if a source's maximum hourly potential to emit (PTE) immediately prior to the proposed modification is less than the source's post-modification maximum hourly PTE.

Table 5-7 provides the PTE of one of the five existing engines compared to the PTE for one of the four proposed replacement engines. As shown, the HRCM Project will result in a substantial reduction in the NO_x PTE due to a substantial decrease in NO_x from the implementation of BACT on each of the new compressor gas lean-burn engines, both on a pounds per day and tons per year basis. There will also be a substantial decrease in NO_x PTE for the entire project since the existing facility has five natural gas-fired compressor gas lean burn engines which are proposed to be replaced by four natural gas-fired compressor gas lean burn engines and two EDCs. Therefore, since the replacement of the compressor gas lean-burn engines does not result in an emission increase of NO_x, modeling is not required to satisfy Rule 2005(c)(1).

Table 5-7: Comparison of Pre- and Post-Project NO_x PTE for Each Engine

Calculation Basis	HP	NO_x Emissions	
	(per engine)	(lb/day)	(tpy)
Pre-Project PTE	5,500	582	106.2
Post-Project PTE	5,000	36.4	6.6
Change in PTE	–	-545.6	-99.6

Furthermore, pursuant to Rule 2005(k)(1), functionally identical source replacements are exempt from the modeling requirements of Rule 2005(c)(1)(B).

The proposed HRCM Project involves replacing five 5,500-HP compressor gas lean-burn engines with four 5,000-HP compressor gas lean-burn engines. The replacement engines will perform the same function as the existing engines and the rated capacity (HP) of each replacement engine is less than the rated capacity of each existing engine. The proposed HRCM Project meets the requirements for functionally identical source replacement and the modeling exemption of Rule 2005(k)(1).

In conclusion, the HRCM Project does not require NO_x modeling since the equipment-by-equipment NO_x PTE decreases (i.e., there is not an increase in NO_x emissions) and the proposed equipment is a functionally identical source replacement.

5.9.2.3 RECLAIM Trading Credits

The Executive Officer may not approve an application for a facility permit amendment to authorize operation of a new or modified source which results in an emission increase as defined in subdivision (d), unless the applicant demonstrates that the facility holds sufficient RTCs to offset the annual emissions increase for the first year of operation at a 1-to-1 ratio.

The post-HRCM Project NO_x emissions (PTE basis) for the compression equipment are estimated to be 53,168 pounds per year. The facility RTC holdings (as of November 9, 2021) for 2025 and subsequent years are 75,890 pounds per year. Based on recent facility emissions, the NO_x emissions not associated with the existing compressor engines that would be replaced are less than 2 tons per year. Thus, the facility has sufficient RTC holdings for the first year of operation.

5.9.3 Rule 2012, Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NO_x) Emissions

Rule 2012 establishes the monitoring, reporting, and recordkeeping requirements for NO_x emissions under the RECLAIM program. The provisions of this rule apply to any RECLAIM NO_x source, including, but not limited to, internal combustion engines.

A major NO_x source means any internal combustion engine with a rated brake horsepower greater than or equal to 1,000 HP and operating more than 2,190 hours per year. With a rating of 5,000 HP, the proposed compressor gas lean-burn engines are major sources.

This rule requires that the facility permit holder of a major NO_x source install, maintain, and operate a direct monitoring device for each major NO_x source to continuously measure

the concentration of NO_x emissions and all other applicable variables specified in Table 2012-1 and Appendix A, Chapter 2, Table 2-A.[8]

The facility permit holder of a major NO_x source must report emissions as follows:

- Install, maintain, and operate a reporting device to electronically report total daily mass emissions of NO_x and daily status codes to the District Central NO_x Station for each major NO_x source. Data shall be reported by 5:00 p.m. the following day.
- Submit Monthly Emissions Reports aggregating NO_x emissions from major sources within 15 days following the end of each calendar month.

A CEMS meeting the requirements of Rule 2012 and Appendix A will be installed to monitor NO_x emissions from each engine, using O_2 as the reference gas unless the facility exits the RECLAIM program prior. Once the CEMS is installed and operational, emissions will be reported, as required. An application for the CEMS will be submitted at a later date, once the CEMS equipment has been selected for the HRCM Project.

5.10 Regulation XXX – Title V Permits

Regulation XXX establishes the Title V permit program within the South Coast AQMD. The Honor Rancho Storage Field is a Title V facility.

5.10.1 Rule 3000, General

The HRCM Project is a significant permit revision per Rule 3000(b)(31)(I) because the HRCM Project will install replacement equipment that is subject to an NSPS pursuant to 40 CFR Part 60, or a NESHAP pursuant to 40 CFR Part 61 or 40 CFR Part 63. Specifically, the replacement compressor gas lean-burn engines will be subject to 40 CFR 60, Subpart JJJJ, as well as 40 CFR Part 63, Subpart ZZZZ.

For a significant permit revision, the Executive Officer shall issue a permit or deny a permit application within 18 months after receipt of a complete application pursuant to subdivision (c) of this rule.

5.10.2 Rule 3006, Public Participation

Rule 3006 establishes public notice and public participation requirements for Title V permitting projects. Since the HRCM Project is a significant permit revision, the proposed project is subject to the public notification and public participation requirements of Rule 3006. The public notification procedures include South Coast AQMD posting a notice of the proposed Title V permit on the public website and providing notice to interested parties subscribed to the mailing list. At least 30 days must be provided for public comment. If a public hearing is not proposed by South Coast AQMD, any person may request a proposed public hearing within 15 days of the date of posting.

[8] The proposed NO_x CEMS would be subject to Rules 218, 218.1, 218.2, and 218.3, or would be subject to Rule 2012 pursuant to RECLAIM, depending on when the RECLAIM sunset is completed relative to the installation date of the combustion equipment and associated CEMS.

5.11 California Requirements

5.11.1 California Accidental Release Prevention (CalARP) Program

The purpose of the CalARP Program is to prevent the accidental release of regulated substances. The CalARP Program includes the federal Chemical Accident Prevention Provisions (40 CFR Part 68) with certain additions specific to the State pursuant to Article 2, Chapter 6.95 of the Health and Safety Code (HSC). The list of regulated substances is found in Section 2770.5 of Title 19 of the California Code of Regulations.

Stationary sources with more than a threshold quantity of a regulated substance are evaluated to determine the potential for, and impacts of, accidental releases from that covered process. Under conditions specified by the HSC, the owner or operator of a stationary source may be required to develop and submit a Risk Management Plan (RMP).

The total quantity of hydrogen stored onsite will be less than 10,000 pounds; therefore, the proposed hydrogen processes are not subject to the CalARP RMP requirements. In addition, aqueous urea solution is not subject to the CalARP RMP requirements as it is not a regulated substance.

5.11.2 California Environmental Quality Act (CEQA)

CEQA requires public agencies and local governments to evaluate, minimize, and disclose the environmental impacts of a project. The primary component of the HRCM Project, i.e., the replacement of five existing compressor gas lean-burn engines, was analyzed by the South Coast AQMD in the Subsequent Environmental Assessment (SEA) prepared for the implementation of Rules 1110.2/1100. The completed Form 400-CEQA is included in Appendix B. Additional information is provided with the form, as appropriate.

5.12 Federal Requirements

5.12.1 40 CFR 60 Subpart A – General Provisions

The provisions of 40 CFR 60 apply to the owner or operator of an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

Subpart A contains the administrative requirements for any facility subject to other 40 CFR 60 subparts. This subpart requires:

- Pre-construction review;
- Notification requirements; and
- Source test requirements.

The pre-construction review and notification requirements are satisfied via the South Coast AQMD permitting process. In addition, source tests required by the South Coast AQMD will satisfy the requirements of this subpart.

5.12.2 40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark-ignition engines as specified in paragraphs (a)(1) through (6) of the rule. The rule applies to spark-ignition engines that are greater than 25 HP and were constructed after 2006, although later dates apply to specific engines.

The proposed compressor gas lean-burn engines will be subject to this subpart. The emission standards of Section 60.4233 are listed in Table 5-7. As shown in Table 5-8, the controlled emission factors for NO_x, CO, and VOCs satisfy the emission standards of Section 60.4233. Subpart JJJJ does not impose emission standards for other pollutants such as PM_{10} or SO_x.

Table 5-8: 40 CFR 60 Subpart JJJJ Emissions Standards –Engines

Pollutant	Emission Standard (ppmvd)	Controlled Emission Factors (ppmvd)	Complies? (Yes/No)
NO_x	82	11	Yes
VOCs	60	30	Yes
CO	270	70	Yes

Subpart JJJJ also establishes administrative requirements pursuant to Section 60.4245. These include maintaining records to document that notifications were submitted, records of maintenance conducted on the engines, and documentation that the engine meets the emission standards. The applicant is aware of and will comply with the recordkeeping provisions of the regulation.

5.12.3 40 CFR 63 Subpart A – General Provisions

Subpart A of 40 CFR 63 establishes the administrative requirements applicable to sources subject to source-specific NESHAPs. This subpart requires:

- Pre-construction review and notification;
- Performance testing; and
- Notification requirements.

The pre-construction review and notification requirements are satisfied via the South Coast AQMD permitting process. Initial performance testing, as specified in 40 CFR 63 Subpart ZZZZ, is required within 180 days of startup.

5.12.4 40 CFR 63 Subpart ZZZZ – National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR 63, Subpart ZZZZ – National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines applies to stationary reciprocating internal combustion engines (RICEs) at a major or area source of Hazardous Air Pollutant (HAP) emissions. The Honor Rancho Storage Field has a PTE of HAP emissions above the major source threshold. The HRCM Project will reduce HAP emissions to below the major source threshold. Historically, the EPA's "Once In, Always In" policy dictated that once a facility was classified as a major source, it could not revert to an area source by

reducing emissions. SoCalGas is currently reviewing recent revisions by EPA to 40 CFR 63.1(c)(6) that would allow a major source to become an area source if the potential to emit HAPs is reduced to below the major source threshold. SoCalGas is not requesting to reclassify this source at this time, and thus, the facility will continue to be categorized as a major source of HAP.

Pursuant to Section 63.6600, a new four-stroke lean-burn (4SLB) stationary RICE with a site rating of more than 500 BHP located at a major source must meet the following emission limitations:

- Reduce CO emissions by 93% or more; or
- Limit the concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15% O_2.

SoCalGas proposes to comply with the 93% CO reduction emission limitation by installing oxidation catalysts. The following operating limitations also apply:

- Maintain the oxidation catalyst so that the pressure drop across the catalyst is within 2 inches of water at 100% load plus or minus 10% from the pressure drop across the catalyst that was measured during the initial performance test; and
- Maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450°F and less than or equal to 1,350°F.

In addition to the requirements above, Section 63.6600 requires an initial performance test and ongoing compliance testing to demonstrate compliance with the emission limits. For 4SLB engines complying with the CO emission reduction requirements and not utilizing a CEMS, subsequent performance tests must be conducted semiannually, and the frequency may be reduced to annually following two consecutive compliant performance tests. The applicant is aware of and will comply with the recordkeeping and monitoring provisions of the regulation.

5.12.5 40 CFR 64 – Compliance Assurance Monitoring

Compliance assurance monitoring (CAM) is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act for large emissions units that rely on pollution control device equipment to achieve compliance. Monitoring is conducted to determine that control measures, once installed or otherwise employed, are properly operated and maintained so that they continue to achieve a level of control that complies with applicable requirements. CAM establishes monitoring for the purpose of (1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that the cause or causes of the excursions are corrected.

The first step in the CAM process is the determination of the applicability of CAM to each emissions unit on a pollutant-specific basis. Section 64.2 of the CAM rule specifies the criteria for making this determination, and Table 5-9 summarizes the applicability requirements for Part 64. Table 5-10 summarizes the CAM Rule exemptions. If the unit does not meet any of the exemption criteria in Table 5-10 and satisfies all of the

applicability requirements listed in Table 5-9, the unit is subject to CAM. Otherwise, 40 CFR 64 does not apply to the emissions unit. It should be emphasized that the applicability determination is made on a pollutant-by-pollutant basis for each emissions unit.

Table 5-9: Applicability Requirements for CAM

40 CFR 64 Reference	Requirement
§64.2(a)	Unit is located at major source that is required to obtain a Part 70 or 71 permit.
§64.2(a)(1)	Unit is subject to emission limitation or standard for the applicable pollutant.
§64.2(a)(2)	Unit uses a control device to achieve compliance (See § 64.1 for definition of control device).
§64.2(a)(3)	Potential pre-control emissions of applicable pollutant from unit are at least 100 percent of major source amount.
§64.2(a)(b)	Unit is not otherwise exempt (See Table 5-8 for list of specific exemptions).

Table 5-10: Summary of CAM Rule Exemptions

40 CFR 64 Reference	Exempted Emission Limits or Standards
§ 64.2(b)(1)(I)	Post-11/15/90 NSPS or NESHAP.
§ 64.2(b)(1)(ii)	Stratospheric ozone protection requirements.
§ 64.2(b)(1)(iii)	Acid Rain Program requirements.
§ 64.2(b)(1)(iv)	Emission limitations, standards, or other requirements that apply solely under an approved emission trading program.
§ 64.2(b)(1)(v)	Emissions cap that meets requirements of § 70.4(b)(12).
§ 64.2(b)(1)(vi)	Emission limitations or standards for which a Part 70 or 71 permit specifies a continuous compliance determination method that does not use an assumed control factor.

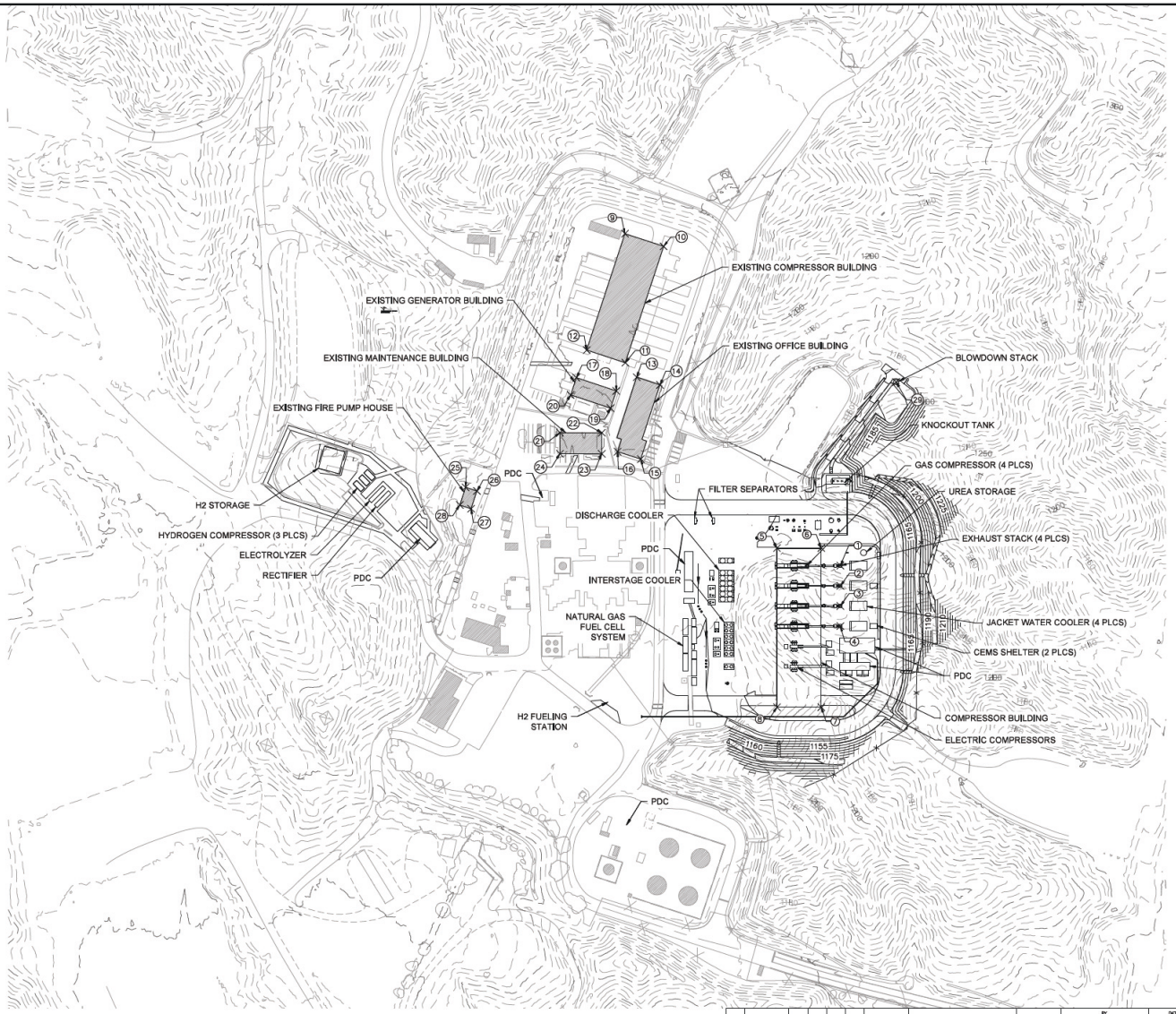
Emissions of NO_x, VOC, and CO from the compressor gas lean-burn engines are subject to a post-1990 NSPS (i.e., Subpart JJJJ), so CAM is not applicable to NO_x, VOC, and CO [per Section 64.2(b)(1)(I)]. There is no add-on control device for SO_x and PM_{10}, so CAM is not applicable to SO_x and PM_{10} [per Section 64.2(a)(2)]. Accordingly, the proposed HRCM Project is not subject to CAM requirements.

5.12.6 40 CFR 68 – Chemical Accident Prevention Provisions

40 CFR 68 implements the federal RMP requirements. The federal RMP requirements apply to processes that use aqueous ammonia at 20% or greater concentration. The proposed Project will use aqueous urea; therefore, 40 CFR 68 does not apply.

The total quantity of hydrogen stored onsite will be less than 10,000 pounds, and therefore, the proposed hydrogen processes are not subject to the federal RMP requirements.

APPENDIX A – FACILITY LAYOUT DIAGRAM



SITE PLAN POINT COORDINATE TABLE			
NUMBER	UTM NORTHING	UTM EASTING	LOCATION DESCRIPTION
1	3812748.380	354347.764	CL STACK
2	3812736.189	354347.646	CL STACK
3	3812723.998	354347.527	CL STACK
4	3812711.809	354347.407	CL STACK
5	3812759.424	354309.503	BLDG CORNER
6	3812759.160	354336.322	BLDG CORNER
7	3812662.855	354335.375	BLDG CORNER
8	3812663.118	354308.566	BLDG CORNER
9	3812950.557	354219.350	BLDG CORNER
10	3812942.658	354242.679	BLDG CORNER
11	3812872.450	354218.791	BLDG CORNER
12	3812880.350	354195.461	BLDG CORNER
13	3812863.635	354225.577	BLDG CORNER
14	3812858.869	354239.645	BLDG CORNER
15	3812814.080	354228.864	BLDG CORNER
16	3812818.692	354213.594	BLDG CORNER
17	3812863.718	354189.080	BLDG CORNER
18	3812855.470	354213.142	BLDG CORNER
19	3812845.065	354209.576	BLDG CORNER
20	3812853.313	354185.514	BLDG CORNER
21	3812830.499	354178.792	BLDG CORNER
22	3812830.180	354204.166	BLDG CORNER
23	3812817.457	354204.006	BLDG CORNER
24	3812817.776	354178.632	BLDG CORNER
25	3812798.058	354121.376	BLDG CORNER
26	3812795.742	354128.179	BLDG CORNER
27	3812785.065	354124.544	BLDG CORNER
28	3812787.380	354117.742	BLDG CORNER
29	3812859.116	354382.582	STACK CENTERLINE

SITE BUILDING DIMENSIONS	
NAME	L x W x H (FEET)
EXISTING OFFICE BUILDING	154 x 50 x 18
EXISTING MAINTENANCE BUILDING	80 x 40 x 20
EXISTING GENERATOR BUILDING	82 x 34 x 20
EXISTING COMPRESSOR BUILDING	242 x 80 x 35
EXISTING FIRE PUMP HOUSE	36 x 22 x 16
COMPRESSOR BUILDING	316 x 88 x 58.5

NORTH

0 100' 200'
SCALE IN FEET

15 Mar 2022

PRELIMINARY
ISSUED FOR PERMIT

REV	DATE	DRAWN	CHECKED	PRJ APV	SCE APV	ENG FILE NO	DESCRIPTION	WOA
C	03/15/2022	WHJ	JBB	JS		E17031	ISSUED FOR PERMIT	
B	02/04/2022	WHJ	JBB	JS		E17031	ISSUED FOR PERMIT	
A	11/02/2021	WHJ	JBB	JS		E17031	ISSUED FOR PERMIT	

	BY	DATE
DESIGNED	J. BAKKER	10/29/2021
DRAWN	W. JACKSON	10/29/2021
CHECKED	J. SIRHALL	10/29/2021
PRJ APV	R. HIESTAND	10/29/2021
SCE ENG APV		
ENG FILE NO:		
WOA: 92671.000		

SoCalGas
A Sempra Energy utility

HONOR RANCHO STORAGE FIELD
COMPRESSOR MODERNIZATION (HRCM)
OVERALL SITE PLAN

DWG CLASS: DWG DIST:
SCALE: 1"=100'
DRAWING NUMBER: 34005-CIV-SK-012B REV C

D:\Burns & McDonnell\SoCalGas – Honor Rancho FEED (131782) – Documents\CADD\Civil\34005-CIV-SK-0128.dwg, 3/15/2022 8:19 AM, Bakker, Jon

APPENDIX B – SOUTH COAST AQMD APPLICATION FORMS

Device	Permit Action	Form	
Replacement Compressor Gas Lean-Burn Engine 1	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-13b	Non-Emergency Internal Combustion Engine
		400-PS	Plot Plan and Stack Information Form
Control System for Compressor Gas Lean-Burn Engine 1	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-5	Selective Catalytic Reduction (SCR) System and Oxidation Catalyst
Replacement Compressor Gas Lean-Burn Engine 2	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-13b	Non-Emergency Internal Combustion Engine
		400-PS	Plot Plan and Stack Information Form
Control System for Compressor Gas Lean-Burn Engine 2	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-5	Selective Catalytic Reduction (SCR) System and Oxidation Catalyst
Replacement Compressor Gas Lean-Burn Engine 3	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-13b	Non-Emergency Internal Combustion Engine
		400-PS	Plot Plan and Stack Information Form
Control System for Compressor Gas Lean-Burn Engine 3	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-5	Selective Catalytic Reduction (SCR) System and Oxidation Catalyst
Replacement Compressor Gas Lean-Burn Engine 4	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-13b	Non-Emergency Internal Combustion Engine
		400-PS	Plot Plan and Stack Information Form
Control System for Compressor Gas Lean-Burn Engine 4	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-5	Selective Catalytic Reduction (SCR) System and Oxidation Catalyst
Aqueous Urea Storage Tank	Permit to Construct	400-A	Application Form for Permit or Plan Approval
		400-E-18	Storage Tank
Facility Permit	Amendment	400-A	Application Form for Permit or Plan Approval
		500-A2	Title V Application Certification
Project	–	400-CEQA	California Environmental Quality Act (CEQA) Applicability

Replacement Compressor Gas Lean-Burn Engine 1

South Coast Air Quality Management District

Form 400-A

Application Form for Permit or Plan Approval

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

1. **Facility Name** (Business Name of Operator to Appear on the Permit): SoCalGas

2. **Valid AQMD Facility ID** (Available On Permit Or Invoice Issued By AQMD): 005973

3. **Owner's Business Name** (If different from Business Name of Operator):

Section B - Equipment Location Address

4. **Equipment Location Is:** (●) Fixed Location ( ) Various Location
(For equipment operated at various locations, provide address of initial site.)

25205 W. Rye Canyon Rd
Street Address

Valencia , CA 91355
City Zip

Ify Mordi — Principal Env. Specialist
Contact Name — Title

(818) 429-7337 — — —
Phone # Ext. Fax #

E-Mail: IMordi@socalgas.com

Section C - Permit Mailing Address

5. **Permit and Correspondence Information:**
[X] Check here if same as equipment location address

25205 W. Rye Canyon Rd
Address

Valencia , CA 91355
City State Zip

Ify Mordi — Principal Env. Specialist
Contact Name — Title

(818) 429-7337 — —
Phone # Ext. Fax #

E-Mail: IMordi@socalgas.com

Section D - Application Type

6. **The Facility Is:** ( ) Not In RECLAIM or Title V ( ) In RECLAIM ( ) In Title V (●) In RECLAIM & Title V Programs

7. **Reason for Submitting Application** (Select only ONE):

7a. New Equipment or Process Application:

- (●) New Construction (Permit to Construct)
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Equipment Operating Without A Permit *
- ( ) Compliance Plan
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

7b. Facility Permits:

- ( ) Title V Application or Amendment (Refer to Title V Matrix)
- ( ) RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- ( ) Administrative Change
- ( ) Alteration/Modification
- ( ) Alteration/Modification without Prior Approval *
- ( ) Change of Condition
- ( ) Change of Condition without Prior Approval *
- ( ) Change of Location
- ( ) Change of Location without Prior Approval *
- ( ) Equipment Operating with an Expired/Inactive Permit *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

8a. **Estimated Start Date of Construction** (mm/dd/yyyy):

8b. **Estimated End Date of Construction** (mm/dd/yyyy):

8c. **Estimated Start Date of Operation** (mm/dd/yyyy):

9. **Description of Equipment or Reason for Compliance Plan** (list applicable rule):
Replacement of compressor gas lean-burn engines for compliance with FWEMCP

10. **For Identical equipment, how many additional applications are being submitted with this application?** (Form 400-A required for each equipment / process): 3

11. **Are you a Small Business as per AQMD's Rule 102 definition?** (10 employees or less and total gross receipts are $500,000 or less OR a not-for-profit training center) (●) No ( ) Yes

12. **Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment?** (●) No ( ) Yes
If Yes, provide NOV/NC#:

Section E - Facility Business Information

13. **What type of business is being conducted at this equipment location?**
Natural gas storage field

14. **What is your business primary NAICS Code?** (North American Industrial Classification System): 486210

15. **Are there other facilities in the SCAQMD jurisdiction operated by the same operator?** ( ) No (●) Yes

16. **Are there any schools (K-12) within 1000 feet of the facility property line?** (●) No ( ) Yes

Section F - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. **Signature of Responsible Official:**

18. **Title of Responsible Official:** Storage Operations Manager

19. **I wish to review the permit prior to issuance.** (This may cause a delay in the application process.) ( ) No (●) Yes

20. **Print Name:** Lawrence T. Bittleston, Jr.

21. **Date:** 6/1/22

22. **Do you claim confidentiality of data?** (If Yes, see instructions.) (●) No ( ) Yes

23. **Check List:** [X] Authorized Signature/Date [X] Form 400-CEQA [X] Supplemental Form(s) (ie., Form 400-E-xx) [X] Fees Enclosed

AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED $	PAYMENT TRACKING #	VALIDATION

DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN

Replacement Compressor Gas Lean-Burn Engine 1

South Coast Air Quality Management District

Form 400-E-13b
Non-Emergency Internal Combustion Engine

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W. Rye Canyon Rd., Valencia

(●) Fixed Location ( ) Various Locations

Section B - Equipment Description

Internal Combustion Engine

Is the ICE an EPA Certified or Qualifying Non-Road Engine? (●) No ( ) Yes

If yes, provide EPA Certificate No., and attach copy: _____

Manufacturer: Waukesha | Model: 16V275GL | Serial No.: TBD

Date of Manufacture: _____ (mm/dd/yyyy) Date of Installation: _____ (mm/dd/yyyy)

Note: For an ICE manufactured after 7/18/94, please provide manufacturer's specification and guarantee.

Manufacturer Maximum Rating: 5000 BHP@ 1000 RPM

ICE Function (Check all that apply)

☐ Electrical Generator ☐ Fire Pump ☒ Compressor ☐ Co-Generation
☐ Flood Control ☐ Pump Driver ☐ Other (specify): _____

Type

(●) Stationary ( ) Portable

How Is This Type of Equipment Used? (Check All That Apply) ☒ Within Facility ☐ Off-Site ☐ Rental ☐ Non-Rental

Fuel

☒ Natural Gas ☐ LPG ☐ Refinery Gas* ☐ Digester Gas* ☐ Landfill Gas*
☐ Diesel Oil No. 2 ☒ Other*: Blended Natural Gas

*If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content.

Stand-By Fuel

☐ Natural Gas ☐ LPG ☐ Refinery Gas* ☐ Digester Gas* ☐ Landfill Gas*
☐ Diesel Oil No. 2 ☐ Other*: _____

*If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content.

Cycle Type

( ) Two Cycle (●) Four Cycle

Combustion Type

(●) Lean Burn ( ) Rich Burn

No. of Cylinders

( ) Four ( ) Six ( ) Eight ( ) Ten ( ) Twelve (●) Sixteen ( ) Other: _____

Aspiration Type

( ) Turbocharged (●) Turbocharged/Aftercooled ( ) Naturally Aspirated
☐ Timing Retarded ≥ 4° (relative to standard timing)

Air Pollution Control (If Applicable)

(●) Selective Catalytic Reduction (SCR) * ( ) No Controls
( ) Selective Non-Catalytic Reduction (SNCR) * ( ) Air Fuel Ratio Controller
( ) Non-selective Catalytic Reduction (NSCR) ( ) Other (specify): _____

* Separate application is required.

Manufacturer: AeriNOx | Model: 21047

If already permitted, indicate Permit No.: _____ Device No.: _____

South Coast Air Quality Management District

Form 400-E-13b
Non-Emergency Internal Combustion Engine

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section C - Operation Information

Fuel Consumption

Maximum Rated Load: _____ gal./hr. OR 42345 cu.ft./hr

Average Load: _____ gal./hr. OR 32920 cu.ft./hr.

Emissions Data

Pollutants	Maximum Emissions Before Control: gm/Bhp-hr	Maximum Emissions Before Control: PPM (15% O_2)	Maximum Emissions After Control: gm/Bhp-hr	Maximum Emissions After Control: PPM (15% O_2)
ROG		30		
NOx		11		
CO		70		
PM		10		
SOx		0.6		

Emissions Reference (attach):

- ☒ Manufacturer's Guarantee
- ☒ Catalytic Manufacturer's Guarantee
- ☐ Source Test Data
- ☒ EPA Emission Factors
- ☐ Other (specify): _____

Operating Schedule

Normal: 24 hours/day 7 days/week 52 weeks/yr

Maximum: 24 hours/day 7 days/week 52 weeks/yr

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info

Signature: Jessica Mohatt Date: 05/24/2022

Title: Engineer Company Name: Yorke Engineering, LLC

Name: Jessica Mohatt

Phone #: (209) 446-0227 Fax #:

Email: JMohatt@YorkeEngr.com

Contact Info

Name: Ify Mordi

Title: Princ. Env. Specialist Company Name: Southern California Gas

Phone #: (818) 429-7337 Fax #:

Email: IMordi@socalgas.com

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Replacement Compressor Gas Lean-Burn Engine 1

South Coast Air Quality Management District

Form 400-PS

Plot Plan And Stack Information Form

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator To Appears On The Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W Rye Canyon Rd., Valencia, CA 91355

(•) Fixed Location ( ) Various Locations

Section B - Location Data

Plot Plan

Please attach a site map for the project with distances and scales. Identify and locate the proposed equipment on the map. A copy of the appropriate Thomas Brothers page, a web-based map, or a sketch that shows the major streets and location of the equipment is acceptable.

Location of Schools Nearby

Is the facility located within a 1/4 mile radius (1,320 feet) of the outer boundary of a school? ( ) Yes (•) No

If yes, please provide name(s) of school(s) below:

School Name: _____ **School Name:** _____

School Address: _____ **School Address:** _____

Distance from stack or equipment vent to the outer boundary of the school: _____ feet

Distance from stack or equipment vent to the outer boundary of the school: _____ feet

CA Health & Safety Code 42301.9: "School" means any public or private school used for purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes.

Population Density

(•) Urban ( ) Rural (<50% of land within 3 km radius accounted for by urban land use categories, i.e., multi-family dwelling or industrial.)

Zoning Classification

( ) Mixed Use Residential Commercial Zone (M-U) ( ) Service and Professional Zone (C-S) ( ) Medium Commercial (C-3)

(•) Heavy Commercial (C-4) ( ) Commercial Manufacturing (C-M)

Section C - Emission Release Parameters - Stacks, Vents

Stack Data

Stack Height: 64.50 feet (above ground level) **What is the height of the closest building nearest the stack?** 59 feet

Stack Inside Diameter: 34.00 inches **Stack Flow:** 29,047 acfm **Stack Temperature:** 700 °F

Rain Cap Present: ( ) Yes (•) No **Stack Orientation:** (•) Vertical ( ) Horizontal

If the stack height is less than 2.5 times the closest building height (H), please provide information on any building within 5xH distance from the stack (attach additional sheet if necessary):

Building #/Name: Compressor Building **Building #/Name:** _____

Building Height: 59 feet (above ground level) **Building Height:** _____ feet (above ground level)

Building Width: 88 feet **Building Width:** _____ feet

Building Length: 316 feet **Building Length:** _____ feet

Receptor Distance From Equipment Stack or Roof Vents/Openings

Distance to nearest residence or sensitive receptor*: 2,400 feet

Distance to nearest business: 1,500 feet

Building Information

Are the emissions released from vents and/or openings from a building? ( ) Yes (•) No

If yes, please provide:

Building #/Name: _____ **Building Width:** _____ feet

Building Height: _____ feet (above ground level) **Building Length:** _____ feet

*AQMD Rule 1470 defines SENSITIVE RECEPTOR as meaning any residence including private homes, condominiums, apartments, and living quarters, schools as defined under paragraph (b)(57), preschools, daycare centers and health facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

South Coast Air Quality Management District

Form 400-PS

Plot Plan And Stack Information Form

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submittfgfed with this application is true and correct.

Signature of Preparer:	Title of Preparer:	Preparer's Phone #: (209) 446-0227
Jessica Mohatt	Engineer	Preparer's Email: JMohatt@YorkeEngr.com

Contact Person:	Contact's Phone#: (818) 429-7337	Date Signed:
Ify Mordi		
Contact's Email: IMordi@socalgas.com	Contact's Fax#:	

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Control System for Compressor Gas Lean-Burn Engine 1

South Coast Air Quality Management District

Form 400-A

Application Form for Permit or Plan Approval

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

1. Facility Name (Business Name of Operator to Appear on the Permit): SoCalGas

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

3. Owner's Business Name (If different from Business Name of Operator):

Section B - Equipment Location Address

4. Equipment Location Is: (●) Fixed Location ( ) Various Location
(For equipment operated at various locations, provide address of initial site.)

25205 W. Rye Canyon Rd
Street Address

Valencia , CA 91355
City Zip

Ify Mordi — Principal Env. Specialist
Contact Name Title

(818) 429-7337 — Ext. — Fax #
Phone #

E-Mail: IMordi@socalgas.com

Section C - Permit Mailing Address

5. Permit and Correspondence Information:
☒ Check here if same as equipment location address

25205 W. Rye Canyon Rd
Address

Valencia , CA 91355
City State Zip

Ify Mordi — Principal Env. Specialist
Contact Name Title

(818) 429-7337 — Ext. — Fax #
Phone #

E-Mail: IMordi@socalgas.com

Section D - Application Type

6. The Facility Is: ( ) Not In RECLAIM or Title V ( ) In RECLAIM ( ) In Title V (●) In RECLAIM & Title V Programs

7. Reason for Submitting Application (Select only ONE):

7a. New Equipment or Process Application:
- (●) New Construction (Permit to Construct)
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Equipment Operating Without A Permit *
- ( ) Compliance Plan
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

7b. Facility Permits:
- ( ) Title V Application or Amendment (Refer to Title V Matrix)
- ( ) RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:
- ( ) Administrative Change
- ( ) Alteration/Modification
- ( ) Alteration/Modification without Prior Approval *
- ( ) Change of Condition
- ( ) Change of Condition without Prior Approval *
- ( ) Change of Location
- ( ) Change of Location without Prior Approval *
- ( ) Equipment Operating with an Expired/Inactive Permit *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

8a. Estimated Start Date of Construction (mm/dd/yyyy):

8b. Estimated End Date of Construction (mm/dd/yyyy):

8c. Estimated Start Date of Operation (mm/dd/yyyy):

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Installation of a new emission control system for a replacement compressor gas lean-burn engine

10. For Identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each equipment / process): 3

11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are $500,000 or less OR a not-for-profit training center) (●) No ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? (●) No ( ) Yes
If Yes, provide NOV/NC#:

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location?
Natural gas storage field

14. What is your business primary NAICS Code? (North American Industrial Classification System): 486210

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? ( ) No (●) Yes

16. Are there any schools (K-12) within 1000 feet of the facility property line? (●) No ( ) Yes

Section F - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official:

18. Title of Responsible Official: Storage Operations Manager

19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) ( ) No (●) Yes

20. Print Name: Lawrence T. Bittleston, Jr.

21. Date: 6/1/22

22. Do you claim confidentiality of data? (If Yes, see instructions.) (●) No ( ) Yes

23. Check List: ☒ Authorized Signature/Date ☒ Form 400-CEQA ☒ Supplemental Form(s) (ie., Form 400-E-xx) ☒ Fees Enclosed

AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED $	PAYMENT TRACKING #	VALIDATION

DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN

Control System for Compressor Gas Lean-Burn Engine 1

South Coast Air Quality Management District

Form 400-E-5
Selective Catalytic Reduction (SCR) System, Oxidation Catalyst, and Ammonia Catalyst

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W. Rye Canyon Rd., Valencia, CA 91355 (●) Fixed Location ( ) Various Locations

Section B - Equipment Description

Selective Catalytic Reduction (SCR)

SCR Catalyst

Manufacturer: Cormetech — Catalyst Active Material: Ti-W

Model Number: CM21-HT — Type: SCR Catalyst

Size of Each Layer or Module: L: 1 ft. 1 in. W: 1 ft. 4 in. H: 0 ft. 8 in.

No. of Layers or Modules: 2 — Total Volume: 53.996 cu. ft. — Total Weight: 2520 lbs.

Reducing Agent

(●) Urea ( ) Anhydrous Ammonia ( ) Aqueous Ammonia _____ % — Injection Rate: 14.05 lb/hr

Reducing Agent Storage*

Diameter: 11 ft. 10 in. Height: 11 ft. 4 in. Capacity: 8000 gal

Pressure Setting: 14.7 psia * A separate permit may be needed for the storage equipment.

Space Velocity

Gas Flow Rate/Catalyst Volume: 16000 per hour

Area Velocity

Gas Flow Rate/Wetted Catalyst Surface Area: 9.4 ft/hr

Manufacturer's Guarantee

NOx: 11 ppm $\%O_2$: 15.00 NOx: _____ gm/bhp-hr Ammonia Slip: 10 ppm @ 15.00 $\%O_2$

Catalyst Life

_____ years (expected)

Cost

Capital Cost: _____ Installation Cost: _____ Catalyst Replacement Cost: _____

Oxidation Catalyst

Oxidation Catalyst

Manufacturer: DCL — Catalyst Active Material: Platinum

Model Number: DC5B — Type: Oxicat-Metallic

Size of Each Layer or Module: L: 5 ft. _____ in. W: 4 ft. _____ in. H: _____ ft. 4 in.

No. of Layers or Modules: 1 — Total Volume: 6.63 cu. ft. — Total Weight: 375 lbs.

Space Velocity

Gas Flow Rate/Catalyst Volume: 138544 per hour

Manufacturer's Guarantee

VOC: 30 ppm VOC: _____ gm/bhp-hr $\%O_2$: 15.00

CO: 70 ppm CO: _____ gm/bhp-hr $\%O_2$: 15.00

Catalyst Life

2 years (expected)

Cost

Capital Cost: _____ Installation Cost: _____ Catalyst Replacement Cost: _____

South Coast Air Quality Management District

Form 400-E-5
Selective Catalytic Reduction (SCR) System, Oxidation Catalyst, and Ammonia Catalyst

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section B - Equipment Description (cont.)

Ammonia Catalyst

Ammonia Catalyst

Manufacturer: _____ Catalyst Active Material: _____

Model Number: _____ Type: _____

Size of Each Layer or Module: L: _____ ft. _____ in. W: _____ ft. _____ in. H: _____ ft. _____ in.

No. of Layers or Modules: _____ Total Volume: _____ cu. ft. Total Weight: _____ lbs.

Space Velocity

Gas Flow Rate/Catalyst Volume: _____ per hour

Manufacturer's Guarantee

NH_3: _____ ppm $\%O_2$: _____

Catalyst Life

_____ years (expected)

Cost

Capital Cost: _____ Installation Cost: _____ Catalyst Replacement Cost: _____

Section C - Operation Information

Operating Temperature

Minimum Inlet Temperature: 572 °F (from cold start) Maximum Temperature: 985 °F

Warm-up Time: 0 hr. 30 min. (maximum)

Operating Schedule

Normal: 24 hours/day 7 days/week 52 weeks/yr

Maximum: 24 hours/day 7 days/week 52 weeks/yr

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info

Signature: Jessica Mohatt Date: 05/24/2022

Title: Engineer Company Name: Yorke Engineering

Name: Jessica Mohatt

Phone #: (209) 446-0227 Fax #:

Email: JMohatt@YorkeEngr.com

Contact Info

Name: Ify Mordi

Title: Princ. Env. Specialist Company Name: Southern California Gas

Phone #: (818) 429-7337 Fax #:

Email: IMordi@YorkeEngr.com

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Replacement Compressor Gas Lean-Burn Engine 2

South Coast Air Quality Management District

Form 400-A

Application Form for Permit or Plan Approval

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

1. Facility Name (Business Name of Operator to Appear on the Permit): SoCalGas

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

3. Owner's Business Name (If different from Business Name of Operator):

Section B - Equipment Location Address

4. Equipment Location Is: (●) Fixed Location ( ) Various Location
(For equipment operated at various locations, provide address of initial site.)

25205 W. Rye Canyon Rd
Street Address

Valencia , CA 91355
City Zip

Ify Mordi Principal Env. Specialist
Contact Name Title

(818) 429-7337 Ext. Fax #
Phone #

E-Mail: IMordi@socalgas.com

Section C - Permit Mailing Address

5. Permit and Correspondence Information:
☒ Check here if same as equipment location address

25205 W. Rye Canyon Rd
Address

Valencia , CA 91355
City State Zip

Ify Mordi Principal Env. Specialist
Contact Name Title

(818) 429-7337 Ext. Fax #
Phone #

E-Mail: IMordi@socalgas.com

Section D - Application Type

6. The Facility Is: ( ) Not In RECLAIM or Title V ( ) In RECLAIM ( ) In Title V (●) In RECLAIM & Title V Programs

7. Reason for Submitting Application (Select only ONE):

7a. New Equipment or Process Application:

- (●) New Construction (Permit to Construct)
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Equipment Operating Without A Permit *
- ( ) Compliance Plan
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

7b. Facility Permits:

- ( ) Title V Application or Amendment (Refer to Title V Matrix)
- ( ) RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- ( ) Administrative Change
- ( ) Alteration/Modification
- ( ) Alteration/Modification without Prior Approval *
- ( ) Change of Condition
- ( ) Change of Condition without Prior Approval *
- ( ) Change of Location
- ( ) Change of Location without Prior Approval *
- ( ) Equipment Operating with an Expired/Inactive Permit *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

8a. Estimated Start Date of Construction (mm/dd/yyyy):

8b. Estimated End Date of Construction (mm/dd/yyyy):

8c. Estimated Start Date of Operation (mm/dd/yyyy):

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Replacement of compressor gas lean-burn engines for compliance with FWEMCP

10. For Identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each equipment / process): 3

11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are $500,000 or less OR a not-for-profit training center) (●) No ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? (●) No ( ) Yes
If Yes, provide NOV/NC#:

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location?
Natural gas storage field

14. What is your business primary NAICS Code? (North American Industrial Classification System): 486210

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? ( ) No (●) Yes

16. Are there any schools (K-12) within 1000 feet of the facility property line? (●) No ( ) Yes

Section F - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official:

18. Title of Responsible Official:
Storage Operations Manager

19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) ( ) No (●) Yes

20. Print Name:
Lawrence T. Bittleston, Jr.

21. Date: 6/1/22

22. Do you claim confidentiality of data? (If Yes, see instructions.) (●) No ( ) Yes

23. Check List: ☒ Authorized Signature/Date ☒ Form 400-CEQA ☒ Supplemental Form(s) (ie., Form 400-E-xx) ☒ Fees Enclosed

AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED $	PAYMENT TRACKING #	VALIDATION

DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN

Replacement Compressor Gas Lean-Burn Engine 2

South Coast Air Quality Management District

Form 400-E-13b
Non-Emergency Internal Combustion Engine

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W. Rye Canyon Rd., Valencia

(•) Fixed Location ( ) Various Locations

Section B - Equipment Description

Internal Combustion Engine

Is the ICE an EPA Certified or Qualifying Non-Road Engine? (•) No ( ) Yes

If yes, provide EPA Certificate No., and attach copy: _____

Manufacturer: Waukesha | Model: 16V275GL | Serial No.: TBD

Date of Manufacture: _____ (mm/dd/yyyy) Date of Installation: _____ (mm/dd/yyyy)

Note: For an ICE manufactured after 7/18/94, please provide manufacturer's specification and guarantee.

Manufacturer Maximum Rating: 5000 BHP@ 1000 RPM

ICE Function (Check all that apply)

[ ] Electrical Generator [ ] Fire Pump [X] Compressor [ ] Co-Generation
[ ] Flood Control [ ] Pump Driver [ ] Other (specify): _____

Type

(•) Stationary ( ) Portable

How Is This Type of Equipment Used? (Check All That Apply) [X] Within Facility [ ] Off-Site [ ] Rental [ ] Non-Rental

Fuel

[X] Natural Gas [ ] LPG [ ] Refinery Gas* [ ] Digester Gas* [ ] Landfill Gas*
[ ] Diesel Oil No. 2 [X] Other*: Blended Natural Gas

*If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content.

Stand-By Fuel

[ ] Natural Gas [ ] LPG [ ] Refinery Gas* [ ] Digester Gas* [ ] Landfill Gas*
[ ] Diesel Oil No. 2 [ ] Other*: _____

*If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content.

Cycle Type

( ) Two Cycle (•) Four Cycle

Combustion Type

(•) Lean Burn ( ) Rich Burn

No. of Cylinders

( ) Four ( ) Six ( ) Eight ( ) Ten ( ) Twelve (•) Sixteen ( ) Other: _____

Aspiration Type

( ) Turbocharged (•) Turbocharged/Aftercooled ( ) Naturally Aspirated
[ ] Timing Retarded ≥ 4° (relative to standard timing)

Air Pollution Control (If Applicable)

(•) Selective Catalytic Reduction (SCR) * ( ) No Controls
( ) Selective Non-Catalytic Reduction (SNCR) * ( ) Air Fuel Ratio Controller
( ) Non-selective Catalytic Reduction (NSCR) ( ) Other (specify): _____

* Separate application is required.

Manufacturer: AeriNOx | Model: 21047

If already permitted, indicate Permit No.: _____ Device No.: _____

South Coast Air Quality Management District

Form 400-E-13b
Non-Emergency Internal Combustion Engine

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section C - Operation Information

Fuel Consumption

Maximum Rated Load: _____ gal./hr. OR 42345 cu.ft./hr

Average Load: _____ gal./hr. OR 32920 cu.ft./hr.

Emissions Data

Pollutants	Maximum Emissions Before Control: gm/Bhp-hr	Maximum Emissions Before Control: PPM (15% O_2)	Maximum Emissions After Control: gm/Bhp-hr	Maximum Emissions After Control: PPM (15% O_2)
ROG		30		
NOx		11		
CO		70		
PM		10		
SOx		0.6		

Emissions Reference (attach):

- ☒ Manufacturer's Guarantee
- ☒ Catalytic Manufacturer's Guarantee
- ☐ Source Test Data
- ☒ EPA Emission Factors
- ☐ Other (specify): _____

Operating Schedule

Normal: 24 hours/day 7 days/week 52 weeks/yr

Maximum: 24 hours/day 7 days/week 52 weeks/yr

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info

Signature: Jessica Mohatt Date: 05/24/2022

Title: Engineer Company Name: Yorke Engineering, LLC

Name: Jessica Mohatt

Phone #: (209) 446-0227 Fax #:

Email: JMohatt@YorkeEngr.com

Contact Info

Name: Ify Mordi

Title: Princ. Env. Specialist Company Name: Southern California Gas

Phone #: (818) 429-7337 Fax #:

Email: IMordi@socalgas.com

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Replacement Compressor Gas Lean-Burn Engine 2

South Coast Air Quality Management District

Form 400-PS

Plot Plan And Stack Information Form

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator To Appears On The Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W Rye Canyon Rd., Valencia, CA 91355

(•) Fixed Location ( ) Various Locations

Section B - Location Data

Plot Plan

Please attach a site map for the project with distances and scales. Identify and locate the proposed equipment on the map. A copy of the appropriate Thomas Brothers page, a web-based map, or a sketch that shows the major streets and location of the equipment is acceptable.

Location of Schools Nearby

Is the facility located within a 1/4 mile radius (1,320 feet) of the outer boundary of a school? ( ) Yes (•) No

If yes, please provide name(s) of school(s) below:

School Name: _____ **School Name:** _____

School Address: _____ **School Address:** _____

Distance from stack or equipment vent to the outer boundary of the school: _____ feet

Distance from stack or equipment vent to the outer boundary of the school: _____ feet

CA Health & Safety Code 42301.9: "School" means any public or private school used for purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes.

Population Density

(•) Urban ( ) Rural (<50% of land within 3 km radius accounted for by urban land use categories, i.e., multi-family dwelling or industrial.)

Zoning Classification

( ) Mixed Use Residential Commercial Zone (M-U) ( ) Service and Professional Zone (C-S) ( ) Medium Commercial (C-3)

(•) Heavy Commercial (C-4) ( ) Commercial Manufacturing (C-M)

Section C - Emission Release Parameters - Stacks, Vents

Stack Data

Stack Height: 64.50 feet (above ground level) **What is the height of the closest building nearest the stack?** 59 feet

Stack Inside Diameter: 34.00 inches **Stack Flow:** 29,047 acfm **Stack Temperature:** 700 °F

Rain Cap Present: ( ) Yes (•) No **Stack Orientation:** (•) Vertical ( ) Horizontal

If the stack height is less than 2.5 times the closest building height (H), please provide information on any building within 5xH distance from the stack (attach additional sheet if necessary):

Building #/Name: Compressor Building **Building #/Name:** _____

Building Height: 59 feet (above ground level) **Building Height:** _____ feet (above ground level)

Building Width: 88 feet **Building Width:** _____ feet

Building Length: 316 feet **Building Length:** _____ feet

Receptor Distance From Equipment Stack or Roof Vents/Openings

Distance to nearest residence or sensitive receptor*: 2,400 feet

Distance to nearest business: 1,500 feet

Building Information

Are the emissions released from vents and/or openings from a building? ( ) Yes (•) No

If yes, please provide:

Building #/Name: _____ **Building Width:** _____ feet

Building Height: _____ feet (above ground level) **Building Length:** _____ feet

*AQMD Rule 1470 defines SENSITIVE RECEPTOR as meaning any residence including private homes, condominiums, apartments, and living quarters, schools as defined under paragraph (b)(57), preschools, daycare centers and health facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

South Coast Air Quality Management District

Form 400-PS

Plot Plan And Stack Information Form

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submittfgfed with this application is true and correct.

Signature of Preparer:	Title of Preparer:	Preparer's Phone #: (209) 446-0227
Jessica Mohatt	Engineer	Preparer's Email: JMohatt@YorkeEngr.com

Contact Person:	Contact's Phone#: (818) 429-7337	Date Signed:
Ify Mordi		
Contact's Email: IMordi@socalgas.com	Contact's Fax#:	

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Control System for Compressor Gas Lean-Burn Engine 2

South Coast Air Quality Management District

Form 400-A

Application Form for Permit or Plan Approval

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

1. Facility Name (Business Name of Operator to Appear on the Permit): SoCalGas

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

3. Owner's Business Name (If different from Business Name of Operator):

Section B - Equipment Location Address

4. Equipment Location Is: (●) Fixed Location ( ) Various Location
(For equipment operated at various locations, provide address of initial site.)

25205 W. Rye Canyon Rd
Street Address

Valencia , CA 91355
City Zip

Ify Mordi — Principal Env. Specialist
Contact Name — Title

(818) 429-7337 — Ext. — Fax #
Phone #

E-Mail: IMordi@socalgas.com

Section C - Permit Mailing Address

5. Permit and Correspondence Information:
☒ Check here if same as equipment location address

25205 W. Rye Canyon Rd
Address

Valencia , CA 91355
City State Zip

Ify Mordi — Principal Env. Specialist
Contact Name — Title

(818) 429-7337 — Ext. — Fax #
Phone #

E-Mail: IMordi@socalgas.com

Section D - Application Type

6. The Facility Is: ( ) Not In RECLAIM or Title V ( ) In RECLAIM ( ) In Title V (●) In RECLAIM & Title V Programs

7. Reason for Submitting Application (Select only ONE):

7a. New Equipment or Process Application:
- (●) New Construction (Permit to Construct)
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Equipment Operating Without A Permit *
- ( ) Compliance Plan
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

7b. Facility Permits:
- ( ) Title V Application or Amendment (Refer to Title V Matrix)
- ( ) RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:
- ( ) Administrative Change
- ( ) Alteration/Modification
- ( ) Alteration/Modification without Prior Approval *
- ( ) Change of Condition
- ( ) Change of Condition without Prior Approval *
- ( ) Change of Location
- ( ) Change of Location without Prior Approval *
- ( ) Equipment Operating with an Expired/Inactive Permit *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

8a. Estimated Start Date of Construction (mm/dd/yyyy):

8b. Estimated End Date of Construction (mm/dd/yyyy):

8c. Estimated Start Date of Operation (mm/dd/yyyy):

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Installation of a new emission control system for a replacement compressor gas lean-burn engine

10. For Identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each equipment / process): 3

11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are $500,000 or less OR a not-for-profit training center) (●) No ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? (●) No ( ) Yes
If Yes, provide NOV/NC#:

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location?
Natural gas storage field

14. What is your business primary NAICS Code? (North American Industrial Classification System): 486210

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? ( ) No (●) Yes

16. Are there any schools (K-12) within 1000 feet of the facility property line? (●) No ( ) Yes

Section F - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official: [signature]

18. Title of Responsible Official: Storage Operations Manager

19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) ( ) No (●) Yes

20. Print Name: Lawrence T. Bittleston, Jr.

21. Date: 6/1/22

22. Do you claim confidentiality of data? (If Yes, see instructions.) (●) No ( ) Yes

23. Check List: ☒ Authorized Signature/Date ☒ Form 400-CEQA ☒ Supplemental Form(s) (ie., Form 400-E-xx) ☒ Fees Enclosed

AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED $	PAYMENT TRACKING #	VALIDATION

DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN

Control System for Compressor Gas Lean-Burn Engine 2

South Coast Air Quality Management District

Form 400-E-5
Selective Catalytic Reduction (SCR) System, Oxidation Catalyst, and Ammonia Catalyst

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W. Rye Canyon Rd., Valencia, CA 91355

(•) Fixed Location ( ) Various Locations

Section B - Equipment Description

Selective Catalytic Reduction (SCR)

SCR Catalyst

Manufacturer: Cormetech — Catalyst Active Material: Ti-W

Model Number: CM21-HT — Type: SCR Catalyst

Size of Each Layer or Module: L: 1 ft. 1 in. W: 1 ft. 4 in. H: 0 ft. 8 in.

No. of Layers or Modules: 2 — Total Volume: 53.996 cu. ft. — Total Weight: 2520 lbs.

Reducing Agent

(•) Urea ( ) Anhydrous Ammonia ( ) Aqueous Ammonia ____ % — Injection Rate: 14.05 lb/hr

Reducing Agent Storage*

Diameter: 11 ft. 10 in. Height: 11 ft. 4 in. Capacity: 8000 gal

Pressure Setting: 14.7 psia

* A separate permit may be needed for the storage equipment.

Space Velocity

Gas Flow Rate/Catalyst Volume: 16000 per hour

Area Velocity

Gas Flow Rate/Wetted Catalyst Surface Area: 9.4 ft/hr

Manufacturer's Guarantee

NOx: 11 ppm $\%O_2$: 15.00 NOx: ____ gm/bhp-hr Ammonia Slip: 10 ppm @ 15.00 $\%O_2$

Catalyst Life

____ years (expected)

Cost

Capital Cost: ____ Installation Cost: ____ Catalyst Replacement Cost: ____

Oxidation Catalyst

Oxidation Catalyst

Manufacturer: DCL — Catalyst Active Material: Platinum

Model Number: DC5B — Type: Oxicat-Metallic

Size of Each Layer or Module: L: 5 ft. ____ in. W: 4 ft. ____ in. H: ____ ft. 4 in.

No. of Layers or Modules: 1 — Total Volume: 6.63 cu. ft. — Total Weight: 375 lbs.

Space Velocity

Gas Flow Rate/Catalyst Volume: 138544 per hour

Manufacturer's Guarantee

VOC: 30 ppm VOC: ____ gm/bhp-hr $\%O_2$: 15.00

CO: 70 ppm CO: ____ gm/bhp-hr $\%O_2$: 15.00

Catalyst Life

2 years (expected)

Cost

Capital Cost: ____ Installation Cost: ____ Catalyst Replacement Cost: ____

South Coast Air Quality Management District

Form 400-E-5
Selective Catalytic Reduction (SCR) System, Oxidation Catalyst, and Ammonia Catalyst

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section B - Equipment Description (cont.)

Ammonia Catalyst

Ammonia Catalyst	Manufacturer: _____ Catalyst Active Material: _____ Model Number: _____ Type: _____ Size of Each Layer or Module: L: _____ ft. _____ in. W: _____ ft. _____ in. H: _____ ft. _____ in. No. of Layers or Modules: _____ Total Volume: _____ cu. ft. Total Weight: _____ lbs.
Space Velocity	Gas Flow Rate/Catalyst Volume: _____ per hour
Manufacturer's Guarantee	NH_3: _____ ppm $\%O_2$: _____
Catalyst Life	_____ years (expected)
Cost	Capital Cost: _____ Installation Cost: _____ Catalyst Replacement Cost: _____

Section C - Operation Information

Operating Temperature	Minimum Inlet Temperature: 572 °F (from cold start) Maximum Temperature: 985 °F Warm-up Time: 0 hr. 30 min. (maximum)
Operating Schedule	Normal: 24 hours/day 7 days/week 52 weeks/yr Maximum: 24 hours/day 7 days/week 52 weeks/yr

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info	Signature: Jessica Mohatt Date: 05/24/2022 Title: Engineer Company Name: Yorke Engineering	Name: Jessica Mohatt Phone #: (209) 446-0227 Fax #: Email: JMohatt@YorkeEngr.com
Contact Info	Name: Ify Mordi Title: Princ. Env. Specialist Company Name: Southern California Gas	Phone #: (818) 429-7337 Fax #: Email: IMordi@YorkeEngr.com

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Replacement Compressor Gas Lean-Burn Engine 3

South Coast Air Quality Management District

Form 400-A

Application Form for Permit or Plan Approval

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

1. Facility Name (Business Name of Operator to Appear on the Permit): SoCalGas

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

3. Owner's Business Name (If different from Business Name of Operator):

Section B - Equipment Location Address

4. Equipment Location Is: (●) Fixed Location ( ) Various Location
(For equipment operated at various locations, provide address of initial site.)

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Street Address

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City Zip

Ify Mordi — Principal Env. Specialist
Contact Name — Title

(818) 429-7337 — Ext. — Fax #
Phone #

E-Mail: IMordi@socalgas.com

Section C - Permit Mailing Address

5. Permit and Correspondence Information:
[X] Check here if same as equipment location address

25205 W. Rye Canyon Rd
Address

Valencia , CA 91355
City State Zip

Ify Mordi — Principal Env. Specialist
Contact Name — Title

(818) 429-7337 — Ext. — Fax #
Phone #

E-Mail: IMordi@socalgas.com

Section D - Application Type

6. The Facility Is: ( ) Not In RECLAIM or Title V ( ) In RECLAIM ( ) In Title V (●) In RECLAIM & Title V Programs

7. Reason for Submitting Application (Select only ONE):

7a. New Equipment or Process Application:

- (●) New Construction (Permit to Construct)
- ( ) Equipment On-Site But Not Constructed or Operational
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- ( ) Registration/Certification
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7b. Facility Permits:

- ( ) Title V Application or Amendment (Refer to Title V Matrix)
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- ( ) Alteration/Modification
- ( ) Alteration/Modification without Prior Approval *
- ( ) Change of Condition
- ( ) Change of Condition without Prior Approval *
- ( ) Change of Location
- ( ) Change of Location without Prior Approval *
- ( ) Equipment Operating with an Expired/Inactive Permit *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

8a. Estimated Start Date of Construction (mm/dd/yyyy):

8b. Estimated End Date of Construction (mm/dd/yyyy):

8c. Estimated Start Date of Operation (mm/dd/yyyy):

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Replacement of compressor gas lean-burn engines for compliance with FWEMCP

10. For Identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each equipment / process): 3

11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are $500,000 or less OR a not-for-profit training center) (●) No ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? (●) No ( ) Yes
If Yes, provide NOV/NC#:

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location?
Natural gas storage field

14. What is your business primary NAICS Code? (North American Industrial Classification System): 486210

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? ( ) No (●) Yes

16. Are there any schools (K-12) within 1000 feet of the facility property line? (●) No ( ) Yes

Section F - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official:

18. Title of Responsible Official:
Storage Operations Manager

19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) ( ) No (●) Yes

20. Print Name:
Lawrence T. Bittleston, Jr.

21. Date: 6/1/22

22. Do you claim confidentiality of data? (If Yes, see instructions.) (●) No ( ) Yes

23. Check List: [X] Authorized Signature/Date [X] Form 400-CEQA [X] Supplemental Form(s) (ie., Form 400-E-xx) [X] Fees Enclosed

AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED $	PAYMENT TRACKING #	VALIDATION

DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN

Replacement Compressor Gas Lean-Burn Engine 3

South Coast Air Quality Management District

Form 400-E-13b
Non-Emergency Internal Combustion Engine

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W. Rye Canyon Rd., Valencia

(•) Fixed Location ( ) Various Locations

Section B - Equipment Description

Internal Combustion Engine

Is the ICE an EPA Certified or Qualifying Non-Road Engine? (•) No ( ) Yes

If yes, provide EPA Certificate No., and attach copy: _____

Manufacturer: Waukesha | Model: 16V275GL | Serial No.: TBD

Date of Manufacture: _____ (mm/dd/yyyy) Date of Installation: _____ (mm/dd/yyyy)

Note: For an ICE manufactured after 7/18/94, please provide manufacturer's specification and guarantee.

Manufacturer Maximum Rating: 5000 BHP@ 1000 RPM

ICE Function (Check all that apply)

[ ] Electrical Generator [ ] Fire Pump [X] Compressor [ ] Co-Generation
[ ] Flood Control [ ] Pump Driver [ ] Other (specify): _____

Type

(•) Stationary ( ) Portable

How Is This Type of Equipment Used? (Check All That Apply) [X] Within Facility [ ] Off-Site [ ] Rental [ ] Non-Rental

Fuel

[X] Natural Gas [ ] LPG [ ] Refinery Gas* [ ] Digester Gas* [ ] Landfill Gas*
[ ] Diesel Oil No. 2 [X] Other*: Blended Natural Gas

*If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content.

Stand-By Fuel

[ ] Natural Gas [ ] LPG [ ] Refinery Gas* [ ] Digester Gas* [ ] Landfill Gas*
[ ] Diesel Oil No. 2 [ ] Other*: _____

*If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content.

Cycle Type

( ) Two Cycle (•) Four Cycle

Combustion Type

(•) Lean Burn ( ) Rich Burn

No. of Cylinders

( ) Four ( ) Six ( ) Eight ( ) Ten ( ) Twelve (•) Sixteen ( ) Other: _____

Aspiration Type

( ) Turbocharged (•) Turbocharged/Aftercooled ( ) Naturally Aspirated
[ ] Timing Retarded ≥ 4° (relative to standard timing)

Air Pollution Control (If Applicable)

(•) Selective Catalytic Reduction (SCR) * ( ) No Controls
( ) Selective Non-Catalytic Reduction (SNCR) * ( ) Air Fuel Ratio Controller
( ) Non-selective Catalytic Reduction (NSCR) ( ) Other (specify): _____

* Separate application is required.

Manufacturer: AeriNOx | Model: 21047

If already permitted, indicate Permit No.: _____ Device No.: _____

South Coast Air Quality Management District

Form 400-E-13b
Non-Emergency Internal Combustion Engine

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section C - Operation Information

Fuel Consumption

Maximum Rated Load: _____ gal./hr. OR 42345 cu.ft./hr

Average Load: _____ gal./hr. OR 32920 cu.ft./hr.

Emissions Data

Pollutants	Maximum Emissions Before Control: gm/Bhp-hr	Maximum Emissions Before Control: PPM (15% O_2)	Maximum Emissions After Control: gm/Bhp-hr	Maximum Emissions After Control: PPM (15% O_2)
ROG		30		
NOx		11		
CO		70		
PM		10		
SOx		0.6		

Emissions Reference (attach):

- ☒ Manufacturer's Guarantee
- ☒ Catalytic Manufacturer's Guarantee
- ☐ Source Test Data
- ☒ EPA Emission Factors
- ☐ Other (specify): _____

Operating Schedule

Normal: 24 hours/day 7 days/week 52 weeks/yr

Maximum: 24 hours/day 7 days/week 52 weeks/yr

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info

Signature: Jessica Mohatt Date: 05/24/2022

Title: Engineer Company Name: Yorke Engineering, LLC

Name: Jessica Mohatt

Phone #: (209) 446-0227 Fax #:

Email: JMohatt@YorkeEngr.com

Contact Info

Name: Ify Mordi

Title: Princ. Env. Specialist Company Name: Southern California Gas

Phone #: (818) 429-7337 Fax #:

Email: IMordi@socalgas.com

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Replacement Compressor Gas Lean-Burn Engine 3

South Coast Air Quality Management District

Form 400-PS

Plot Plan And Stack Information Form

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator To Appears On The Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W Rye Canyon Rd., Valencia, CA 91355 (●) Fixed Location ( ) Various Locations

Section B - Location Data

Plot Plan

Please attach a site map for the project with distances and scales. Identify and locate the proposed equipment on the map. A copy of the appropriate Thomas Brothers page, a web-based map, or a sketch that shows the major streets and location of the equipment is acceptable.

Location of Schools Nearby

Is the facility located within a 1/4 mile radius (1,320 feet) of the outer boundary of a school? ( ) Yes (●) No

If yes, please provide name(s) of school(s) below:

School Name: _____ **School Name:** _____

School Address: _____ **School Address:** _____

Distance from stack or equipment vent to the outer boundary of the school: _____ feet

Distance from stack or equipment vent to the outer boundary of the school: _____ feet

CA Health & Safety Code 42301.9: "School" means any public or private school used for purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes.

Population Density

(●) Urban ( ) Rural (<50% of land within 3 km radius accounted for by urban land use categories, i.e., multi-family dwelling or industrial.)

Zoning Classification

( ) Mixed Use Residential Commercial Zone (M-U) ( ) Service and Professional Zone (C-S) ( ) Medium Commercial (C-3)

(●) Heavy Commercial (C-4) ( ) Commercial Manufacturing (C-M)

Section C - Emission Release Parameters - Stacks, Vents

Stack Data

Stack Height: 64.50 feet (above ground level) **What is the height of the closest building nearest the stack?** 59 feet

Stack Inside Diameter: 34.00 inches **Stack Flow:** 29,047 acfm **Stack Temperature:** 700 °F

Rain Cap Present: ( ) Yes (●) No **Stack Orientation:** (●) Vertical ( ) Horizontal

If the stack height is less than 2.5 times the closest building height (H), please provide information on any building within 5xH distance from the stack (attach additional sheet if necessary):

Building #/Name: Compressor Building **Building #/Name:** _____

Building Height: 59 feet (above ground level) **Building Height:** _____ feet (above ground level)

Building Width: 88 feet **Building Width:** _____ feet

Building Length: 316 feet **Building Length:** _____ feet

Receptor Distance From Equipment Stack or Roof Vents/Openings

Distance to nearest residence or sensitive receptor*: 2,400 feet

Distance to nearest business: 1,500 feet

Building Information

Are the emissions released from vents and/or openings from a building? ( ) Yes (●) No

If yes, please provide:

Building #/Name: _____ **Building Width:** _____ feet

Building Height: _____ feet (above ground level) **Building Length:** _____ feet

*AQMD Rule 1470 defines SENSITIVE RECEPTOR as meaning any residence including private homes, condominiums, apartments, and living quarters, schools as defined under paragraph (b)(57), preschools, daycare centers and health facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

South Coast Air Quality Management District

Form 400-PS

Plot Plan And Stack Information Form

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.

Section D - Authorization/Signature			
I hereby certify that all information contained herein and information submittfgfed with this application is true and correct.			
Signature of Preparer: Jessica Mohatt	**Title of Preparer:** Engineer	**Preparer's Phone #:** (209) 446-0227 **Preparer's Email:** JMohatt@YorkeEngr.com	
Contact Person: Ify Mordi **Contact's Email:** IMordi@socalgas.com	**Contact's Phone#:** (818) 429-7337 **Contact's Fax#:**	**Date Signed:**	

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Control System for Compressor Gas Lean-Burn Engine 3

South Coast Air Quality Management District

Form 400-A

Application Form for Permit or Plan Approval

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

1. **Facility Name** (Business Name of Operator to Appear on the Permit): SoCalGas

2. **Valid AQMD Facility ID** (Available On Permit Or Invoice Issued By AQMD): 005973

3. **Owner's Business Name** (If different from Business Name of Operator):

Section B - Equipment Location Address

4. **Equipment Location Is:** (●) Fixed Location ( ) Various Location
(For equipment operated at various locations, provide address of initial site.)

25205 W. Rye Canyon Rd
Street Address

Valencia , CA 91355
City Zip

Ify Mordi Principal Env. Specialist
Contact Name Title

(818) 429-7337
Phone # Ext. Fax #

E-Mail: IMordi@socalgas.com

Section C - Permit Mailing Address

5. **Permit and Correspondence Information:**
[X] Check here if same as equipment location address

25205 W. Rye Canyon Rd
Address

Valencia , CA 91355
City State Zip

Ify Mordi Principal Env. Specialist
Contact Name Title

(818) 429-7337
Phone # Ext. Fax #

E-Mail: IMordi@socalgas.com

Section D - Application Type

6. **The Facility Is:** ( ) Not In RECLAIM or Title V ( ) In RECLAIM ( ) In Title V (●) In RECLAIM & Title V Programs

7. **Reason for Submitting Application** (Select only ONE):

7a. New Equipment or Process Application:

- (●) New Construction (Permit to Construct)
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Equipment Operating Without A Permit *
- ( ) Compliance Plan
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

7b. Facility Permits:

- ( ) Title V Application or Amendment (Refer to Title V Matrix)
- ( ) RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- ( ) Administrative Change
- ( ) Alteration/Modification
- ( ) Alteration/Modification without Prior Approval *
- ( ) Change of Condition
- ( ) Change of Condition without Prior Approval *
- ( ) Change of Location
- ( ) Change of Location without Prior Approval *
- ( ) Equipment Operating with an Expired/Inactive Permit *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

8a. **Estimated Start Date of Construction** (mm/dd/yyyy):

8b. **Estimated End Date of Construction** (mm/dd/yyyy):

8c. **Estimated Start Date of Operation** (mm/dd/yyyy):

9. **Description of Equipment or Reason for Compliance Plan** (list applicable rule):
Installation of a new emission control system for a replacement compressor gas lean-burn engine

10. **For Identical equipment, how many additional applications are being submitted with this application?** (Form 400-A required for each equipment / process): 3

11. **Are you a Small Business as per AQMD's Rule 102 definition?** (10 employees or less and total gross receipts are $500,000 or less OR a not-for-profit training center) (●) No ( ) Yes

12. **Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment?** (●) No ( ) Yes
If Yes, provide NOV/NC#:

Section E - Facility Business Information

13. **What type of business is being conducted at this equipment location?** Natural gas storage field

14. **What is your business primary NAICS Code?** (North American Industrial Classification System) 486210

15. **Are there other facilities in the SCAQMD jurisdiction operated by the same operator?** ( ) No (●) Yes

16. **Are there any schools (K-12) within 1000 feet of the facility property line?** (●) No ( ) Yes

Section F - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. **Signature of Responsible Official:** Lawrence T. Bittleston, Jr.

18. **Title of Responsible Official:** Storage Operations Manager

19. **I wish to review the permit prior to issuance.** (This may cause a delay in the application process.) ( ) No (●) Yes

20. **Print Name:** Lawrence T. Bittleston, Jr.

21. **Date:** 6/1/22

22. **Do you claim confidentiality of data?** (If Yes, see instructions.) (●) No ( ) Yes

23. **Check List:** [X] Authorized Signature/Date [X] Form 400-CEQA [X] Supplemental Form(s) (ie., Form 400-E-xx) [X] Fees Enclosed

AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED $	PAYMENT TRACKING #	VALIDATION

DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN

Control System for Compressor Gas Lean-Burn Engine 3

South Coast Air Quality Management District

Form 400-E-5
Selective Catalytic Reduction (SCR) System, Oxidation Catalyst, and Ammonia Catalyst

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W. Rye Canyon Rd., Valencia, CA 91355 (●) Fixed Location ( ) Various Locations

Section B - Equipment Description

Selective Catalytic Reduction (SCR)

SCR Catalyst	Manufacturer: Cormetech; Catalyst Active Material: Ti-W Model Number: CM21-HT; Type: SCR Catalyst Size of Each Layer or Module: L: 1 ft. 1 in. W: 1 ft. 4 in. H: 0 ft. 8 in. No. of Layers or Modules: 2; Total Volume: 53.996 cu. ft.; Total Weight: 2520 lbs.
Reducing Agent	(●) Urea ( ) Anhydrous Ammonia ( ) Aqueous Ammonia ____ %; Injection Rate: 14.05 lb/hr
Reducing Agent Storage*	Diameter: 11 ft. 10 in. Height: 11 ft. 4 in. Capacity: 8000 gal Pressure Setting: 14.7 psia * A separate permit may be needed for the storage equipment.
Space Velocity	Gas Flow Rate/Catalyst Volume: 16000 per hour
Area Velocity	Gas Flow Rate/Wetted Catalyst Surface Area: 9.4 ft/hr
Manufacturer's Guarantee	NOx: 11 ppm $\%O_2$: 15.00 NOx: ____ gm/bhp-hr Ammonia Slip: 10 ppm @ 15.00 $\%O_2$
Catalyst Life	____ years (expected)
Cost	Capital Cost: ____ Installation Cost: ____ Catalyst Replacement Cost: ____

Oxidation Catalyst

Oxidation Catalyst	Manufacturer: DCL; Catalyst Active Material: Platinum Model Number: DC5B; Type: Oxicat-Metallic Size of Each Layer or Module: L: 5 ft. ____ in. W: 4 ft. ____ in. H: ____ ft. 4 in. No. of Layers or Modules: 1; Total Volume: 6.63 cu. ft.; Total Weight: 375 lbs.
Space Velocity	Gas Flow Rate/Catalyst Volume: 138544 per hour
Manufacturer's Guarantee	VOC: 30 ppm VOC: ____ gm/bhp-hr $\%O_2$: 15.00 CO: 70 ppm CO: ____ gm/bhp-hr $\%O_2$: 15.00
Catalyst Life	2 years (expected)
Cost	Capital Cost: ____ Installation Cost: ____ Catalyst Replacement Cost: ____

South Coast Air Quality Management District

Form 400-E-5
Selective Catalytic Reduction (SCR) System, Oxidation Catalyst, and Ammonia Catalyst

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section B - Equipment Description (cont.)

Ammonia Catalyst

Ammonia Catalyst

Manufacturer: _____ Catalyst Active Material: _____

Model Number: _____ Type: _____

Size of Each Layer or Module: L: _____ ft. _____ in. W: _____ ft. _____ in. H: _____ ft. _____ in.

No. of Layers or Modules: _____ Total Volume: _____ cu. ft. Total Weight: _____ lbs.

Space Velocity

Gas Flow Rate/Catalyst Volume: _____ per hour

Manufacturer's Guarantee

NH_3: _____ ppm $\%O_2$: _____

Catalyst Life

_____ years (expected)

Cost

Capital Cost: _____ Installation Cost: _____ Catalyst Replacement Cost: _____

Section C - Operation Information

Operating Temperature

Minimum Inlet Temperature: 572 °F (from cold start) Maximum Temperature: 985 °F

Warm-up Time: 0 hr. 30 min. (maximum)

Operating Schedule

Normal: 24 hours/day 7 days/week 52 weeks/yr

Maximum: 24 hours/day 7 days/week 52 weeks/yr

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info

Signature: Jessica Mohatt Date: 05/24/2022

Title: Engineer Company Name: Yorke Engineering

Name: Jessica Mohatt

Phone #: (209) 446-0227 Fax #:

Email: JMohatt@YorkeEngr.com

Contact Info

Name: Ify Mordi

Title: Princ. Env. Specialist Company Name: Southern California Gas

Phone #: (818) 429-7337 Fax #:

Email: IMordi@YorkeEngr.com

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Replacement Compressor Gas Lean-Burn Engine 4

South Coast Air Quality Management District

Form 400-A

Application Form for Permit or Plan Approval

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

1. Facility Name (Business Name of Operator to Appear on the Permit): SoCalGas

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

3. Owner's Business Name (If different from Business Name of Operator):

Section B - Equipment Location Address

4. Equipment Location Is: (●) Fixed Location ( ) Various Location
(For equipment operated at various locations, provide address of initial site.)

25205 W. Rye Canyon Rd
Street Address

Valencia , CA 91355
City Zip

Ify Mordi Principal Env. Specialist
Contact Name Title

(818) 429-7337
Phone # Ext. Fax #

E-Mail: IMordi@socalgas.com

Section C - Permit Mailing Address

5. Permit and Correspondence Information:
[X] Check here if same as equipment location address

25205 W. Rye Canyon Rd
Address

Valencia , CA 91355
City State Zip

Ify Mordi Principal Env. Specialist
Contact Name Title

(818) 429-7337
Phone # Ext. Fax #

E-Mail: IMordi@socalgas.com

Section D - Application Type

6. The Facility Is: ( ) Not In RECLAIM or Title V ( ) In RECLAIM ( ) In Title V (●) In RECLAIM & Title V Programs

7. Reason for Submitting Application (Select only ONE):

7a. New Equipment or Process Application:

- (●) New Construction (Permit to Construct)
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Equipment Operating Without A Permit *
- ( ) Compliance Plan
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

7b. Facility Permits:

- ( ) Title V Application or Amendment (Refer to Title V Matrix)
- ( ) RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- ( ) Administrative Change
- ( ) Alteration/Modification
- ( ) Alteration/Modification without Prior Approval *
- ( ) Change of Condition
- ( ) Change of Condition without Prior Approval *
- ( ) Change of Location
- ( ) Change of Location without Prior Approval *
- ( ) Equipment Operating with an Expired/Inactive Permit *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

8a. Estimated Start Date of Construction (mm/dd/yyyy):

8b. Estimated End Date of Construction (mm/dd/yyyy):

8c. Estimated Start Date of Operation (mm/dd/yyyy):

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Replacement of compressor gas lean-burn engines for compliance with FWEMCP

10. For Identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each equipment / process): 3

11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are $500,000 or less OR a not-for-profit training center) (●) No ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? (●) No ( ) Yes
If Yes, provide NOV/NC#:

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location?
Natural gas storage field

14. What is your business primary NAICS Code? (North American Industrial Classification System): 486210

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? ( ) No (●) Yes

16. Are there any schools (K-12) within 1000 feet of the facility property line? (●) No ( ) Yes

Section F - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official: Harry Bittleston

18. Title of Responsible Official: Storage Operations Manager

19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) ( ) No (●) Yes

20. Print Name: Lawrence T. Bittleston, Jr.

21. Date: 6/1/22

22. Do you claim confidentiality of data? (If Yes, see instructions.) (●) No ( ) Yes

23. Check List: [X] Authorized Signature/Date [X] Form 400-CEQA [X] Supplemental Form(s) (ie., Form 400-E-xx) [X] Fees Enclosed

AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED $	PAYMENT TRACKING #	VALIDATION

DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN

Replacement Compressor Gas Lean-Burn Engine 4

South Coast Air Quality Management District

Form 400-E-13b
Non-Emergency Internal Combustion Engine

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W. Rye Canyon Rd., Valencia

(•) Fixed Location ( ) Various Locations

Section B - Equipment Description

Internal Combustion Engine

Is the ICE an EPA Certified or Qualifying Non-Road Engine? (•) No ( ) Yes

If yes, provide EPA Certificate No., and attach copy: _____

Manufacturer: Waukesha | Model: 16V275GL | Serial No.: TBD

Date of Manufacture: _____ (mm/dd/yyyy) Date of Installation: _____ (mm/dd/yyyy)

Note: For an ICE manufactured after 7/18/94, please provide manufacturer's specification and guarantee.

Manufacturer Maximum Rating: 5000 BHP@ 1000 RPM

ICE Function (Check all that apply)

[ ] Electrical Generator [ ] Fire Pump [X] Compressor [ ] Co-Generation
[ ] Flood Control [ ] Pump Driver [ ] Other (specify): _____

Type

(•) Stationary ( ) Portable

How Is This Type of Equipment Used? (Check All That Apply) [X] Within Facility [ ] Off-Site [ ] Rental [ ] Non-Rental

Fuel

[X] Natural Gas [ ] LPG [ ] Refinery Gas* [ ] Digester Gas* [ ] Landfill Gas*
[ ] Diesel Oil No. 2 [X] Other*: Blended Natural Gas

*If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content.

Stand-By Fuel

[ ] Natural Gas [ ] LPG [ ] Refinery Gas* [ ] Digester Gas* [ ] Landfill Gas*
[ ] Diesel Oil No. 2 [ ] Other*: _____

*If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content.

Cycle Type

( ) Two Cycle (•) Four Cycle

Combustion Type

(•) Lean Burn ( ) Rich Burn

No. of Cylinders

( ) Four ( ) Six ( ) Eight ( ) Ten ( ) Twelve (•) Sixteen ( ) Other: _____

Aspiration Type

( ) Turbocharged (•) Turbocharged/Aftercooled ( ) Naturally Aspirated
[ ] Timing Retarded ≥ 4° (relative to standard timing)

Air Pollution Control (If Applicable)

(•) Selective Catalytic Reduction (SCR) * ( ) No Controls
( ) Selective Non-Catalytic Reduction (SNCR) * ( ) Air Fuel Ratio Controller
( ) Non-selective Catalytic Reduction (NSCR) ( ) Other (specify): _____

* Separate application is required.

Manufacturer: AeriNOx | Model: 21047

If already permitted, indicate Permit No.: _____ Device No.: _____

South Coast Air Quality Management District

Form 400-E-13b
Non-Emergency Internal Combustion Engine

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section C - Operation Information

Fuel Consumption

Maximum Rated Load: _____ gal./hr. OR 42345 cu.ft./hr

Average Load: _____ gal./hr. OR 32920 cu.ft./hr.

Emissions Data

Pollutants	Maximum Emissions Before Control: gm/Bhp-hr	Maximum Emissions Before Control: PPM (15% O_2)	Maximum Emissions After Control: gm/Bhp-hr	Maximum Emissions After Control: PPM (15% O_2)
ROG		30		
NOx		11		
CO		70		
PM		10		
SOx		0.6		

Emissions Reference (attach):

- ☒ Manufacturer's Guarantee
- ☒ Catalytic Manufacturer's Guarantee
- ☐ Source Test Data
- ☒ EPA Emission Factors
- ☐ Other (specify): _____

Operating Schedule

Normal: 24 hours/day 7 days/week 52 weeks/yr

Maximum: 24 hours/day 7 days/week 52 weeks/yr

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info

Signature: Jessica Mohatt Date: 05/24/2022

Title: Engineer Company Name: Yorke Engineering, LLC

Name: Jessica Mohatt

Phone #: (209) 446-0227 Fax #:

Email: JMohatt@YorkeEngr.com

Contact Info

Name: Ify Mordi

Title: Princ. Env. Specialist Company Name: Southern California Gas

Phone #: (818) 429-7337 Fax #:

Email: IMordi@socalgas.com

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Replacement Compressor Gas Lean-Burn Engine 4

South Coast Air Quality Management District

Form 400-PS

Plot Plan And Stack Information Form

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator To Appears On The Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W Rye Canyon Rd., Valencia, CA 91355 (●) Fixed Location ( ) Various Locations

Section B - Location Data

Plot Plan

Please attach a site map for the project with distances and scales. Identify and locate the proposed equipment on the map. A copy of the appropriate Thomas Brothers page, a web-based map, or a sketch that shows the major streets and location of the equipment is acceptable.

Location of Schools Nearby

Is the facility located within a 1/4 mile radius (1,320 feet) of the outer boundary of a school? ( ) Yes (●) No

If yes, please provide name(s) of school(s) below:

School Name: _____ **School Name:** _____

School Address: _____ **School Address:** _____

Distance from stack or equipment vent to the outer boundary of the school: _____ feet

Distance from stack or equipment vent to the outer boundary of the school: _____ feet

CA Health & Safety Code 42301.9: "School" means any public or private school used for purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes.

Population Density

(●) Urban ( ) Rural (<50% of land within 3 km radius accounted for by urban land use categories, i.e., multi-family dwelling or industrial.)

Zoning Classification

( ) Mixed Use Residential Commercial Zone (M-U) ( ) Service and Professional Zone (C-S) ( ) Medium Commercial (C-3)

(●) Heavy Commercial (C-4) ( ) Commercial Manufacturing (C-M)

Section C - Emission Release Parameters - Stacks, Vents

Stack Data

Stack Height: 64.50 feet (above ground level) **What is the height of the closest building nearest the stack?** 59 feet

Stack Inside Diameter: 34.00 inches **Stack Flow:** 29,047 acfm **Stack Temperature:** 700 °F

Rain Cap Present: ( ) Yes (●) No **Stack Orientation:** (●) Vertical ( ) Horizontal

If the stack height is less than 2.5 times the closest building height (H), please provide information on any building within 5xH distance from the stack (attach additional sheet if necessary):

Building #/Name: Compressor Building **Building #/Name:** _____

Building Height: 59 feet (above ground level) **Building Height:** _____ feet (above ground level)

Building Width: 88 feet **Building Width:** _____ feet

Building Length: 316 feet **Building Length:** _____ feet

Receptor Distance From Equipment Stack or Roof Vents/Openings

Distance to nearest residence or sensitive receptor*: 2,400 feet

Distance to nearest business: 1,500 feet

Building Information

Are the emissions released from vents and/or openings from a building? ( ) Yes (●) No

If yes, please provide:

Building #/Name: _____ **Building Width:** _____ feet

Building Height: _____ feet (above ground level) **Building Length:** _____ feet

*AQMD Rule 1470 defines SENSITIVE RECEPTOR as meaning any residence including private homes, condominiums, apartments, and living quarters, schools as defined under paragraph (b)(57), preschools, daycare centers and health facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

South Coast Air Quality Management District

Form 400-PS

Plot Plan And Stack Information Form

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submittfgfed with this application is true and correct.

Signature of Preparer:	*Title of Preparer:*	Preparer's Phone #: (209) 446-0227
Jessica Mohatt	Engineer	Preparer's Email: JMohatt@YorkeEngr.com

Contact Person:	Contact's Phone#: (818) 429-7337	Date Signed:
Ify Mordi		
Contact's Email: IMordi@socalgas.com	Contact's Fax#:	

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Control System for Compressor Gas Lean-Burn Engine 4

South Coast Air Quality Management District

Form 400-A

Application Form for Permit or Plan Approval

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

1. **Facility Name** (Business Name of Operator to Appear on the Permit): SoCalGas

2. **Valid AQMD Facility ID** (Available On Permit Or Invoice Issued By AQMD): 005973

3. **Owner's Business Name** (If different from Business Name of Operator):

Section B - Equipment Location Address

4. **Equipment Location Is:** (●) Fixed Location ( ) Various Location
(For equipment operated at various locations, provide address of initial site.)

25205 W. Rye Canyon Rd
Street Address

Valencia , CA 91355
City Zip

Ify Mordi — Principal Env. Specialist
Contact Name Title

(818) 429-7337 Ext. Fax #
Phone #

E-Mail: IMordi@socalgas.com

Section C - Permit Mailing Address

5. **Permit and Correspondence Information:**
☒ Check here if same as equipment location address

25205 W. Rye Canyon Rd
Address

Valencia , CA 91355
City State Zip

Ify Mordi — Principal Env. Specialist
Contact Name Title

(818) 429-7337 Ext. Fax #
Phone #

E-Mail: IMordi@socalgas.com

Section D - Application Type

6. **The Facility Is:** ( ) Not In RECLAIM or Title V ( ) In RECLAIM ( ) In Title V (●) In RECLAIM & Title V Programs

7. **Reason for Submitting Application** (Select only ONE):

7a. New Equipment or Process Application:

- (●) New Construction (Permit to Construct)
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Equipment Operating Without A Permit *
- ( ) Compliance Plan
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

7b. Facility Permits:

- ( ) Title V Application or Amendment (Refer to Title V Matrix)
- ( ) RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- ( ) Administrative Change
- ( ) Alteration/Modification
- ( ) Alteration/Modification without Prior Approval *
- ( ) Change of Condition
- ( ) Change of Condition without Prior Approval *
- ( ) Change of Location
- ( ) Change of Location without Prior Approval *
- ( ) Equipment Operating with an Expired/Inactive Permit *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

8a. **Estimated Start Date of Construction** (mm/dd/yyyy):

8b. **Estimated End Date of Construction** (mm/dd/yyyy):

8c. **Estimated Start Date of Operation** (mm/dd/yyyy):

9. **Description of Equipment or Reason for Compliance Plan** (list applicable rule):
Installation of a new emission control system for a replacement compressor gas lean-burn engine

10. **For Identical equipment, how many additional applications are being submitted with this application?** (Form 400-A required for each equipment / process): 3

11. **Are you a Small Business as per AQMD's Rule 102 definition?** (10 employees or less and total gross receipts are $500,000 or less OR a not-for-profit training center) (●) No ( ) Yes

12. **Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment?** (●) No ( ) Yes
If Yes, provide NOV/NC#:

Section E - Facility Business Information

13. **What type of business is being conducted at this equipment location?** Natural gas storage field

14. **What is your business primary NAICS Code?** (North American Industrial Classification System) 486210

15. **Are there other facilities in the SCAQMD jurisdiction operated by the same operator?** ( ) No (●) Yes

16. **Are there any schools (K-12) within 1000 feet of the facility property line?** (●) No ( ) Yes

Section F - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. **Signature of Responsible Official:**

18. **Title of Responsible Official:** Storage Operations Manager

19. **I wish to review the permit prior to issuance.** (This may cause a delay in the application process.) ( ) No (●) Yes

20. **Print Name:** Lawrence T. Bittleston, Jr.

21. **Date:** 6/1/22

22. **Do you claim confidentiality of data?** (If Yes, see instructions.) (●) No ( ) Yes

23. **Check List:** ☒ Authorized Signature/Date ☒ Form 400-CEQA ☒ Supplemental Form(s) (ie., Form 400-E-xx) ☒ Fees Enclosed

AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED $	PAYMENT TRACKING #	VALIDATION

DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN

Control System for Compressor Gas Lean-Burn Engine 4

South Coast Air Quality Management District

Form 400-E-5
Selective Catalytic Reduction (SCR) System, Oxidation Catalyst, and Ammonia Catalyst

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): 25205 W. Rye Canyon Rd., Valencia, CA 91355 (●) Fixed Location ( ) Various Locations

Section B - Equipment Description

Selective Catalytic Reduction (SCR)

SCR Catalyst	Manufacturer: Cormetech; Catalyst Active Material: Ti-W Model Number: CM21-HT; Type: SCR Catalyst Size of Each Layer or Module: L: 1 ft. 1 in. W: 1 ft. 4 in. H: 0 ft. 8 in. No. of Layers or Modules: 2; Total Volume: 53.996 cu. ft.; Total Weight: 2520 lbs.
Reducing Agent	(●) Urea ( ) Anhydrous Ammonia ( ) Aqueous Ammonia ____ %; Injection Rate: 14.05 lb/hr
Reducing Agent Storage*	Diameter: 11 ft. 10 in. Height: 11 ft. 4 in. Capacity: 8000 gal Pressure Setting: 14.7 psia * A separate permit may be needed for the storage equipment.
Space Velocity	Gas Flow Rate/Catalyst Volume: 16000 per hour
Area Velocity	Gas Flow Rate/Wetted Catalyst Surface Area: 9.4 ft/hr
Manufacturer's Guarantee	NOx: 11 ppm $\%O_2$: 15.00 NOx: ____ gm/bhp-hr Ammonia Slip: 10 ppm @ 15.00 $\%O_2$
Catalyst Life	____ years (expected)
Cost	Capital Cost: ____ Installation Cost: ____ Catalyst Replacement Cost: ____

Oxidation Catalyst

Oxidation Catalyst	Manufacturer: DCL; Catalyst Active Material: Platinum Model Number: DC5B; Type: Oxicat-Metallic Size of Each Layer or Module: L: 5 ft. ____ in. W: 4 ft. ____ in. H: ____ ft. 4 in. No. of Layers or Modules: 1; Total Volume: 6.63 cu. ft.; Total Weight: 375 lbs.
Space Velocity	Gas Flow Rate/Catalyst Volume: 138544 per hour
Manufacturer's Guarantee	VOC: 30 ppm VOC: ____ gm/bhp-hr $\%O_2$: 15.00 CO: 70 ppm CO: ____ gm/bhp-hr $\%O_2$: 15.00
Catalyst Life	2 years (expected)
Cost	Capital Cost: ____ Installation Cost: ____ Catalyst Replacement Cost: ____

South Coast Air Quality Management District

Form 400-E-5
Selective Catalytic Reduction (SCR) System, Oxidation Catalyst, and Ammonia Catalyst

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section B - Equipment Description (cont.)

Ammonia Catalyst

Ammonia Catalyst

Manufacturer: _____ Catalyst Active Material: _____

Model Number: _____ Type: _____

Size of Each Layer or Module: L: _____ ft. _____ in. W: _____ ft. _____ in. H: _____ ft. _____ in.

No. of Layers or Modules: _____ Total Volume: _____ cu. ft. Total Weight: _____ lbs.

Space Velocity

Gas Flow Rate/Catalyst Volume: _____ per hour

Manufacturer's Guarantee

NH_3: _____ ppm $\%O_2$: _____

Catalyst Life

_____ years (expected)

Cost

Capital Cost: _____ Installation Cost: _____ Catalyst Replacement Cost: _____

Section C - Operation Information

Operating Temperature

Minimum Inlet Temperature: 572 °F (from cold start) Maximum Temperature: 985 °F

Warm-up Time: 0 hr. 30 min. (maximum)

Operating Schedule

Normal: 24 hours/day 7 days/week 52 weeks/yr

Maximum: 24 hours/day 7 days/week 52 weeks/yr

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info

Signature: Jessica Mohatt Date: 05/24/2022

Title: Engineer Company Name: Yorke Engineering

Name: Jessica Mohatt

Phone #: (209) 446-0227 Fax #:

Email: JMohatt@YorkeEngr.com

Contact Info

Name: Ify Mordi

Title: Princ. Env. Specialist Company Name: Southern California Gas

Phone #: (818) 429-7337 Fax #:

Email: IMordi@YorkeEngr.com

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Aqueous Urea Storage Tank

South Coast Air Quality Management District

Form 400-A

Application Form for Permit or Plan Approval

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

1. Facility Name (Business Name of Operator to Appear on the Permit): SoCalGas

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

3. Owner's Business Name (If different from Business Name of Operator):

Section B - Equipment Location Address

4. Equipment Location Is: (●) Fixed Location ( ) Various Location
(For equipment operated at various locations, provide address of initial site.)

25205 W. Rye Canyon Rd
Street Address

Valencia , CA 91355
City Zip

Ify Mordi — Princ. Env. Specialist
Contact Name Title

(818) 429-7337 — — —
Phone # Ext. Fax #

E-Mail: IMordi@socalgas.com

Section C - Permit Mailing Address

5. Permit and Correspondence Information:
[X] Check here if same as equipment location address

25205 W. Rye Canyon Rd
Address

Valencia , CA 91355
City State Zip

Ify Mordi — Princ. Env. Specialist
Contact Name Title

(818) 429-7337 — — —
Phone # Ext. Fax #

E-Mail: IMordi@socalgas.com

Section D - Application Type

6. The Facility Is: ( ) Not In RECLAIM or Title V ( ) In RECLAIM ( ) In Title V (●) In RECLAIM & Title V Programs

7. Reason for Submitting Application (Select only ONE):

7a. New Equipment or Process Application:

- (●) New Construction (Permit to Construct)
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Equipment Operating Without A Permit *
- ( ) Compliance Plan
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

7b. Facility Permits:

- ( ) Title V Application or Amendment (Refer to Title V Matrix)
- ( ) RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- ( ) Administrative Change
- ( ) Alteration/Modification
- ( ) Alteration/Modification without Prior Approval *
- ( ) Change of Condition
- ( ) Change of Condition without Prior Approval *
- ( ) Change of Location
- ( ) Change of Location without Prior Approval *
- ( ) Equipment Operating with an Expired/Inactive Permit *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

8a. Estimated Start Date of Construction (mm/dd/yyyy):

8b. Estimated End Date of Construction (mm/dd/yyyy):

8c. Estimated Start Date of Operation (mm/dd/yyyy):

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Installation of a new 8,000 gallon aqueous urea storage tank

10. For Identical equipment, how many additional applications are being submitted with this application?
(Form 400-A required for each equipment / process)

11. Are you a Small Business as per AQMD's Rule 102 definition?
(10 employees or less and total gross receipts are $500,000 or less OR a not-for-profit training center) (●) No ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? (●) No ( ) Yes
If Yes, provide NOV/NC#:

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location?
Natural gas storage field

14. What is your business primary NAICS Code?
(North American Industrial Classification System) 486210

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? ( ) No (●) Yes

16. Are there any schools (K-12) within 1000 feet of the facility property line? (●) No ( ) Yes

Section F - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official: Larry Bittleston

18. Title of Responsible Official: Storage Operations Manager

19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) ( ) No (●) Yes

20. Print Name: Lawrence T. Bittleston, Jr.

21. Date: 6/1/22

22. Do you claim confidentiality of data? (If Yes, see instructions.) (●) No ( ) Yes

23. Check List: [X] Authorized Signature/Date [X] Form 400-CEQA [X] Supplemental Form(s) (ie., Form 400-E-xx) [X] Fees Enclosed

AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED $	PAYMENT TRACKING #	VALIDATION

DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN

Aqueous Urea Storage Tank

South Coast Air Quality Management District

Form 400-E-18
Storage Tank

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): SoCalGas

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

Address where the equipment will be operated (for equipment which will be moved to various locations in AQMD's jurisdiction, please list the initial location site): 25205 W. Rye Canyon Rd., Valencia, CA 91355

(•) Fixed Location ( ) Various Locations

Tank Type (Select ONE)

( ) External Floating Roof Tank (EFRT) ( ) Internal Floating Roof Tank (IFRT) ( ) Horizontal Tank (HT)
( ) Vertical Fixed Roof Tank (VFRT) ( ) Domed External Roof Tank (DEFRT)

Identification

Tank Identification Number: TBD

Tank Contents/Product (include MSDS): 32.5% Aqueous Urea

Section B - Tank Information

Tank Characteristics

Shell Diameter (ft.): 11.833
Shell Length (ft.):
Shell Height (ft.): 11.333
Turnovers Per Year:

Is Tank Heated? ( ) Yes (•) No
Is Tank Underground? ( ) Yes (•) No
Net Throughput (gal/year):
Self Support Roof: ( ) Yes ( ) No

Number of Columns?
Effective Column Diameter: ( ) 9" by 7" Built Up Column - 1.1 ( ) 8" Diameter Pipe - 0.7 ( ) Unknown - 1

External Shell Condition: (•) Good ( ) Poor

Internal Shell Color: ( ) Light Rust ( ) Dense Rust ( ) Gunite Lining

External Shell Color: ( ) White/White ( ) Aluminum/Specular ( ) Aluminum/Diffuse ( ) Gray/Light ( ) Gray/Medium ( ) Red/Primer

Average Liquid Height (ft.) (Vertical Only):
Maximum Liquid Height (ft.) (Vertical Only):
Working Volume (gal.) (Vertical Only):
Actual Volume (gal.) (Vertical Only): 8000

Paint Condition: (•) Good ( ) Poor

Paint Color/Shade: ( ) White/White ( ) Aluminum/Diffuse ( ) Gray/Light ( ) Aluminum/Specular ( ) Gray/Medium ( ) Red/Primer

Roof Characteristics (Floating Roof Tank)

Roof Type: ( ) Pontoon ( ) Double Deck ( ) Dome Roof (Height_____ ft.) ( ) Cone Roof (Height_____ ft.)

Roof Fitting Category: ( ) Typical ( ) Detail

Roof Height (ft.):

Roof Paint Condition: ( ) Good ( ) Poor

Roof Color/Shade: ( ) White/White ( ) Aluminum/Diffuse ( ) Gray/Light ( ) Aluminum/Specular ( ) Gray/Medium ( ) Red/Primer

Deck Characteristics (Floating Roof Tank)

Deck Type: ( ) Welded ( ) Bolted

Deck Fitting Characteristics: ( ) Typical ( ) Detailed (Complete Deck Seam)

Construction:	Deck Seam Length (ft.):	Deck Seam:
( ) Sheet		( ) 5 ft. wide ( ) 6 ft. wide ( ) 7 ft. wide
( ) Panel		( ) 5 x 7.5 ft. ( ) 5 x 12 ft.

Tank Construction and Rim -Seal System (Floating Roof Tank)

Tank Construction: ( ) Welded ( ) Riveted

Primary Seal: ( ) Mechanical Shoe ( ) Liquid Mounted ( ) Vapor Mounted

Secondary Seal: ( ) Rim Mounted ( ) None ( ) Shoe Mounted

Breather Vent Setting

Vacuum Setting (psig):
Pressure Setting (psig):

* Section D of the application MUST be completed.

South Coast Air Quality Management District

Form 400-E-18
Storage Tank

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section B - Tank Information (cont.)

Site Selection

Nearest Major City:_____

Daily Average Ambient Temperature (°F): _____ Annual Average Minimum Temperature (°F):_____

Annual Average Maximum Temperature (°F): _____ Average Wind Speed (mph):_____

Annual Average Solar Insulation Factor (Btu / (ft^3 * ft * day)):_____

Tank Contents

Chemical Category: ○ Organic Liquids ○ Crude Oil ○ Petroleum Distillates

Liquid: ◉ Single ○ Multiple

If Multiple, Select Speciation Option: ○ Full Speciation ○ Partial Speciation ○ Various Weight Speciation ○ None

Section C - Operation Information

Vapor Control

Vapor Control During Loading or Unloading: ☐ Sparger ☐ Vapor Balance System ☐ Vapor Return Line ☐ Vented to Air Pollution Control Equipment [1]

[1] A separate permit is required. If APC equipment is already permitted, provide Permit or Device Number:_____

Vent Valve Data

Indicate Type of Setting and Vapor Disposal

	Number	Pressure Setting	Vaccum Setting	Discharging to (Check Appropriate Box)		
				Atmosphere	Vapor Control	Flare
Combination				☐	☐	☐
Pressure				☐	☐	☐
Vaccum				☐	☐	☐
Open				☐	☐	☐

Materials

Name all liquids, vapors, gases, or mixtures of such material to be stored in this tank:
32.5% Aqueous Urea

If material is stored in a solution, supply the following information:

Name of Solvent:_____ Name of Materials Dissolved:_____

Concentration of Materials Dissolved:_____ % by Weight OR _____ % by Volume OR _____ lbs/gal

Section D - Roof/Deck Fitting

Section D is required for the following tanks: External Floating Roof Tank, Internal Floating Roof Tanks, or Domed External Floating Roof Tanks.

Select the number of fittings for each applicable question. Examples: 3 Unbolted Cover, Ungasketed
_____ Unbolted Cover, Gasketed

Roof/Deck Fitting Details

1. Access Hatch (24" diameter well)
_____ Bolted Cover, Gasketed
_____ Unbolted Cover, UnGasketed
_____ Unbolted Cover, Gasketed

2. Automatic Gauge Float Well (20" diameter well)
_____ Bolted Cover, Gasketed
_____ Unbolted Cover, Ungasketed
_____ Unbolted Cover, Gasketed

3. Column Well (24" diameter well)
_____ Built-Up Col - Sliding Cover, Gasketed
_____ Built-Up Col - Sliding Cover, Ungasketed
_____ Pipe Col - Flex, Fabric Sleeve Seal
_____ Pipe Col - Sliding Cover, Gasketed
_____ Pipe Col - Sliding Cover, Ungasketed

South Coast Air Quality Management District

Form 400-E-18
Storage Tank

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section D - Roof/Deck Fitting (cont.)

Roof/Deck Fitting Details (cont.)

4. Gauge Hatch/Sample Well (8" diameter well)
- _____ Weighted Mechanical Actuation, Gasketed
- _____ Weighted Mechanical Actuation, Ungasketed

5. Ladder Well (36" diameter)
- _____ Sliding Cover, Gasketed
- _____ Sliding Cover, Ungasketed

6. Rim Vent (6" diameter)
- _____ Weighted Mechanical Actuation, Gasketed
- _____ Weighted Mechanical Actuation, Ungasketed

7. Roof Drain (3" diameter)
- _____ Open
- _____ 90% Close

8. Roof Leg (3" diameter leg)
- _____ Adjustable, Pontoon Area, Ungasketed
- _____ Adjustable, Center Area, Ungasketed
- _____ Adjustable, Double-Deck Roofs
- _____ Fixed
- _____ Adjustable, Pontoon Area, Gasketed
- _____ Adjustable, Pontoon Area, Sock
- _____ Adjustable, Center Area, Gasketed
- _____ Adjustable, Center Area, Sock

9. Roof Leg or Hang Well
- _____ Adjustable
- _____ Fixed

10. Sample Pipe (24" diameter)
- _____ Slotted Pipe – Sliding Cover, Gasketed
- _____ Slotted Pipe – Sliding Cover, Ungasketed
- _____ Slit Fabric Seal, 10% Open

11. Guided Pole/Sample Well
- _____ Ungasketed, Sliding Cover, Without Float
- _____ Ungasketed Sliding Cover, With Float
- _____ Gasketed Sliding Cover, Without Float
- _____ Gasketed Sliding Cover, With Float
- _____ Gasketed Sliding Cover, With Pole Sleeve
- _____ Gasketed Sliding Cover, With Pole Wiper
- _____ Gasketed Sliding Cover, With Float, Wiper
- _____ Gasketed Sliding Cover, With Float, Sleeve, Wiper
- _____ Gasketed Sliding Cover, With Pole Sleeve, Wiper

12. _____ **Stub Drain (1" diameter)**

13. Unslotted Guide – Pole Well
- _____ Ungasketed, Sliding Cover
- _____ Gasketed Sliding Cover
- _____ Ungasketed Sliding Cover with Sleeve
- _____ Gasketed Sliding Cover with Sleeve
- _____ Gasketed Sliding Cover with Wiper

14. Vacuum Breaker (10" diameter well)
- _____ Weighted Mechanical Actuation, Gasketed
- _____ Weighted Mechanical Actuation, Ungasketed

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info

Signature: Jessica Mohatt
Date: 05/24/2022
Title: Engineer
Company Name: Yorke Engineering
Name: Jessica Mohatt
Phone #: (209) 662-7500
Fax #:
Email: jmohatt@yorkeengr.com

Contact Info

Name: Ify Mordi
Title: Princ. Env. Specialist
Company Name: SoCalGas
Phone #: (818) 429-7337
Fax #:
Email: IMordi@socalgas.com

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Facility Permit Amendment

South Coast Air Quality Management District

Form 400-A

Application Form for Permit or Plan Approval

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

1. Facility Name (Business Name of Operator to Appear on the Permit): SoCalGas

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

3. Owner's Business Name (If different from Business Name of Operator):

Section B - Equipment Location Address

4. Equipment Location Is: (●) Fixed Location ( ) Various Location
(For equipment operated at various locations, provide address of initial site.)

25205 W. Rye Canyon Rd
Street Address

Valencia , CA 91355
City Zip

Ify Mordi — Principal Env. Specialist
Contact Name Title

(818) 429-7337 — — —
Phone # Ext. Fax #

E-Mail: IMordi@socalgas.com

Section C - Permit Mailing Address

5. Permit and Correspondence Information:
☒ Check here if same as equipment location address

25205 W. Rye Canyon Rd
Address

Valencia , CA 91355
City State Zip

Ify Mordi — Principal Env. Specialist
Contact Name Title

(818) 429-7337 — — —
Phone # Ext. Fax #

E-Mail: IMordi@socalgas.com

Section D - Application Type

6. The Facility Is: ( ) Not In RECLAIM or Title V ( ) In RECLAIM ( ) In Title V (●) In RECLAIM & Title V Programs

7. Reason for Submitting Application (Select only ONE):

7a. New Equipment or Process Application:

- ( ) New Construction (Permit to Construct)
- ( ) Equipment On-Site But Not Constructed or Operational
- ( ) Equipment Operating Without A Permit *
- ( ) Compliance Plan
- ( ) Registration/Certification
- ( ) Streamlined Standard Permit

7b. Facility Permits:

- (●) Title V Application or Amendment (Refer to Title V Matrix)
- ( ) RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- ( ) Administrative Change
- ( ) Alteration/Modification
- ( ) Alteration/Modification without Prior Approval *
- ( ) Change of Condition
- ( ) Change of Condition without Prior Approval *
- ( ) Change of Location
- ( ) Change of Location without Prior Approval *
- ( ) Equipment Operating with an Expired/Inactive Permit *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

8a. Estimated Start Date of Construction (mm/dd/yyyy):

8b. Estimated End Date of Construction (mm/dd/yyyy):

8c. Estimated Start Date of Operation (mm/dd/yyyy):

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):
Amend Title V permit to replace compressor gas lean-burn engines for compliance with FWEMCP

10. For Identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each equipment / process)

11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are $500,000 or less OR a not-for-profit training center) (●) No ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? (●) No ( ) Yes
If Yes, provide NOV/NC#:

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location?
Natural gas storage field

14. What is your business primary NAICS Code? (North American Industrial Classification System) 486210

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? ( ) No (●) Yes

16. Are there any schools (K-12) within 1000 feet of the facility property line? (●) No ( ) Yes

Section F - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official:

18. Title of Responsible Official:
Storage Operations Manager

19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) ( ) No (●) Yes

20. Print Name:
Lawrence T. Bittleston, Jr.

21. Date: 6/1/22

22. Do you claim confidentiality of data? (If Yes, see instructions.) (●) No ( ) Yes

23. Check List: ☒ Authorized Signature/Date ☒ Form 400-CEQA ☒ Supplemental Form(s) (ie., Form 400-E-xx) ☒ Fees Enclosed

AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED $	PAYMENT TRACKING #	VALIDATION

DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN

South Coast Air Quality Management District

Form 500-A2
Title V Application Certification

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section I - Operator Information

1. Facility Name (Business Name of Operator That Appears On Permit): SoCalGas

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): 005973

3. This Certification is submitted with a (Check one):

- a. (●) Title V Application (Initial, Revision or Renewal)
- b. ( ) Supplement/Correction to a Title V Application
- c. ( ) MACT Part 1

4. Is Form 500-C2 included with this Certification? ( ) Yes (●) No

Section II - Responsible Official Certification Statement

*Read each statement carefully and check each that applies – **You must check 3a or 3b.***

1. For Initial, Permit Renewal, and Administrative Application Certifications:

a. ( ) The facility, including equipment that are exempt from written permit per Rule 219, is currently operating and will continue to operate in compliance with all applicable requirement(s) identified in Section II and Section III of Form 500-C1,

i. [ ] except for those requirements that do not specifically pertain to such devices or equipment and that have been identified as "Remove" on Section III of Form 500-C1.

ii. [ ] except for those devices or equipment that have been identified on the completed and attached Form 500-C2 that will not be operating in compliance with the specified applicable requirement(s).

b. ( ) The facility, including equipment that are exempt from written permit per Rule 219, will meet in a timely manner, all applicable requirements with future effective dates.

2. For Permit Revision Application Certifications:

a. [✓] The equipment or devices to which this permit revision applies, will in a timely manner comply with all applicable requirements identified in Section II and Section III of Form 500-C1.

3. For MACT Hammer Certifications:

a. ( ) The facility is subject to Section 112(j) of the Clean Air Act (Subpart B of 40 CFR part 63), also known as the MACT "hammer." The following information is submitted with a Title V application to comply with the Part 1 requirements of Section 112(j).

b. (●) The facility is not subject to Section 112(j) of the Clean Air Act (Subpart B of 40 CFR part 63).

Section III - Authorization/Signature

I certify under penalty of law that I am the responsible official for this facility as defined in AQMD Regulation XXX and that based on information and belief formed after reasonable inquiry, the statement and information in this document and in all attached application forms and other materials are true, accurate, and complete.

1. Signature of Responsible Official:	2. Title of Responsible Official:
	Storage Operations Manager II
3. Print Name:	**4. Date:**
Lawrence T. Bittleston, Jr.	6/1/22
5. Phone #:	**6. Fax #:**
(818) 701-3475	

7. Address of Responsible Official:

25205 W Rye Canyon Rd.	Valencia	CA	91355
Street #	City	State	Zip

Acid Rain Facilities Only: Please Complete Section IV

Acid Rain facilities must certify their compliance status of the devices subject to applicable requirements under Title IV by an individual who meets the definition of Designated (or Alternate) Representative in 40 CFR Part 72.

Section IV - Designated Representative Certification Statement	
For Acid Rain Facilities Only: I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.	
1. Signature of Designated Representative or Alternate:	2. Title of Designated Representative or Alternate:
3. Print Name of Designated Representative or Alternate:	4. Date:
5. Phone #:	6. Fax #:
7. Address of Designated Representative or Alternate:	

Street #	City	State	Zip
		CA	

South Coast Air Quality Management District

Form 400-CEQA
California Environmental Quality Act (CEQA) Applicability

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

The SCAQMD is required by state law, the California Environmental Quality Act (CEQA), to review discretionary permit project applications for potential air quality and other environmental impacts. This form is a screening tool to assist the SCAQMD in clarifying whether or not the project [1] has the potential to generate significant adverse environmental impacts that might require preparation of a CEQA document [CEQA Guidelines § 15060(a)]. Form 400-CEQA and the instructions for guidance on completing this form are available at http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms or http://www.aqmd.gov/home/permits/permit-application-forms. For each Form 400-A application, also complete and submit one Form 400-CEQA. If submitting multiple Form 400-A applications for the same project at the same time, only one Form 400-CEQA is necessary for the entire project. If you need assistance completing this form, contact Permit Services at (909) 396-3385.

Section A – Facility Information

1. Facility Name (Business Name of Operator to Appear on the Permit): SoCalGas

2. SCAQMD Facility ID: 5973

3. Project Description:

Replacement of existing five compressor gas lean-burn engines with four compressor gas lean-burn engines with emission control systems and aqueous urea injection system and two EDCs

Section B – Review For Exemption From Further CEQA Action

Check "Yes" or "No" as applicable. If "Yes" is checked for any question in Section B, skip Section C and proceed to page 2 and complete Section D - Signatures.

	Yes	No	Is this application for:
1.	○	⊙	**A request for a change of operator only (without equipment or process change modifications)?**
2.	○	⊙	**A functionally identical permit unit replacement with no increase in equipment unit rating or emissions?**
3.	○	⊙	**A change of daily VOC permit limit to a monthly VOC permit limit?**
4.	○	⊙	**Equipment damaged as a result of a disaster during state of emergency?**
5.	○	⊙	**A Title V (e.g., SCAQMD Regulation XXX) permit renewal without equipment or process change modifications?**
6.	○	⊙	**A Title V administrative permit revision?**
7.	○	⊙	**The conversion of an existing permit into an initial Title V permit?**

Section C – Review of Impacts Which May Trigger Further CEQA Review

Check "Yes" or "No" as applicable. To avoid delays in processing your application(s), explain all "Yes" responses on a separate sheet and attach it to this form.

	Yes	No	
1.	⊙	○	**Is this project specifically evaluated in a previously certified or adopted CEQA document?** If "Yes" is checked, attach a copy of the signed Notice of Determination to this form.
2.	○	⊙	**Is this project specifically exempted from CEQA by another entity (e.g., city or agency)?** If "Yes" is checked, attach a copy of the signed Notice of Exemption or other documentation from the entity to this form.
3.	○	⊙	**Is this project part of a larger project?** If "Yes" is checked, attach a separate sheet to briefly describe the larger project.
4.	○	⊙	**Will the project increase the QUANTITY of hazardous materials stored aboveground onsite or transported by mobile vehicle to or from the site by greater than or equal to the amounts associated with each compound listed on Form 400-CEQA, Table 1 - Regulated Substances List and Threshold Quantities for Accidental Release Prevention** [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]**?** If "Yes" is checked, attach a separate sheet to identify each hazardous material and corresponding quantity to be transported, stored, or used.
5.	⊙	○	**Will the project emit any air toxic listed on Form 400-CEQA, Table 2 - Other Air Toxics and Their Screening Levels** [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms] [2]**?** If "Yes" is checked, attach a separate sheet to identify each air toxic and corresponding quantity to be emitted.
6.	⊙	○	**Will the project require any demolition, excavation, and/or grading construction activities that encompass an area exceeding 20,000 square feet?**

[1] A "project" means the whole of an action which has a potential for resulting in physical change to the environment, including construction activities, clearing or grading of land, improvements to existing structures, and activities or equipment involving the issuance of a permit. For example, a project might include installation of a new, or modification of an existing internal combustion engine, dry cleaning facility, boiler, gas turbine, spray coating booth, solvent cleaning tank, etc

[2] Form 400-CEQA, Table 2 – Other Air Toxics and Their Screening Levels, contains a list of air toxics that either do not have a cancer potency (CP) or reference exposure level (REL) approved by the Office of Environmental Health Hazards Assessment (OEHHA) or have a combination of OEHHA-approved and non-approved CPs or RELs.

Section C – Review of Impacts Which May Trigger Further CEQA (concluded)

	Yes	No	
7.	⊙	○	**Will the project utilize a boiler, engine, or other combustion equipment that uses fuel (e.g., gasoline, diesel, natural gas, liquefied petroleum gas (LPG), or landfill gas)?** If "Yes" is checked, then the applicant will need to calculate the amount of GHGs from fuel use via on the Greenhouse Gas (GHG) online estimator [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms], and attaching the printout or by conducting hand calculations and providing the documentation. Refer to the Instructions for Form 400-CEQA for guidance.
8.	○	⊙	**Will the project utilize other types of equipment not addressed in Question 7 that require the use of, or will generate, any chemicals listed on Form 400-CEQA, Table 3 - Greenhouse Gases** [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]**?** If "Yes" is checked, attach a separate sheet to identify each equipment unit, the chemical name(s), and the quantity of each chemical identified.
9.	○	⊙	**Will the project include the open outdoor storage of dry bulk solid materials that could generate dust?** If "Yes" is checked, include a plot plan with the application package.
10.	○	⊙	**Will the project result in or make worse noticeable off-site odors from activities that may not be subject to SCAQMD permit requirements?** For example, landfills, materials recovery/recycling facilities (MRF), and compost materials or other types of greenwaste (e.g., lawn clippings, tree trimmings, etc.) have the potential to generate odor complaints subject to SCAQMD Rule 402 – Nuisance.
11.	○	⊙	**Will the project cause an increase of emissions from marine vessels, trains and/or airplanes?**
12.	○	⊙	**Will the project increase demand for potable water at the facility by more than 262,820 gallons per day?** The following examples identify some, but not all, types of projects that may result in a "Yes" answer to this question: 1) a project that generates steam; 2) a project that uses water as part of operating air pollution control equipment; 3) a project that requires water as part of the production process; 4) a project that requires a new, or the expansion of an existing, sewage treatment facility, new water lines, sewage lines, sewage hook-ups etc.; 5) a project where the water demand exceeds the capacity of the local water purveyor to supply sufficient water for the project; 6) a project that requires new or the expansion of existing, water supply and conveyance facilities; and, 7) a project that requires water to hydrotest pipelines, storage tanks etc. for structural integrity.
13.	⊙	○	**Will the project create an increase in the mass inflow of effluents to a public wastewater treatment facility that would require a new, or revision to an existing, National Pollutant Discharge Elimination System (NPDES) or other related permit at the facility?**
14.	○	⊙	**Will the project result in the need for more than 350 new employees?**
15.	○	⊙	**Will the project result in an increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round-trips per day?**
16.	○	⊙	**Will the project result in an increase in customer traffic by more than 700 visits per day?**
17.	○	⊙	**Will the project result in temporary or permanent noise or vibration in excess of what is allowed by the applicable local noise ordinance?**
18.	○	⊙	**Will the project create a permanent need for new or additional solid waste disposal?** Check "No" if the projected potential amount of solid waste to be generated by the project is less than five tons per day.
19.	○	⊙	**Will the project create a permanent need for new or additional hazardous waste disposal?** Check "No" if the projected potential amount of hazardous wastes to be generated by the project is less than 42 cubic yards per day (or equivalent in pounds).
20.	○	⊙	**Will the project include equipment that after installation or modification will change the visual character of the site and its surroundings or block views?**
21.	⊙	○	**Will the project have equipment that will create a new source of external lighting that will be visible at the property line?**

Section D – SIGNATURES

I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT THIS FORM IS A SCREENING TOOL AND THAT THE SCAQMD RESERVES THE RIGHT TO CONSIDER OTHER PERTINENT INFORMATION IN DETERMINING CEQA APPLICABILITY.

1. Signature of Responsible Official of Firm:		2. Title of Responsible Official of Firm: Storage Operations Manager II
3. Print Name of Responsible Official of Firm: Lawrence T. Bittleston Jr.		4. Date Signed: 6/1/22
5. Phone # of Responsible Official of Firm: (818) 701-3475	6. Fax # of Responsible Official of Firm:	7. Email of Responsible Official of Firm: lbittleston@socalgas.com
8. Signature of Preparer, (If prepared by person other than responsible official of firm): Jessica Mohatt		9. Title of Preparer: Engineer
10. Print Name of Preparer: Jessica Mohatt		11. Date Signed: 05/24/2022
12. Phone # of Preparer: (209) 446-0227	13. Fax # of Preparer:	14. Email of Preparer: JMohatt@YorkeEngr.com

THIS CONCLUDES FORM 400-CEQA. INCLUDE THIS FORM AND ANY ATTACHMENTS WITH FORM 400-A.

Form 400-CEQA Attachment

This attachment contains supplemental information required by the Form 400-CEQA. Numbering refers to Section C of the form and provides information where the question is answered "Yes" or where additional information is provided to support the "No" answers.

C.1: CEQA Document

As part of the approval process of the 2016 Air Quality Management Plan (AQMP), the South Coast AQMD prepared an Environmental Impact Report (EIR) to meet CEQA requirements that disclosed the potential for significant impacts to occur as a result of implementation of the 2016 AQMP (AQMP Final EIR)[1]. The AQMP Final EIR addressed the 2016 AQMP strategy and control measures needed to attain the health-based ambient air quality standards for which the air basin is not in attainment. Further, South Coast AQMD also completed a Subsequent Environmental Assessment (SEA) for Amended Rule 1110.2 "Emissions from Gaseous and Liquid-Fueled Engines," and Rule 1100 "Implementation Schedule for NO_x Facilities" (SCH# 2016071006) in October 2019 that tiered off the AQMP Final EIR and broadened the scope of Rule 1110.2 to include combustion engines at RECLAIM facilities subject to Rule 1110.2, to meet NO_x emissions limits as well as administrative changes[2].

The primary components of the HRCM Project, i.e., the replacement of the existing compressor units to meet lower NO_x emissions targets, were evaluated previously in the SEA for Rules 1110.2/1100 prepared by the South Coast AQMD. As described in Section 5.11.2 of the Honor Rancho Compressor Modernization Project ("HRCM Project") Permit to Construct (PTC) application package, the underlying CEQA document for this project is the South Coast AQMD's Final SEA for Amended Rules 1110.2 and 1100. Because the SEA is a South Coast AQMD document, a signed Notice of Determination is not attached.

C.4: Hazardous Materials

The HRCM Project will introduce green hydrogen generation and storage at the site. As shown in the figure below, the hydrogen storage will be below the 10,000-pound threshold quantity in Form 400-CEQA, Table 1 – *Regulated Substances List and Threshold Quantities for Accidental Release Prevention*. All other substances on the list that are stored or used onsite will also be present in quantities below the threshold quantities Table 1 – *Regulated Substances List and Threshold Quantities for Accidental Release Prevention*.

To reduce the potential for significant impacts from hazardous material storage and transport, aqueous urea is proposed to be used for the HRCM Project SCR systems rather than the more hazardous aqueous ammonia.

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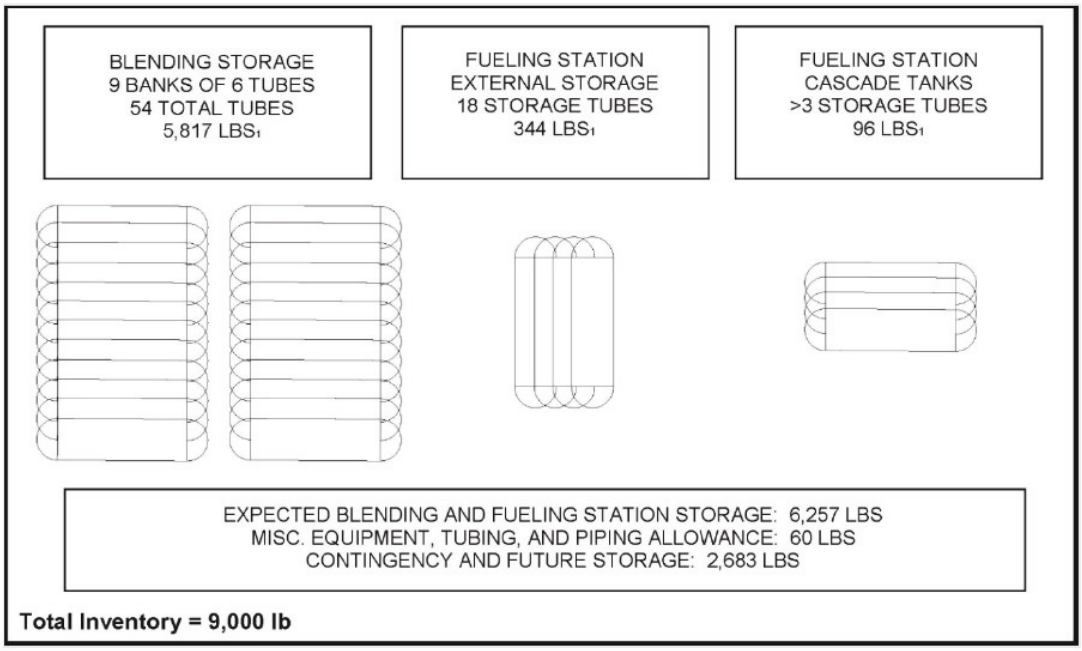
[1] South Coast AQMD Final Program Environmental Impact Report, 2016 Air Quality Management Plan, 2017: http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2016/2016aqmpfpeir.pdf

[2] Final Subsequent Environmental Assessment for Amended Rule 1110.2 – Emissions from Gaseous- and Liquid-Fueled Engines, and Amended Rule 1100 – Implementation Schedule for NO_x Facilities, 2019: http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2019/par-1110-2_final-sea_with-appx.pdf?sfvrsn=6

Figure 1: SoCalGas Honor Rancho Advanced Renewable Energy System Summary of Planned Hydrogen Storage Inventory



Note 1: Actual size and number of tubes to be confirmed based on selected supplier and tube size. Actual maximum storage will vary by minimum set pressure depending on segregated use by either the blending system or fuel cell electric vehicle fueling.

C.5: Toxic Air Contaminants

Please refer to Appendix F of the HRCM Project application package for a list of Toxic Air Contaminants (TACs) and potential emissions from the replacement compressor gas lean-burn engines. Appendix H includes an HRA which demonstrates that the HRCM Project is not expected to cause significant health risk impacts.

C.6: Construction Activities

A facility plot plan including HRCM Project details is provided in Appendix A of the HRCM Project application package. The HRCM Project will require demolition, excavation, and grading activities in an area exceeding 20,000 square feet. During the construction phase of the project, to provide space for the proposed project footprint, it is anticipated that two existing underground storage wells will need to be abandoned.

C.7: Greenhouse Gas (GHG) Emissions

The proposed HRCM Project consists of six primary components: 1) a compressor system upgrade that will replace five compressor gas lean-burn engines with four compressor gas lean-burn engines and two electric driven compressors (EDCs), including ancillary equipment; 2) hydrogen electrolyzers, hydrogen storage, and fuel blending equipment to integrate green hydrogen into compressor combustion fuel; 3) a green hydrogen vehicle fueling station for company vehicles; 4) an electric microgrid comprised of an ESS and a SOFC system to provide base auxiliary load and standby electricity; 5) other site improvements, including one new compressor building; and

6) a new Southern California Edison (SCE) Substation and electrical interconnection to support the increased electric load. Once rigorous performance testing of the new compressor replacement equipment is completed, the existing compressor assets to be retired would be shut down and isolated.

Table C.7-1 summarizes the net GHG emissions due to the HRCM Project. Projected HRCM Project GHG emissions consist of three aspects: 1) amortized construction emissions, 2) projected actual operational emissions associated with the primary compression equipment, and 3) emissions that may be reduced due to the green hydrogen fueling and microgrid aspects of the project. Note, the projected GHG actual emissions for the replacement compressor gas lean-burn engines were estimated using the anticipated duration of use on a yearly basis because CEQA requires a GHG analysis to compare "existing physical conditions without the Project and the conditions expected to be produced by the project" (*Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 328).

1) As shown in Table C.7-1, the HRCM Project's GHG emissions from construction activities have been estimated to total approximately 4,979 Metric Tons (MT) of carbon dioxide equivalents (CO_2e), or about 166 MT/year, when amortized over 30 years.

2) The projected GHG operational actual emissions have been calculated to be 29,071 MT/yr CO_2e. The GHG projected actual emissions for the proposed replacement equipment is the summation of fuel use (20,272 MT/yr direct CO_2e from the natural gas fueled compressors and 6,634 MT/yr direct CO_2e from the SOFC system) plus venting/leaks (1,286 MT/yr direct CO_2e) and electricity use in the EDCs (878 MT/yr indirect CO_2e).

3) Certain HRCM Project components are expected to result in the reduction of GHG emissions, including:
   - Replacing existing compressed natural gas (CNG) fueled company vehicles with FCEVs that are powered by green hydrogen;
   - Fueling the compressor gas lean-burn engines with natural gas blended with green hydrogen rather than 100% natural gas; and
   - Powering the administrative and auxiliary loads via a SOFC system rather than with the existing onsite natural gas generators.

To determine the net GHG emissions related to the HRCM Project, the annual average of the actual reported CO_2e emissions from the last two years (2021 and 2020) was subtracted from these calculated future GHG emissions as described above. The annual average of the actual reported operational GHG emissions for the Honor Rancho Storage Field (based on the average of 2021 and 2020 operating conditions) was 23,281 MT/yr, based on actual compressor gas lean-burn engines fuel use, venting/leaks, and facility-wide electricity use during those two years. Note, GHG emissions from the other combustion equipment at the facility that are not affected by this project are not included. This two-year historical average operational GHG emissions value for the Honor Rancho Storage Field of 23,281 MT/yr is then subtracted from the total HRCM Project GHG emissions described above to provide an estimated net GHG emissions increase of 5,956 MT/yr CO_2e. As shown in Table C.7-1 below, the projected increase in GHG emissions is less

than the South Coast AQMD significance threshold of 10,000 MT/yr of CO_2e, and hence is less than significant.

Table C.7-1: Current and Projected Greenhouse Gas Emissions

Honor Rancho Compressor Modernization Project - Net GHGs	
Annual Greenhouse Gas Emissions[1]	**MT/year CO_2e**
Amortized Project Construction Emissions (30 years)	166
Post-Project Projected Actual Emissions[2]	29,071
Total Project Amortized Construction and Operational GHG Projected Actual Emissions	***29,237***
Less Pre-Project Operational Emissions (2020-2021)[3]	(23,281)
Net GHG Projected Emissions Increase from Current Actual[4]	**5,956**
South Coast AQMD GHG Significance Threshold	10,000
Project's GHG Net Projected Emissions Increase is Significant?	**No**

1. GHG emissions are based on CARB global warming potential and other standard factors.
2. The administrative and auxiliary loads powered by a SOFC system are included in the direct emissions. Calculations assume 40% reduction of the two-year average Subpart W emissions from 2020 and 2021 which is based on ASPIRE 2045 efforts to reduce fugitive methane emission 40% by 2030.
3. Historical two-year average actual emissions based on 2020 with compressor gas lean-burn engines fuel use (19,890 direct), venting/leaks (1,789 direct) & electricity use (195 indirect) and 2021 with compressor gas lean-burn engines fuel use (21,504 direct), venting/leaks (2,499) & electricity use (684 indirect). Emissions from other combustion sources at the facility have not been included (2020 other combustion units = 2,809 and 2021 other combustion units = 733).
4. Net GHG emissions do not include the GHG reductions from the following project elements as their full benefit is yet uncertain and current estimates are as follows: i) Replacement of CNG with FCEVs fueled with green hydrogen; ii) fueling the compressor gas lean-burn engines with natural gas blended with green hydrogen rather than 100% natural gas; and iii) powering the administrative and auxiliary loads via a SOFC system rather than with the existing onsite natural gas fired generators.

The pre-HRCM Project permitted combustion compressor equipment (5 Delaval lean-burn engines) has a combined total of 27,500 horsepower (HP), while the proposed post-HRCM Project combustion compressor equipment (4 Waukesha lean-burn engines) will have a combined total of approximately 20,000 HP, which is a decrease of 7,500 HP. The Honor Rancho Storage Field compressor equipment is expected to be operated at approximately the same level as the current operations after the replacement equipment is installed. The South Coast AQMD's Final SEA for Amended Rules 1110.2 and 1100 indicated that GHG emissions are not expected to increase significantly related to the implementation of these rules. The actual increase in GHG emissions from the HRCM Project may be less than the projected actual increase.

C.12: Water Demand

Water for the Honor Rancho Storage Field facility is provided by Santa Clarita Valley Water Agency. Water demand would remain generally consistent with current usage since older equipment would be decommissioned and replaced with new equipment. The HRCM Project would not result in a need to upgrade existing water supply infrastructure. Based on available meter data from Santa Clarita Valley Water Agency, annual water demand ranges between 1.7 and 8 million gallons (meter data 2017 through 2021 provided by SCG). Construction is anticipated to

use approximately 4.3 million gallons of water in total over the three-year construction and commissioning process. Peak construction water demand would occur in the first year during the HRCM Project site preparation and grading activities estimated to use 1.6 million gallons (not including the proposed SCE Substation facility). While the HRCM Project would result in similar water demand associated with the compressors, the inclusion of electrolyzers is anticipated to increase water demand by up to 28,000 gallons a month or 345,000 gallons annually. As such, water demand would increase, but not by 262,820 gallons or more per day.

C13: Water Discharge Permit Revisions

The HRCM Project would not create a substantial increase in the mass discharge of effluents that would require new or expanded public wastewater treatment facilities. However, the HRCM Project would result in more than 200,000 square feet of new impervious areas and upgrades that include modification of the stormwater conveyance system and drainage patterns. The additional impervious area is less than 50% of the previously existing impervious area of the facility (18.2 acres). Projects qualifying for the Planning and Land Development Program must meet certain performance criteria listed in VI.D.7.c of the MS4 Permit. Based on the new impervious area the HRCM Project satisfies category (1a) and category (1c) only the area of the alteration must be mitigated, and not the entire development. The MS4 Permit requires the HRCM Project site to control pollutants, pollutant loads, and runoff volume emanating from it by: (1) minimizing the impervious surface area and (2) controlling runoff from impervious surfaces through infiltration, bioretention, and/or rainfall harvest and use. The HRCM Project shall retain onsite the Stormwater Quality Design Volume (SWQDv).

Honor Rancho facility's stormwater is managed under the California Industrial General Permit (IGP) for Stormwater and its IGP Storm Water Pollution Prevention Plan (SWPPP), which will be updated to include the changes affected by the HRCM Project. Rainwater from impervious surfaces is transferred through a series of concrete ditches, culverts, and storm drains that flow to a centralized onsite stormwater retention and infiltration basin. Improvements to the drainage system of the existing Honor Rancho site were recently completed, these include modification of the stormwater conveyance system, drainage patterns, and increased stormwater capture. The improvements were implemented in an effort to increase onsite retention to ensure no offsite discharges occur. Two of the improvements are located downstream of the HRCM Project: an onsite stormwater infiltration basin and a bioswale.

The HRCM Project includes infiltration-based stormwater quality control measures, referred to as RET-1, RET-2, and RET-3 in the Low Impact Development (LID) Manual and are preferred Best Management Practices (BMPs) which could satisfy stormwater quality control measures by retaining the expected Stormwater Quality Design Volume (SWQDv) on site.

The HRCM Project will be required to obtain coverage under the General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) since there will be a disturbance greater than 1 acre. As part of this coverage, a Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented during construction activities. Erosion and sediment control will be conducted in accordance with industry BMPs and the construction SWPPP, which

will be filed with the Regional Water Quality Control Board (RWQCB) via the state's online SMARTS system.

Additionally, the HRCM Project will be covered by the Statewide General NPDES Order For Discharges From Natural Gas Utility Construction, Operations, And Maintenance Activities Order WQ 2017-0029-DWQ. This General Order authorizes planned, emergency, and unplanned discharges from, but not limited to, hydrostatic testing of existing and new natural gas facilities and site dewatering related to excavation, construction, testing, maintenance and/or repair of natural gas facilities.

C.17: Noise and Vibration

Noise associated with construction and operation of all components of the proposed HRCM Project are not expected to exceed existing noise sources at the Honor Rancho Storage Field, nor exceed noise levels established by the City of Santa Clarita. Construction of the HRCM Project would result in groundborne vibration and noise levels. However, vibration and noise levels associated with construction and operation of the proposed facilities are not expected to exceed existing groundborne vibration and noise levels at the Honor Rancho Storage Field. Construction would occur during allowed hours by the City of Santa Clarita, and construction-related noise would be required to comply with standards outlined in the City of Santa Clarita's Municipal Code. Nighttime construction is not anticipated to be necessary to avoid any peak traffic hours due to the low traffic use in the Project vicinity. No substantial operational noise would result from the SCE electrical interconnection.

C.18: Solid Waste

The proposed HRCM Project includes retirement and decommissioning of certain existing components thereby requiring disposal. The proposed HRCM Project would comply with the Los Angeles County Public Works requirement that mandates that 65% of construction and demolition material needs to be reused, composted, or recycled. Because operations would remain similar to existing operations, simply with more efficient engines, during operation, the proposed HRCM Project would not generate substantially more solid waste than the current operations. Additionally, the HRCM Project would not generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure. New or additional changes in the permanent needs for solid waste disposal exceeding 5 tons per day are not expected.

C.19: Hazardous Waste

The HRCM Project would be subject to all regulations and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of hazardous materials and their containers. Normal operations at the existing Honor Rancho Storage Field require the use of materials designated by federal and state agencies as hazardous materials. The facility also generates hazardous waste as designated by federal and state agencies. Lubricants are essential to operating the motors and compressors. Water softening chemicals are also required for process water. Oily waste and pipeline condensate generated by the facility are stored on site in 55-gallon drums for no longer than 90 days and transported and disposed of by an approved contractor. The facility is approved by the local Certified Uniform Program Agency as a large-quantity generator, and hazardous materials and hazardous waste are stored and disposed of in accordance with applicable federal, state, and local requirements. These requirements and hazardous waste disposal

needs would continue with implementation of the HRCM Project. No significant new hazardous material needs would be introduced by the HRCM Project, with the compressor gas lean-burn engines replacement components having similar needs and waste generation as the existing facilities.

C.20: Visual Character and Views

The proposed HRCM Project would add a new compressor building, hydrogen electrolyzers, hydrogen fueling station, electric microgrid, and an SCE Substation to the existing structures. However, these structures would be comparable in size to the existing buildings and structures onsite and offsite, and would be located within the existing Business Park designated lands. Because the existing Honor Rancho Storage Field facility is mostly obscured from beyond the property lines by the site's topography and other substantial infrastructure adjacent to the site (Newhall Road, SCE Pardee Substation and transmission lines, and City/County stormwater management facilities) the character of the site would not be significantly changed. The location of the new SCE Substation is still being decided, but the SCE eastern site option for the Substation would result in the alteration of topography (a hilltop) that would be visible from public vantage points. While the hilltop is not distinctive or more distinguishable from other adjacent or nearby hilltops, the development of an SCE Substation at that potential site would be more visible to public views than any other proposed or existing component of the Honor Rancho Storage Field facility. In addition, and as mentioned previously, substantial infrastructure, including SCE electrical interconnection lines, traverse the site and nearby infrastructure includes roads, stormwater management facilities and the SCE Pardee Substation. As such, the HRCM Project components would not dominate public views or alter the visual character of the site.

C.21: New External Lighting At The Property Line

Honor Rancho currently has security lighting provided throughout the facility, mounted either on rooftops or on tubular steel poles approximately 20 feet in height, to maintain safe operating conditions. Lighting at this site is mostly not be visible at the property line because of the interior topography of the site. New lighting proposed would be installed to provide supplemental indoor task lighting and down-facing security and safety lighting around the building and other structures to facilitate nighttime use of areas by staff. Although additional lighting is proposed, it would be consistent with that present at the existing facility and would not result in a substantial new source of light in the area. Lighting associated with the new SCE Substation could be visible at the hilltop location. The SCE Substation would include security lighting and operable lighting for maintenance inspections that would generally be consistent with that present at the existing facility.

APPENDIX C – FACILITY-WIDE ENGINE MODERNIZATION COMPLIANCE PLAN

FACILITY PERMIT TO OPERATE
SOCAL GAS CO.

SECTION I: PLANS AND SCHEDULES

RULE 1100 MODERNIZATION PLAN

Plan Approval Date 11/09/2021

The approved Rule 1100 plan include the following:

- **Remove all 5 main gas compressors**
  (D4, D5, D6, D7, D8), 5,500 hp each, 27,500 hp total.

- **Install 4 new main gas compressors**
  Approximately 5,000 hp each, approximately 20,000 hp total, natural gas fueled, turbocharged, intercooled, lean burn, each equipped with SCR and oxidation catalysts.

- **Install 2 new electric motor driven reciprocating compressors**
  Approximately 5,000 hp each, approximately 10,000 hp total to comply with the Rule 1100(d)(7)(B) requirement that at least 20% of the total horsepower of the Rule 1110.2 engines are replaced with a zero emission technology, e.g., electric motors.

- **Potential Integration of Advanced Renewable Energy Components**
  SoCalGas will submit applications for permits to construct the 4 new natural gas fired compressor engines to South Coast AQMD by July 1, 2022.

  SoCalGas will comply with the applicable timelines specified in Rule 1100(d)(7).

  The existing 5 compressor engines (D4, D5, D6, D7, D8) must be shutdown no later than 90 days after start up of the new replacement engines in accordance with Rule 1313(d).

  SoCalGas will request inactivation of the permits for the 5 existing compressor engines (D4, D5, D6, D7, D8) by submittal of Forms 200-C.

APPENDIX D – EQUIPMENT INFORMATION

16V275GL+ Fuel Flex

Gas Compression

ENGINE SPEED (rpm):	1000	NOx SELECTION (g/bhp-hr):	0.5
DISPLACEMENT (in3):	17398	COOLING SYSTEM:	JW, IC + OC
COMPRESSION RATIO:	8:1	INTERCOOLER WATER INLET (°F):	130
IGNITION SYSTEM:	ESM2	JACKET WATER OUTLET (°F):	180
EXHAUST MANIFOLD:	Insulated Dry Type	JACKET WATER CAPACITY (gal):	133
COMBUSTION:	Lean Burn, Prechamber	AUXILIARY WATER CAPACITY (gal):	40
ENGINE DRY WEIGHT (lbs):	65890	LUBE OIL CAPACITY (gal):	275
AIR/FUEL RATIO SETTING:	ESM2	MAX. EXHAUST BACKPRESSURE (in. H2O):	20
ENGINE SOUND LEVEL (dBA)	112	MAX. AIR INLET RESTRICTION (in. H2O):	15
IGNITION TIMING:	ESM2 Controlled	EXHAUST SOUND LEVEL (dBA)	110

SITE CONDITIONS:

FUEL:	High H2 Natural Gas	ALTITUDE (ft):	1152
FUEL PRESSURE RANGE (psig):	50 - 60	MAXIMUM INLET AIR TEMPERATURE (°F):	120
FUEL HHV (BTU/ft3):	962.5	FUEL WKI:	82.1
FUEL LHV (BTU/ft3):	870.1		

SITE SPECIFIC TECHNICAL DATA

POWER RATING	UNITS		MAX RATING AT 100 °F AIR TEMP	SITE RATING AT MAXIMUM INLET AIR TEMPERATURE OF 120 °F 100%	75%	50%
CONTINUOUS ENGINE POWER	BHP		5000	4969	3730	2504
OVERLOAD	% 2/24 hr		0	0	-	-
MECHANICAL EFFICIENCY (LHV)	%		38.2	38.1	36.7	34.3
CONTINUOUS POWER AT FLYWHEEL	BHP		5000	4969	3730	2504
based on no auxiliary engine driven equipment						
AVAILABLE TURNDOWN SPEED RANGE	RPM		750 - 1000			
FUEL CONSUMPTION						
FUEL CONSUMPTION (LHV)	BTU/BHP-hr		6660	6691	6938	7424
FUEL CONSUMPTION (HHV)	BTU/BHP-hr		7367	7402	7675	8212
FUEL FLOW *based on fuel analysis LHV*	SCFM		638	637	496	356
HEAT REJECTION						
JACKET WATER (JW)	BTU/hr x 1000		3375	3426	2924	2457
LUBE OIL (OC)	BTU/hr x 1000		1670	1733	1426	1227
INTERCOOLER (IC)	BTU/hr x 1000		3718	4115	2698	1314
EXHAUST	BTU/hr x 1000		12056	11682	9551	7285
RADIATION	BTU/hr x 1000		399	292	292	295

AIR INTAKE / EXHAUST GAS						
INDUCTION AIR FLOW	SCFM		12425	12369	9827	6923
EXHAUST GAS MASS FLOW	lb/hr		56124	55874	44364	31271
EXHAUST GAS FLOW *at exhaust temp, 14.5 psia*	ACFM		31750	31510	25409	18543
EXHAUST TEMPERATURE	°F		827	823	843	889

HEAT EXCHANGER SIZING[12]			
TOTAL JACKET WATER CIRCUIT (JW)	BTU/hr x 1000		3885
TOTAL AUXILIARY WATER CIRCUIT (IC + OC)	BTU/hr x 1000		6631

COOLING SYSTEM WITH ENGINE MOUNTED WATER PUMPS		
JACKET WATER PUMP MIN. DESIGN FLOW	GPM	580
JACKET WATER PUMP MAX. EXTERNAL RESTRICTION	psig	17
AUX WATER PUMP MIN. DESIGN FLOW	GPM	365
AUX WATER PUMP MAX. EXTERNAL RESTRICTION	psig	13

All data provided per the condtions listed in the notes section on page three.

Data Generated by EngCalc Program Version 4 2 NNIO Waukesha Gas Engines, Inc.

5/26/2021 7 00 AM

FUEL COMPOSITION

HYDROCARBONS:		Mole or Volume %
Methane	CH4	84.88
Ethane	C2H6	3.64
Propane	C3H8	0.23
Iso-Butane	I-C4H10	0.03
Normal Butane	N-C4H10	0.05
Iso-Pentane	I-C5H12	0.01
Normal Pentane	N-C5H12	0
Hexane	C6H14	0.05
Heptane	C7H16	0
Ethene	C2H4	0
Propene	C3H6	0
	SUM HYDROCARBONS	88.89
NON-HYDROCARBONS:		
Nitrogen	N2	0.31
Oxygen	O2	0
Helium	He	0
Carbon Dioxide	CO2	0.81
Carbon Monoxide	CO	0
Hydrogen	H2	10
Water Vapor	H2O	0
	TOTAL FUEL	100.01

FUEL:	High H2 Natural Gas
FUEL PRESSURE RANGE (psig):	50 - 60
FUEL WKI:	82.1
FUEL SLHV (BTU/ft3):	854.93
FUEL SLHV (MJ/Nm3):	33.62
FUEL LHV (BTU/ft3):	870.07
FUEL LHV (MJ/Nm3):	34.21
FUEL HHV (BTU/ft3):	962.47
FUEL HHV (MJ/Nm3):	37.85
FUEL DENSITY (SG):	0.54

Standard Conditions per ASTM D3588-91 [60 F and 14.696psia] and ISO 6976:1996-02-01[25, V(0;101.325)].
Based on the fuel composition, supply pressure and temperature, liquid hydrocarbons may be present in the fuel. No liquid hydrocarbons are allowed in the fuel. The fuel must not contain any liquid water.
Waukesha recommends both of the following:
1) Dew point of the fuel gas to be at least 20 F (11 C) below the measured temperature of the gas at the inlet of the engine fuel regulator.
2) A fuel filter separator to be used on all fuels except commercial quality natural gas.
Refer to the 'Fuel and Lubrication' section of 'Technical Data' or contact the Waukesha Application Engineering Department for additional information on fuels, or LHV and WKI* calculations.
* Trademark of INNIO Waukesha Gas Engines Inc.

FUEL CONTAMINANTS

Total Sulfur Compounds	0	% volume
Total Halogen as Chloride	0	% volume
Total Ammonia	0	% volume
Siloxanes		
Tetramethyl silane	0	% volume
Trimethyl silanol	0	% volume
Hexamethyldisiloxane (L2)	0	% volume
Hexamethylcyclotrisiloxane (D3)	0	% volume
Octamethyltrisiloxane (L3)	0	% volume
Octamethylcyclotetrasiloxane (D4)	0	% volume
Decamethyltetrasiloxane (L4)	0	% volume
Decamethylcyclopentasiloxane (D5)	0	% volume
Dodecamethylpentasiloxane (L5)	0	% volume
Dodecamethylcyclohexasiloxane (D6)	0	% volume
Others	0	% volume

Total Sulfur Compounds	0 µg/BTU
Total Halogen as Chlorid	0 µg/BTU
Total Ammonia	0 µg/BTU
Total Siloxanes (as Si)	0 µg/BTU

Calculated fuel contaminant analysis will depend on the entered fuel composition and selected engine model.

No water or hydrocarbon condensates are allowed in the engine. Requires liquids removal.

NOTES

1. All data is based on engines with standard configurations unless noted otherwise.
2. Power rating is adjusted for fuel, site altitude, and site air inlet temperature, in accordance with ISO 3046/1 with tolerance of ± 3%.
3. Fuel consumption is presented in accordance with ISO 3046/1 with a tolerance of -0 / +5% at maximum rating. Fuel flow calculation based on fuel LHV and fuel consumption with a tolerance of -0/+5 %. For sizing piping and fuel equipment, it is recommended to include the 5% tolerance.
4. Heat rejection tolerances are ± 30% for radia ion, and ± 8% for jacket water, lube oil, intercooler, and exhaust energy.
5. Emission levels for engines with Waukesha supplied 3-way catalyst are given at catalyst ou let flange. For all other engine models, emission levels are given at engine exhaust outlet flange prior to any after treatment. Values are based on a new engine operating at indicated site conditions, and adjusted to the specified timing and air/fuel ratio at rated load. Catalyst out emission levels represent emission levels the catalyst is sized to achieve. Manual adjustment may be necessary to achieve compliance as catalyst/engine age. Catalyst-out emission levels are valid for the dura ion of the engine warranty. Emissions are at an absolute humidity of 75 grains H2O/lb (10.71 g H2O/kg) of dry air. Emission levels may vary subject to instrumentation, measurement, ambient conditions, fuel quality, and engine variation. Engine may require adjustment on-site to meet emission values, which may affect engine performance and heat output. NOx, CO, THC, and NMHC emission levels are listed as a not to exceed limit, all other emission levels are estimated. CO2 emissions based on EPA Federal Register/Vol. 74, No. 209/Friday, October 30, 2009 Rules and Regulations 56398, 56399 (3) Tier 3 Calculation Methodology, Equation C-5.
6. Air flow is based on undried air with a tolerance of ± 7%.
7. Exhaust temperature given at engine exhaust outlet flange with a tolerance of ± 50°F (28°C).
8. Exhaust gas mass flow value is based on a "wet basis" with a tolerance of ± 7%.
9. Inlet air restric ions based on full rated engine load. Exhaust backpressure based on 227.6 PSI BMEP and 1000 RPM. Refer to the engine specification section of Waukesha's standard technical data for more information.
10. Cooling circuit capacity, lube oil capacity, and engine dry weight values are typical.
11. Fuel must conform to Waukesha's "Gaseous Fuel Specification" S7884-7 or most current version. Fuel may require treatment to meet current fuel specifica ion.
12. Heat exchanger sizing values given as the maximum heat rejection of the circuit, with applied tolerances and an additional 5% reserve factor.
13. Fuel volume flow calcula ion in english units is based on 100% relative humidity of the fuel gas at standard conditions of 60°F and 14.696 psia (29.92 inches of mercury; 101.325 kPa).
14. Fuel volume flow calcula ion in metric units is based on 100% relative humidity of the fuel gas at a combustion temperature of 25°C and metering conditions of 0°C and 101.325 kPa (14.696 psia; 29.92 inches of mercury). This is expressed as [25, V(0;101.325)].
15. Engine sound data taken with the microphone at 1 m (3.3 ft) from the side of the engine at the approximate front-to-back centerline. Microphone height was at intake manifold level. Engine sound pressure data may be different at front, back and opposite side locations. Exhaust sound data taken with microphone 1 meter (3.3 ft) away and 1 meter (3.3 ft) to the side of the exhaust outlet.
16. Due to variation between test conditions and final site conditions, such as exhaust configuration and background sound level, sound pressure levels under site conditions may be different than those tabulated above.
17. Cooling system design flow is based on minimum allowable cooling system flow. Cooling system maximum external restriction is defined as the allowable restriction at the minimum cooling system flow.
18. Continuous Power Rating: The highest load and speed that can be applied 24 hours per day, seven days per week, 365 days per year except for normal maintenance at indicated ambient reference conditions and fuel. No engine overload power ra ing is available.
19. emPact emission compliance available for entire range of operable fuels; however, fuel system and/or O2 set point may need to be adjusted in order to maintain compliance.
20. In cold ambient temperatures, heating of the engine jacket water, lube oil and combustion air may be required. See Waukesha Technical Data.
21. Available Turndown Speed Range refers to the constant torque speed range available. Reduced power may be available at speeds outside of this range. Contact application engineering.

SPECIAL REQUIREMENTS

Requires different thermostats for increased aux water temperature. Contact Application Engineering

SAFETY DATA SHEET

AiRx™ Diesel Exhaust Fluid

Section 1. Identification

GHS product identifier : AiRx™ Diesel Exhaust Fluid

Other means of identification : Designation or trade mark: Automotive grade urea solution, AUS 32, AdBlue TM Aqueous Urea Solution 32.5%

Product type : Liquid.

Product use : Synthetic/Analytical chemistry.

Synonym : Designation or trade mark: Automotive grade urea solution, AUS 32, AdBlue TM Aqueous Urea Solution 32.5%

SDS # : 008651

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

24-hour telephone : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : Not applicable

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Designation or trade mark: Automotive grade urea solution, AUS 32, AdBlue TM Aqueous Urea Solution 32.5%

Product code : 008651

Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
WATER	66.3 - 67.7	7732-18-5
urea	31.8 - 33.2	57-13-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
WATER urea	None. **AIHA WEEL (United States, 10/2011).** TWA: 10 mg/m³ 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Colorless.

Odor : ammonia (pungent) [Slight]

Odor threshold : Not available.

Section 9. Physical and chemical properties

pH	:	Not available.
Melting point	:	-11.111°C (12°F)
Boiling point	:	Lowest known value: 100°C (212°F) (water).
Critical temperature	:	Not available.
Flash point	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Gas Density (lb/ft ^{3})	:	Weighted average: 1.09
Relative density	:	Not available.
Solubility	:	Not available.
Solubility in water	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Not available.
Flow time (ISO 2431)	:	Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	:	Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
urea	LD50 Oral	Rat	8471 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
urea	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Section 11. Toxicological information

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
urea	Acute EC50 6573.1 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 3910000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 22.5 ppt Fresh water	Fish - Oreochromis mossambicus - Young	96 hours
	Chronic NOEC 2 g/L Fresh water	Fish - Heteropneustes fossilis	30 days

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
WATER	-1.38	-	low
urea	<-1.73	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	- 	- 	- 	- 	- 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Additional information

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Refer to Section 2: Hazards Identification of this SDS for classification of substance.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

Section 15. Regulatory information

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : **Japan inventory (ENCS)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.

Malaysia : Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

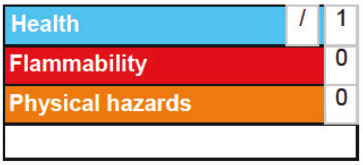
Turkey : Not determined.

United States : All components are listed or exempted.

Viet Nam : Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Section 16. Other information

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
Not classified.	

History

Date of printing : 4/23/2018

Date of issue/Date of revision : 4/23/2018

Date of previous issue : 3/5/2018

Version : 2

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

APPENDIX E – RULE 219 EXEMPTION ANALYSIS

Table E-1: Rule 219 Permit Exemptions

Equipment	Rule 219 Exemption
Interstage Cooler Cooling Tower and Discharge Cooler Cooling Tower	R219(d)(3)(B): Applies if cooling tower is not used for evaporative cooling of process water, barometric jets, barometric condensers with no chromium compounds.
Compressor Area Oil Waste Tank (T-8811)	R219(m)(8): Equipment used exclusively for the storage and transfer of crankcase drainage oil and control equipment used to exclusively vent such equipment.
Sulfuric Acid Tanks (for Interstage Cooler and Discharge Cooler Cooling Towers)	R219(m)(1)(A): Equipment used exclusively for the storage and transfer of fresh, commercial or purer grades of: Sulfuric acid or phosphoric acid with an acid strength of 99 percent or less by weight.
Compressor Area Oily Waste Tank (T-8828) and associated pump	R219(m)(8): Equipment used exclusively for the storage and transfer of crankcase drainage oil and control equipment used to exclusively vent such equipment.
Interstage Scrubber	R219(m)(7): Equipment used exclusively for the storage and transfer of refined lubricating or hydraulic oils and control equipment used to exclusively vent such equipment.
Engine Oil Storage Vessel	R219(m)(7): Equipment used exclusively for the storage and transfer of refined lubricating or hydraulic oils and control equipment used to exclusively vent such equipment.
Microgrid comprising supercapacitor and/or battery energy storage system and a system of solid oxide fuel cell	R219(b)(5): Fuel cells, which produce electricity in an electro-chemical reaction and use phosphoric acid, molten carbonate, proton exchange membrane, or solid oxide technologies; and associated heating equipment, provided the heating equipment: (A) does not use a combustion source; or (B) notwithstanding paragraph (b)(2), is fueled exclusively with natural gas, methanol, liquefied petroleum gas, or any combination thereof, including heaters that have a rated maximum heat input capacity of greater than 2,000,000 Btu per hour, provided that the supplemental heat used is 90,000 therms per year or less and provided a filing pursuant to Rule 222 is submitted to the Executive Officer.

APPENDIX F – EMISSION CALCULATIONS

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Table F-1: Post-Project Potential to Emit

Equipment Description	Rating	Heat Rate (MMBTU/hr)	Annual Fuel Usage (mmcf/yr)	Emission Factor (lb/mmscf)					Emissions (lb/hr)					Emissions (lb/day)					Emissions (lb/year)				
				NO_x	CO	VOC	SO_x	PM10	NO_x	CO	VOC	SO_x	PM10	NO_x	CO	VOC	SO_x	PM10	NO_x	CO	VOC	SO_x	PM10
Waukesha 16V275GL	5,000 Hp	36.84	307.31	43.3	168	41.0	0.60	10	1.52	5.88	1.44	0.02	0.35	36.4	141.1	34.5	0.51	8.4	13,292	51,487	12,609	184	3,073
Waukesha 16V275GL	5,000 Hp	36.84	307.31	43.3	168	41.0	0.60	10	1.52	5.88	1.44	0.02	0.35	36.4	141.1	34.5	0.51	8.4	13,292	51,487	12,609	184	3,073
Waukesha 16V275GL	5,000 Hp	36.84	307.31	43.3	168	41.0	0.60	10	1.52	5.88	1.44	0.02	0.35	36.4	141.1	34.5	0.51	8.4	13,292	51,487	12,609	184	3,073
Waukesha 16V275GL	5,000 Hp	36.84	307.31	43.3	168	41.0	0.60	10	1.52	5.88	1.44	0.02	0.35	36.4	141.1	34.5	0.51	8.4	13,292	51,487	12,609	184	3,073
																		Total (lb/year)	53,168	205,946	50,436	738	12,292
																		Total (ton/year)	26.6	103.0	25.2	0.37	6.15

Notes

1. The NOx emission factors are calculated based on the emission requirements of Rule 1110.2 - 11 ppm @15% O2.

Data and Parameters		Unit of Measure	Reference/Comments
MW NO_x	46	lb/lb-mol	Constant
MW CO	28	lb/lb-mol	Constant
MW VOC	16	lb/lb-mol	Constant
Standard Molar Volume	379	scf/lb-mol	Assumes 60F at standard temp
Dry Fd Factor	8710	dsf/MMBtu	40 CFR 60 App B
Oxygen basis	15	%	SCAQMD Rule 1110.2
Fuel Gas HHV	1050	Btu/scf	RECLAIM
Heat Rate	7367	Btu/Hp-hr	Constant
Hours per day	24	hours/day	Assumption
Days per Year	365	days/year	Assumption
NOx EF	11	ppm	
CO EF	70	ppm	
VOC EF	30	ppm	
SOX EF	0.60	lb/mmscf	SCAQMD Default 4SLB/AER
PM10 EF	10.00	lb/mmscf	SCAQMD Default 4SLB/AER

Table F-2: Post-Project Ammonia PTE

Permit ID	Equipment Description	Rating	Heat Rate (MMBTU/hr)	Annual Usage (hrs/yr)	Annual Fuel Usage (mmcf/yr)	Emission Factor Source	Emission Factor (ppm)	Emission Factor (lb/mmcf)	Emissions (lbs/hr)	Emissions (lb/day)	Emissions (lb/year)
TBD	Waukesha 16V275GL	5,000 Hp	36.84	8,760	307.31	BACT	10	14.54	0.51	12.24	4,468
TBD	Waukesha 16V275GL	5,000 Hp	36.84	8,760	307.31	BACT	10	14.54	0.51	12.24	4,468
TBD	Waukesha 16V275GL	5,000 Hp	36.84	8,760	307.31	BACT	10	14.54	0.51	12.24	4,468
TBD	Waukesha 16V275GL	5,000 Hp	36.84	8,760	307.31	BACT	10	14.54	0.51	12.24	4,468

Notes

Data and Parameters		Unit of Measure	Reference/Comments
MW NH_3	17.01	lb/lb-mol	Constant
Standard Molar Volume	379	scf/lb-mol	Assumes 60F at standard temp
Dry Fd Factor	8710	dsf/MMBtu	40 CFR 60 App B
Oxygen basis	15	%	SCAQMD Rule 1110.2
Fuel Gas HHV	1050	Btu/scf	RECLAIM
Heat Rate	7367	Btu/Hp-hr	Constant
Hours per day	24	hours/day	Assumption
Days per Year	365	days/year	Assumption

Table F-3: Post-Project TAC PTE

Post-Project Potential TAC Emissions per Engine					
Pollutant	**CAS No.**	**Uncontrolled Emission Factor (lb/MMSCF)**	**MHU (lb/hr)**	**MHC (lb/hr)**	**MAC (lb/yr)**
Benzene	71432	0.449	1.58E-02	3.15E-03	2.76E+01
1,3-Butadiene	106990	0.272	9.54E-03	1.91E-03	1.67E+01
Formaldehyde	50000	53.9	1.89E+00	3.78E-01	3.31E+03
Benzo(b)fluoranthene	205992	0.000169	5.93E-06	1.19E-06	1.04E-02
Chrysene	218019	0.000707	2.48E-05	4.96E-06	4.35E-02
Naphthalene	91203	0.0759	2.66E-03	5.33E-04	4.66E+00
Acetaldehyde	75070	8.53	2.99E-01	5.98E-02	5.24E+02
Ammonia*	7664417	14.54	5.10E-01	5.10E-01	4.47E+03
Ethylbenzene	100414	0.0405	1.42E-03	2.84E-04	2.49E+00
n-Hexane	110543	1.13	3.96E-02	7.93E-03	6.95E+01
Methanol	67561	2.55	8.95E-02	1.79E-02	1.57E+02
Styrene	100425	0.0241	8.45E-04	1.69E-04	1.48E+00
Toluene	108883	0.416	1.46E-02	2.92E-03	2.56E+01
Xylene	1330207	0.188	6.60E-03	1.32E-03	1.16E+01

Data and Parameters		**Unit of Measure**	**Reference/Comments**
Fuel Gas HHV	1050	Btu/scf	RECLAIM
Hours per day	24	hours/day	Assumption
Days per Year	365	days/year	Assumption
Oxidation Catalyst Control	80%	%	Assumption
Engine Heat Rate	36.84	MMBtu/hour	Specification Sheet
Engine Heat Rate	0.035	MMscf/hour	Calculation

Emission Factor Source:

Table B-1 for 4-stroke lean-burn natural gas ICEs, SCAQMD, Supplemental Instructions Reporting Procedures for AB2588 Facilities for Reporting their Quadrennial Air Toxics Emissions Inventory, Annual Emissions Reporting Program, June 2020 with the following adjustments: compounds that are not found in natural gas, don't have a test method, or don't have risk factors per Office of Environmental Health Hazard Assessment (OEHHA). *Ammonia emissions are calculated base on a 10 ppm @ 15% O2.

Table F-4: Rule 212 Project Change			
Pollutant	**Post-Project PTE (lb/day)**	**Pre-Project PTE (lb/day)**	**Project Change (lb/day)**
NO_x	146	2,910	-2,765
CO	564	2,815	-2,251
VOC	138	193	-55
PM_{10}	33.7	47.1	-13.4
SO_x	2	2.82	-0.8

Note: Project change is the post-project replacement compressor gas lean burn engine PTE less the pre-project existing compressor gas lean burn engine PTE per the Rule Implementation Guidance – Rule 212, December 19, 2006.

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Table F-5: Rule 1325 Significant Increase Evaluation					
	NO_x	SO_x	VOC	NH_3	$PM_{2.5}$
Pre-Project PTE					
Delaval MU#1 (SCAQMD ID: D4)	582	0.56	38.6	0.00	9.41
Delaval MU#2 (SCAQMD ID: D5)	582	0.56	38.6	0.00	9.41
Delaval MU#3 (SCAQMD ID: D6)	582	0.56	38.6	0.00	9.41
Delaval MU#4 (SCAQMD ID: D7)	582	0.56	38.6	0.00	9.41
Delaval MU#5 (SCAQMD ID: D8)	582	0.56	38.6	0.00	9.41
Pre-Project PTE	**2,910**	**2.82**	**193**	**0.00**	**47.1**
Post-Project PTE					
New Waukesha #1	36.4	0.51	34.5	12.2	8.4
New Waukesha #2	36.4	0.51	34.5	12.2	8.4
New Waukesha #3	36.4	0.51	34.5	12.2	8.4
New Waukesha #4	36.4	0.51	34.5	12.2	8.4
Post-Project PTE	**146**	**2.02**	**138**	**49.0**	**33.7**
Change in PTE (lb/day)	-2,765	-0.80	-55	49.0	-13
Change in PTE (ton/year)	-505	-0.15	-10.01	8.9	-2

Pre-project PTE (tpy)	531.1	0.5	35 2	0.0	8.6
Post-Project PTE (tpy)	26.6	0.4	25 2	8.9	6.1
Change in PTE	-505	-0.1	-10.0	8.9	-2.4

Data and Parameters		**Unit of Measure**	**Reference/Comments**
Pre-Project Heat Rate	7485.30	Btu/Hp-hr	
Hours per day	24	hours/day	Assumption
Days per Year	365	days/year	Assumption
Pre-Project NOx EF	2	g/bhp-hr	Facility data
Pre-Project CO EF	250	ppm	
Pre-Project VOC EF	30	ppm	
Pre-Project SOX EF	0.60	lb/mmscf	SCAQMD Default 4SLB/AER
Pre-Project PM10 EF	10.00	lb/mmscf	SCAQMD Default 4SLB/AER

Table F-6: Rule 1306(c)-Adjusted Historic Emissions for Equipment to be Removed From Service

Equipment	Rating	2020 Fuel (mmcf/yr)	2021 Fuel (mmcf/yr)	2-Year Historic Actual Avg Fuel (mmcf/yr)	2-Year Average Days of Operation	BACT Adjusted Emission Factors[1,2](lb/mmcf)					2-Year Rule 1306-Adjusted Actual Emissions[3] (lb/year)					2-Year Rule 1306-Adjusted Actual Emissions (lb/day)				
						NO_x	CO	VOC	SO_x	PM_{10}	NO_x	CO	VOC	SO_x	PM_{10}	NO_x	CO	VOC	SO_x	PM_{10}
Delaval MU#1 (SCAQMD ID: D4)	5,500	89.68	110.78	100.23	220	43.25	167.54	41.03	0.60	10.00	4,335	16,793	4,113	60	1,002	19.71	76.33	18.69	0.27	4.56
Delaval MU#2 (SCAQMD ID: D5)	5,500	84.28	71.55	77.92	180	43.25	167.54	41.03	0.60	10.00	1,685	6,527	1,598	23	390	9.36	36.26	8.88	0.13	2.16
Delaval MU#3 (SCAQMD ID: D6)	5,500	65.08	90.55	77.81	187	43.25	167.54	41.03	0.60	10.00	3,366	13,037	3,193	47	778	18.00	69.72	17.07	0.25	4.16
Delaval MU#4 (SCAQMD ID: D7)	5,500	57.47	54.96	56.21	165	43.25	167.54	41.03	0.60	10.00	1,216	4,709	1,153	17	281	7.39	28.63	7.01	0.10	1.71
Delaval MU#5 (SCAQMD ID: D8)	5,500	65.47	67.44	66.46	184	43.25	167.54	41.03	0.60	10.00	2,874	11,134	2,727	40	665	15.62	60.51	14.82	0.22	3.61

	Honor Rancho Compressor Operating Days (> 30 minutes/day)	
	2020	**2021**
MU1	212	228
MU2	186	174
MU3	159	215
MU4	155	174
MU5	179	189

Notes:
1. NOx (11). CO (70), VOC (30) BACT estimated to be same as Rule 1110.2 BARCT
2. No BACT adjustments to PM10 or SOx emission factors
3. Rule 1306 Adjustment includes a 50% discount for operation less than 180 days per year

Data and Parameters		
F-factor	8710	scf/MMBtu
HHV	1050	Btu/scf
Molar Volume	379	scf/lb-mol
Conversion	454	gm/lb
Rule 1306 Discount Factor	0.5	SCAQMD Rule 1306
Conversion factor	2000	lbs/ton

Table F-7: Rule 1306 Net Emissions Increase						
Unit	**Emissions Basis**	**2020/2021 Emissions (lb/day)**				
		NO_x	**CO**	**VOC**	**SO_x**	**PM_{10}**
Pre-Project						
Delaval MU#1 (SCAQMD ID: D4)	BACT-adjusted historic actual	19.71	76.33	18.69	0.27	4.56
Delaval MU#2 (SCAQMD ID: D5)	BACT-adjusted historic actual	9.36	36.26	8.88	0.13	2.16
Delaval MU#3 (SCAQMD ID: D6)	BACT-adjusted historic actual	18.00	69.72	17.07	0.25	4.16
Delaval MU#4 (SCAQMD ID: D7)	BACT-adjusted historic actual	7.39	28.63	7.01	0.10	1.71
Delaval MU#5 (SCAQMD ID: D8)	BACT-adjusted historic actual	15.62	60.51	14.82	0.22	3.61
Pre-Project		**70.08**	**271.45**	**66.48**	**0.97**	**16.20**
Post-Project PTE						
New Waukesha #1	Proposed PTE (30-DA)	36.40	141.06	34.55	0.51	8.42
New Waukesha #2	Proposed PTE (30-DA)	36.40	141.06	34.55	0.51	8.42
New Waukesha #3	Proposed PTE (30-DA)	36.40	141.06	34.55	0.51	8.42
New Waukesha #4	Proposed PTE (30-DA)	36.40	141.06	34.55	0.51	8.42
Post-Project PTE		**145.60**	**564.24**	**138.18**	**2.02**	**33.68**
Net Emission Increase (lb/day)		75.52	292.79	71.70	1.05	17.48
Net Emission Increase (ton/year)		13.78	53.43	13.09	0.19	3.19
Reclaim Trading Credit Requirement (tpy)		**26.6**				

Pre-project HAE (tpy)	12.8	49.5	12.1	0.2	3.0
Post-Project PTE (tpy)	26.6	103.0	25.2	0.4	6.1
NEI	13.8	53.4	13.1	0.2	3.2

APPENDIX G – SUPPLEMENTAL BACT INFORMATION

Appendix G – Supplemental BACT Information

Due to the challenges associated with applying SCR to engines driving natural gas compressors, and minimal industry experience with SCR on these types of units, a three-hour averaging period for the NO_x BACT limit, 11 ppm NO_x @ 15% O_2, is appropriate. Also, to address challenges associated with meeting the VOC BACT limit, 30 ppm VOC @ 15% O_2, and an ammonia slip limit of 10 ppm NH_3 @ 15% O_2 is appropriate.

The compressor gas lean-burn engines proposed for the HRCM Project are separable, that is a separate engine and separate compressor connected with a coupler. Several challenges previously discussed with the South Coast AQMD related to integral units (which use a single crank shaft that drives both the engine and compressor in a single crankcase) are also applicable to these units:

- Compressor units have multiple compressor cylinders, but they don't necessarily carry the same load. Sometimes, compressor cylinders are physically different sizes, but for the proposed compressor unit, some of the cylinders compress the gas from pipeline pressure to an intermediate pressure (first stage) and other cylinders compress gas from the intermediate to storage field injection pressure (second stage). Two stages are needed to reach the high storage field pressure at the Honor Rancho Storage Field.
- Load changes are made in abrupt steps when volume pockets are open or closed, or when deactivating or activating head end of compressor cylinders. Deactivation is accomplished by holding check valves open.
- The engine is balanced so that load is evenly carried by each engine power cylinder, but it is never perfect, because each power cylinder sees the load from a different compressor cylinder.
- In high-speed compressor units speed changes are also used as a variable to control load.

While there is a lot of experience with SCR systems responding well to load changes in power generating engines, those engines do not have the geometry issues or load control strategies discussed above. These characteristics are unique to compression engines which cause power cylinder-to-power cylinder, and combustion cycle-to-combustion cycle differences that create variability in engine emissions. There isn't enough real-world experience with how well SCR controls will respond to the load variation, thereby justifying a three-hour averaging period and a NO_x limit of 11 ppm @ 15% O_2.

The urea injection rate will be determined by feedback from the CEMS on the compressor gas lean-burn engines. Any variability in uncontrolled NO_x from the compressor gas lean-burn engines will result in a lag in response time for the urea flow control system. Significant shifts in NO_x emissions and transient loads will result in a delayed response by the control system, resulting in under-injection or over-injection of urea and increased variability in the stack emissions of NO_x and ammonia. SoCalGas proposes a 10 ppmvd ammonia slip limit to meet the NO_x emission limit of 11 ppmvd. SoCalGas understands that 10 ppm NH_3 slip limits have been applied to engines generating power, SoCalGas believes a 10 ppm NH_3 slip limit is required to provide the flexibility needed to assure simultaneous NO_x and NH_3 compliance for the compressor gas lean burn engines.

Consideration of Ammonia Slip Catalyst

Ammonia slip catalyst (ASC) is a catalyst designed to convert NH_3 to nitrogen (N_2). This technology uses a precious group metal (PGM) on the catalyst. In the past, the ASC used platinum for its formulation. Platinum is a strong catalyst for oxidation and the primary PGM in an oxidation catalyst. An ASC is not applicable to engine applications.

Use of ASC in the 475-800°F window results in high nitrous oxide (N_2O) formation, as well as ammonia oxidation to NO_x instead of N_2. This is especially true with new high-speed engines, where the exhaust temperature will be higher, the selectivity of the reaction changes, and the ASC is expected to convert much of the NH_3 to NO_x. Given the high NO_x conversion requirement for Rule 1110.2 compliance, any oxidation of ammonia to NO_x would make the design NO_x removal unachievable. Also, NO_x created from oxidized ammonia interferes with the control system. The Programmable Logic Controller (PLC) controlling SCR operation would over-inject ammonia to compensate, creating even more NO_x and resulting in an uncontrollable system.

In recent years, new ASC formulations were developed using a "strategic" addition of palladium with the platinum. The goal of this formulation is to control the selectivity of the ammonia oxidation and promote the desired ammonia destruct reaction toward the creation of N_2 and not N_2O or NO_x. While lab results demonstrate this change in selectivity, palladium can be poisoned rapidly by sulfur compounds present in the flue gas stream, even at low levels associated with odorant in natural gas. Additionally, these catalysts are unproven for four-stroke engine applications. Poisoning of the palladium from sulfur and phosphorous will reduce the selectivity toward the creation of N_2, and the ASC would revert back to N_2O or NO_x formation. For the above reasons, ASC is an unproven technology with significant technical concerns and, therefore, is not being proposed at this time.

VOC Considerations

SoCalGas would also like to highlight the challenges of simultaneously meeting low NO_x, NH_3 slip, and VOC limits for the compressor gas lean burn engines. The analogy of leveling a 3-legged stool is applicable. To obtain low NH_3 slip, NO_x from the engine must be low. However, running the engine leaner to lower NO_x increases VOC emissions. Since the predominant VOC species, propane and butane, are not easily reduced by an oxidation catalyst, the engine cannot be leaned out too much without compromising VOC compliance. Leveling the stool requires not going too low with either the NO_x, NH_3, or VOC emissions from the engine.

The manufacturers must estimate the required compliance margin for the compressor gas lean burn engines and the emissions control equipment to ensure that emission guarantees are achievable in practice. There are at least two uncertainties that would potentially require a greater compliance margin:

- As discussed above, the compressor gas lean burn engines will be required to operate with significant variations in load. The VOC composition with load variation is not well understood. VOC speciation significantly impacts catalyst performance and destruction efficiency.
- The engine and catalyst manufacturer experience and warranty are based on VOC measurements with EPA Test Method 18 which speciates VOCs. The equipment

manufacturers are generally not accustomed to South Coast AQMD Test Method 25.3, which does not speciate VOCs and is biased higher than EPA Method 18.

The HRCM Project proposes an NH_3 slip limit of 10 ppm to allow operational flexibility in assuring appropriate compliance margin to meet the VOC limit of 30 ppm @ 15% O_2.

APPENDIX H – HEALTH RISK ASSESSMENT

Appendix H

Health Risk Assessment for Honor Rancho Compressor Modernization Project

February 2022

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Health Risk Assessment for Honor Rancho Compressor Modernization Project

1.0 INTRODUCTION

Southern California Gas Company (SoCalGas) plans to modernize the Honor Rancho Storage Field (facility) located in Valencia, CA. The Honor Rancho Compressor Modernization Project (HRCM Project) involves replacing the existing compression equipment with new compression equipment at the Honor Rancho Storage Field. Specifically, the existing five natural gas-fueled lean-burn engines will be replaced with four compressor gas lean-burn engines in accordance with the Facility-wide Engine Modernization Compliance Plan (FWEMCP) submitted to the South Coast AQMD in December 2020 pursuant to Rule 1110.2 *Emissions from Gaseous and Liquid-Fueled Engines.*

This health risk assessment (HRA) has been prepared by Yorke Engineering, LLC (Yorke) in support of the South Coast Air Quality Management District (South Coast AQMD) Permit to Construct (PTC) application for this Project. This HRA report addresses the emissions of Toxic Air Contaminants (TACs) from the proposed equipment only, and other air quality-related issues are discussed elsewhere in the PTC application.

The facility is located at 25205 West Rye Canyon Road in Valencia, CA. An aerial photograph of the site and surrounding properties is provided as Figure 1-1. Land use in the immediate vicinity of the site is commercial/industrial use to the east and south of the facility. Property to the west includes the North County Correctional Facility and commercial/industrial usage. The area to the north is the Pitchess Detention Center, along with undeveloped land. The nearest sensitive receptor is approximately 2,400 feet to the south of the proposed project location. The nearest commercial/industrial property is approximately 1,500 feet to the east of the proposed project location. There are no schools within 1,000 feet of the facility.

The Tier 4 HRA for this facility was conducted using meteorological data collected at the facility. The location of the 10-meter meteorological tower, shown in Figure 1-1, is close to both the existing and the proposed compressor buildings. The on-site data were collected from January 1, 2016 to December 31, 2017. Additional information regarding this meteorological dataset is provided in this report.

As discussed in this report, the health risks from the HRCM Project were found to be below the South Coast AQMD significance criteria for new and modified stationary sources.

Figure 1-1: Aerial View of Honor Rancho Storage Field and Surrounding Area

Red line = SoCalGas property boundary
Red crosses = Replacement Compressor Gas Lean-Burn Engine Stacks
Red rectangle = New Compressor Building
Dark blue structures = Existing Buildings. Existing compressor building is the northernmost building.
Red triangle = Onsite MET Station

2.0 EMISSION ESTIMATES

As described in the PTC application, TAC emissions from the replacement compressor gas lean-burn engines were calculated in accordance with South Coast AQMD emission factors for 4-stroke lean-burn natural gas internal combustion engines and a control efficiency of 80% for the oxidation catalysts for all TACs except ammonia. The TACs will also include ammonia slip emissions due to installation of Selective Catalytic Reduction (SCR) systems. A summary of the hourly and annual emission estimates for each replacement engine are provided in Table 2-1.

Table 2-1: Summary of TAC Emissions – One Compressor Gas Lean-Burn

Pollutant	CAS	MHU	MHC	MAC
		(lb/hr)	(lb/hr)	(lb/yr)
Benzene	71432	1.58E-02	3.15E-03	2.76E+01
1,3-Butadiene	106990	9.54E-03	1.91E-03	1.67E+01
Formaldehyde	50000	1.89E+00	3.78E-01	3.31E+03
Benzo(b)fluoranthene	205992	5.93E-06	1.19E-06	1.04E-02
Chrysene	218019	2.48E-05	4.96E-06	4.35E-02
Naphthalene	91203	2.66E-03	5.33E-04	4.66E+00
Acetaldehyde	75070	2.99E-01	5.98E-02	5.24E+02
Ammonia	7664417	5.10E-01	5.10E-01	4.47E+03
Ethylbenzene	100414	1.42E-03	2.84E-04	2.49E+00
n-Hexane	110543	3.96E-02	7.93E-03	6.95E+01
Methanol	67561	8.95E-02	1.79E-02	1.57E+02
Styrene	100425	8.45E-04	1.69E-04	1.48E+00
Toluene	108883	1.46E-02	2.92E-03	2.56E+01
Xylene	1330207	6.60E-03	1.32E-03	1.16E+01

1. South Coast AQMD, AB 2588 Quadrennial Air Toxics Emissions Inventory Reporting Procedures Annual Emissions Reporting Program, June 2020 with the following adjustments: 1) brominated and chlorinated compounds have been omitted because they are not found in natural gas; 2) acrolein has been omitted from the HRA per CARB guidance "Acrolein Test Method Advisory and Data": and 3) compounds without California Office of Health Hazard Assessment (OEHHA) risk factors.
2. Control efficiency of 80% applied for oxidation catalyst except for ammonia.
3. Ammonia emission factor is based on an ammonia slip limit of 10 ppm.

3.0 MODELING AND RISK ASSESSMENT METHODOLOGIES

The methodology used to develop the air dispersion modeling and HRA is described below. AERMOD air dispersion modeling input files used to create the dispersion characteristics used in the HRA are described below in Section 3.1. A description of the health risk indices calculated in the HARP2 tool follows in Section 3.2. The AERMOD and HARP2 modeling files are provided in Attachment A while the detailed results summary tables are provided in Attachment B.

3.1 Air Dispersion Modeling

Air dispersion models calculate the atmospheric transport and fate of pollutants emitted from an emissions source. The models calculate the concentration of selected pollutants at specific downwind ground-level points, such as residential or off-site workplace receptors. The transformation (fate) of an airborne pollutant, its movement with the prevailing winds (transport), its crosswind and vertical movement due to atmospheric turbulence (dispersion), and its removal due to dry and wet deposition are influenced by the pollutant's physical and chemical properties and by meteorological and environmental conditions. Factors such as the distance from the source to the receptor, meteorological conditions, intervening land use and terrain, pollutant release characteristics, and background pollutant concentrations affect the predicted concentration of an air pollutant. Air dispersion models take these factors into consideration when calculating downwind ground-level pollutant concentrations.

The air dispersion model used for this HRA is the **A**merican Meteorological Society (AMS)/ **E**nvironmental Protection Agency (EPA) **R**egulatory **Mod**el (AERMOD). AERMOD is a steady-state plume dispersion model that incorporates air dispersion calculations based on planetary boundary layer turbulence structure and scaling concepts. AERMOD includes the treatment of both surface and elevated sources and both simple and complex terrain. AERMOD, like most dispersion models, uses mathematical algorithms to characterize the atmospheric processes that disperse pollutants emitted by a source. Using emission rates, exhaust parameters, terrain characteristics, and meteorological inputs, AERMOD calculates downwind pollutant concentrations at specified receptor locations. For this project, the results from the AERMOD runs were imported into an HRA program for further processing and analysis. AERMOD is recommended by the EPA, California Air Resources Board (CARB), and South Coast AQMD for stationary source air dispersion modeling projects.

The Lakes Environmental Software (Lakes) implementation/user interface, AERMOD View™, Version 10.2.1, was used for this project. This version of AERMOD View™ implements the newest version of AERMOD (version 21112). All geographical coordinates referenced in this section and appendices are in the Universal Transverse Mercator (UTM) coordinate system, with the WGS84 Datum.

3.1.1 Meteorological Data

Meteorological data collected at the facility was used in the modeling. The location of the 10-meter meteorological tower, shown in Figure 1-1, is close to both the existing and the proposed compressor buildings. The on-site data were collected from January 1, 2016 to December 31, 2017. The on-site data are provided in Attachment A.

The meteorological data were processed with AERMET version 18081, using the recommended Adjusted U* method which improves model performance under low wind

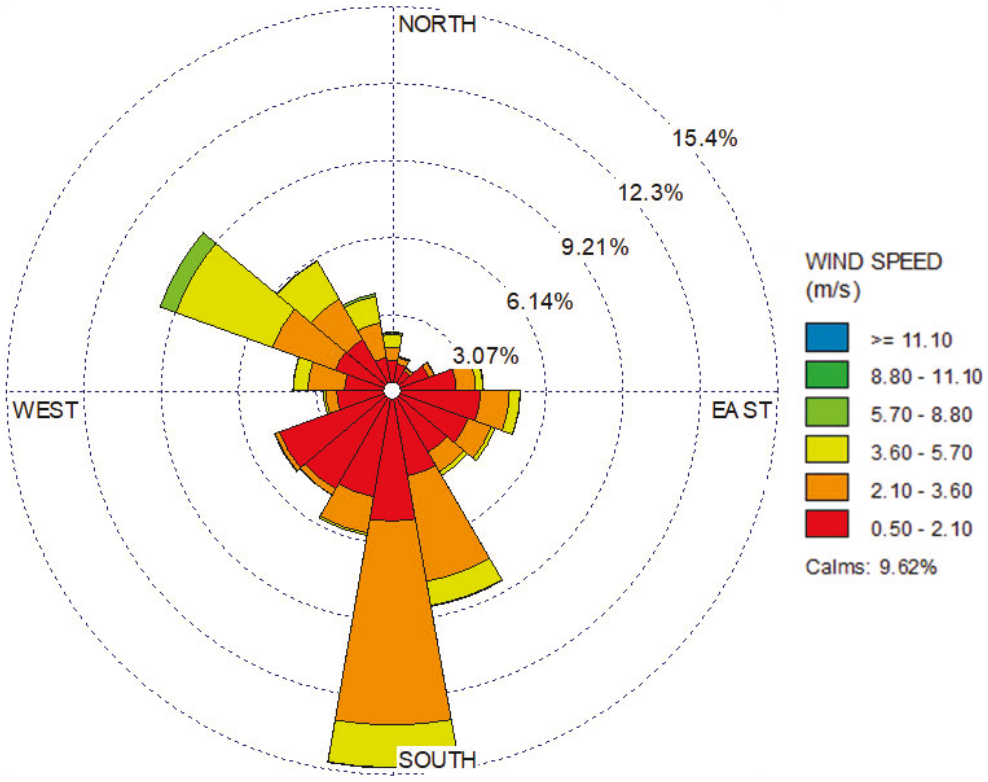
and stable atmospheric conditions. The processing utilized cloud cover and cloud layer information from the monitoring surface station at the Van Nuys Airport which was also used to fill in any missing data from the on-site meteorological data. Upper air data for parameters measured in the vertical layers of the atmosphere was used from the Vandenberg Air Force Base AMS DataStreme Atmosphere Upper Air Station. These surface and upper air data are required by AERMET but were not collected on-site.

The minimum wind speed of the on-site anemometer is 0.5 m/s with approximately 9.6% of the frequency distribution being classified as calm which is within the EPA threshold of less than 15% calm hours by quarter. In addition, only 0.4% of the data are classified as missing and/or incomplete which is well within the EPA threshold of less than 10% missing data by quarter.

The on-site station is characteristic of the facility terrain and onsite wind patterns. Wind patterns from the on-site station are predominantly from the south followed by winds out of the west-northwest as shown in the wind rose provided in Figure 3-1.

Due to its location, the on-site meteorological station is most characteristic of the terrain and wind patterns of the facility. The closest South Coast AQMD meteorological stations are the Burbank Airport, which is approximately 21 miles southeast of the facility, and the Van Nuys Airport, which is approximately 17 miles southwest of the facility. The available South Coast AQMD-processed meteorological datasets for both Burbank and Van Nuys Airports are based on 2012-2016 data. Neither the Burbank Airport nor the Van Nuys Airport meteorological stations wind patterns are as representative as those seen by the station at the facility.

Figure 3-1: Honor Rancho On-site Meteorological Wind Rose for 2016-2017

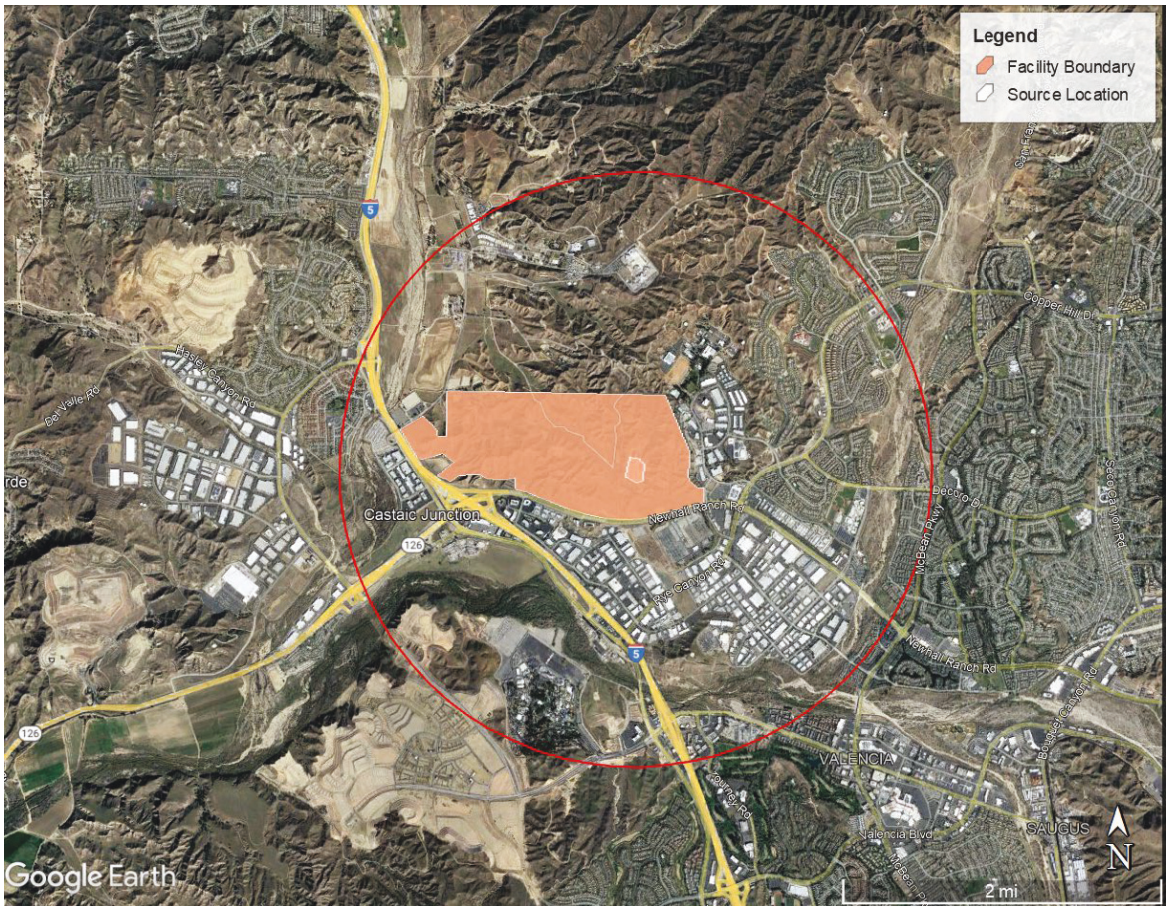


3.1.2 Urban/Rural Dispersion Option

AERMOD allows for the use of urban or rural dispersion coefficients. The determination of whether the facility is in an urban or rural area followed the Auer method noted in the References section of 40 CFR Part 51 Appendix W. The Auer method requires drawing a circle with a 3-kilometer radius centered on the centroid of the emission source locations and classifying the land use types within the circle as urban or rural according to a set of criteria. If 50% or more of the land use types within the circle meet the urban criteria (I1-Heavy Industrial, I2-Light-Moderate Industrial, C1-Commercial, R2 and R3-Compact Residential), the facility is considered to be in an urban area. Rural criteria are R1-Common Residential, R4-Estate Residential, A1-Metropolitan Natural, A2-Agricultural, A3-Undeveloped (Grass/Weeds), A4-Undeveloped (Heavily Wooded), and A5-Water Surfaces.

Figure 3-2 shows the area within 3 kilometers of the Honor Rancho facility. More than 50% of the land use types within the circle meet the criteria to be classified as rural. Therefore, the AERMOD modeling used rural dispersion coefficients.

Figure 3-2: Land Use Types Within 3 Kilometers of the HRCS



3.1.3 Terrain Options and Modeling Domain

The AERMOD runs used the regulatory default elevated terrain option. Terrain data were imported directly into AERMOD View™ using the WebGIS import feature. The terrain

data were from the United States Geological Survey (USGS) National Elevation Dataset (NED) and had a spatial resolution of approximately 30 meters (1 arcsecond). The terrain data files were processed by AERMOD View™ using AERMAP Version 18081 and elevations were assigned to receptors, buildings, and emission sources accordingly.

3.1.4 On-Site Buildings

Five on-site buildings close to the emission sources were included in the modeling using dimensional data provided by SoCalGas, summarized in Table 3-1, and are shown in Figure 1-1. Building downwash effects were assessed using BPIPPRIME.

Table 3-1: Building/Structure Dimension Information

Building/Structure Description	Height (feet)	Dimensions - X (feet)	Dimensions - Y (feet)
New Compressor Building	58.5	88	316
Existing Compressor Building	35.0	80	242
Existing Generator Building	20.0	82	34
Existing Maintenance Building	20.0	80	40
Existing Office Building	18.0	Polygonal	

1. Building dimensions provided by SoCalGas.

3.1.5 Receptors

HRA results were determined at various locations around the facility. These receptor locations were identified as the facility boundary, a grid network of receptors to establish the impact area and area where the maximum impact would occur, and discrete receptors that were positioned at specific locations of concern.

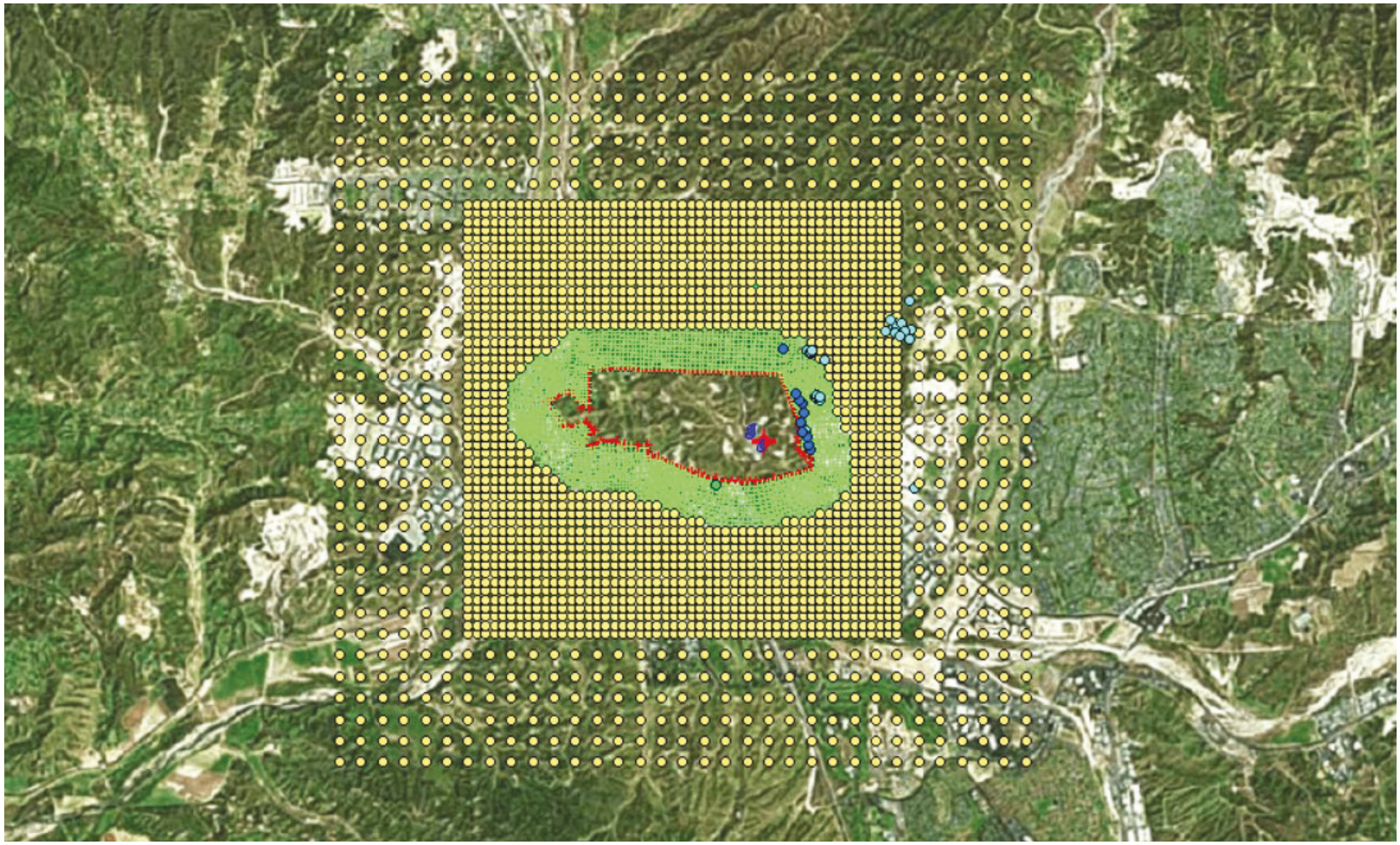
Fenceline receptors were placed every 50 meters apart. A fenceline grid was extended 500 meters with 50 meter spacing to ensure impacts at nearby receptors were adequately captured. In addition, a cascading grid of receptors was used to ensure impacts were below the appropriate South Coast AQMD thresholds at all locations off-site. These gridded receptors were located 100 meters apart from 500 meters out to 2,500 meters and 250 meters apart out from 2,500 meters to 4,000 meters.

Discrete Cartesian receptors were used to evaluate the locations of the maximally exposed residential and off-site workplace. A series of receptors were placed along the nearest residences on each side of the Project. To capture peak off-site worker exposure, receptors were located within the nearest businesses on each side of the Project site. Figure 3-3 shows the locations of the receptors.

3.1.6 Source Parameters

The exhaust stacks from each compressor engine were modeled as individual point sources. The release parameters for each exhaust stack are presented in Table 3-2, and stack locations are shown on Figure 1-1 (in Section 1.0).

Figure 3-3: Receptor Locations



Red line = SoCalGas property boundary
Red crosses = New Ccmpressor Gas Lean-Burn Engine Stacks
Green crosses = Fenceline grid
Yellow dots = Cartesian grid
Light green dots = Residential receptors
Light blue dots = Sensitive receptors
Dark blue dots = Worker receptors

Table 3-2: Emission Sources and Release Parameters

Source ID	Base Elevation (m)	Release Height (m)	Diameter (m)	Exit Velocity (m/s)	Exit Temperature (°K)	UTM Easting (m)	UTM Northing (m)
COMP1	351.00	19.66	0.86	23.40	644.26	354,347.76	3,812,748.38
COMP2	351.00	19.66	0.86	23.40	644.26	354,347.65	3,812,736.19
COMP3	351.00	19.66	0.86	23.40	644.26	354,347.53	3,812,724.00
COMP4	351.00	19.66	0.86	23.40	644.26	354,347.41	3,812,711.81

3.2 Health Risk Assessment

The HRA followed the California Office of Environmental Health Hazard Assessment (OEHHA) Tier-1 techniques to calculate the health risk impacts at all receptors including the nearby residential, sensitive, and off-site worker receptors. The health risk calculations were performed using the Hotspots Analysis and Reporting Program, version 2 (HARP2) Air Dispersion Model & Risk Tool (ADMRT, version 21081). The X/Q values that were determined for each source using AERMOD were imported into HARP2 and used in conjunction with hourly and annual emissions to determine the ground level concentrations (GLCs) for each TAC. The GLCs are then used to estimate the long-term cancer health risk to an individual, and the non-cancer chronic and acute health indices.

A description of the health risk indices calculated in the HARP2 is provided below.

3.2.1 Cancer Risk

Cancer risk is the estimated probability of a maximally exposed individual potentially contracting cancer as a result of exposure to TAC emissions over a period of time. Per OEHHA guidance, cancer risk was estimated over a 30-year lifetime for residential, sensitive, and point of maximum impact (PMI) grid receptor locations, and 25 years for off-site worker receptor locations.

The exposure pathways used to estimate the cancer risk are summarized in Table 3-3. Any exposure pathway not explicitly listed was not included in this HRA. A deposition velocity of 0.02 meters per second was used since all particulate matter emissions from compressors are calculated to be less than 2.5 micrograms per meter cubed ($\mu g/m^3$).

Table 3-3: Exposure Pathways

Exposure Pathway	Residential/Sensitive	Off-Site Workplace
Inhalation	Yes	Yes
Homegrown Produce	Yes	No
Dermal	Yes	Yes
Soil Ingestion	Yes	Yes
Mother's Milk	Yes	No

Based on South Coast AQMD guidelines, the "RMP Using the Derived Method" calculation was used to estimate cancer risk at residential/sensitive/grid receptors and the "OEHHA Derived Method" was used to estimate cancer risk at off-site worker receptors.

The RMP uses high-end breathing rates (95th percentile) for children from the 3rd trimester through age 2 and 80th percentile breathing rates for all other ages for residential exposures (CARB/CAPCOA 2015). The "OEHHA Derived Method" uses high-end exposure parameters for the top two exposure pathways, and mean exposure parameters for the remaining pathways for cancer risk estimates. The facility could operate continuously, thus, no worker adjustment factor (WAF) was applied in HARP2.

3.2.2 Chronic Hazard Index

Some TACs increase non-cancer health risk due to long-term (chronic) exposures. The Chronic Hazard Index (HIC) is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system. The HIC estimates for all receptor types used the "OEHHA Derived" calculation method. The reported HIC is for the maximally affected target organ system.

3.2.3 Acute Hazard Index

Some TACs increase non-cancer health risk due to short-term (acute) exposures. The Acute Hazard Index (HIA) is the sum of the individual substance acute hazard indices for all TACs affecting the same target organ system. Acute risk is calculated from a 1-hour exposure. The reported HIA is for the maximally affected target organ system.

3.2.4 Cancer Burden

Cancer burden is the estimated increase in the occurrence of cancer cases in a population subject to an MICR of greater than or equal to one in one million (1.0×10^{-6}) resulting from exposure to TACs. The cancer burden is determined for the population located within the zone of impact, defined as the area within the one in one million cancer risk isopleth. HARP is able to generate an isopleth, a line of a constant value, showing the area exposed to a cancer risk above one in one million.

Since the Residential MICR for each compressor is below one in a million, a cancer burden analysis was not completed.

4.0 RESULTS

To demonstrate compliance with South Coast AQMD Rule 1401, *New Source Review for Air Toxics,* the HRA examined the potential impacts of TACs emitted from the replacement compressors. The compressors will include oxidation catalysts which are best available control technology for air toxics (T-BACT). A summary of the HRA results for each compressor is presented in Table 4-1.

The results per compressor shows that for all receptor types and locations, the predicted health risks are less than the South Coast AQMD Rule 1401 Thresholds. The majority of the cancer, chronic and acute risks at the receptors of interest are attributed to emissions of formaldehyde. Additional detailed results tables showing the contribution per pollutant for the predicted cancer risk, chronic, and acute HIs are presented in Attachment B.

Table 4-1: Summary of Health Risk Assessment Results by Permit Unit

Impact Parameter	Receptor Type	Health Risk Impact				South Coast AQMD Rule 1401 Threshold	Pass (Yes/No)
		Comp 1	Comp 2	Comp 3	Comp 4		
Cancer Risk (in a million)	PMI	1.12	1.14	1.20	1.24	10 in a million	Yes
	Resident	0.60	0.59	0.58	0.58	10 in a million	Yes
	Sensitive	0.57	0.60	0.63	0.69	10 in a million	Yes
	Worker	0.28	0.07	0.07	0.08	10 in a million	Yes
HIC (dimensionless)	PMI	0.007	0.008	0.008	0.008	1	Yes
	Resident	0.004	0.004	0.004	0.004	1	Yes
	Sensitive	0.004	0.004	0.004	0.005	1	Yes
	Worker	0.005	0.005	0.006	0.006	1	Yes
HIA (dimensionless)	PMI	0.05	0.05	0.05	0.05	1	Yes
	Resident	0.03	0.03	0.03	0.03	1	Yes
	Sensitive	0.03	0.03	0.03	0.03	1	Yes
	Worker	0.03	0.03	0.03	0.03	1	Yes

Although not required by Rule 1401, the tables in Attachment B also show that the combined risk for the four HRCM Project compressors are also below applicable thresholds.

ATTACHMENT A – AERMOD AND HARP2 MODELING FILES

(Modeling files provided electronically)

ATTACHMENT B – DETAILED RESULTS SUMMARY TABLES

Maximum Cancer Risk by Pollutant at PMI, MEIR, MEIW and Sensitive Receptor
HRCM HRA

Pollutant CAS	Pollutant	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
		receptor #	4239	receptor #	17	receptor #	3	receptor #	11
		UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
		354724	3813034	355367	3813743	354835	3812871	354817	3813077
		30-Year Cancer Risk	Contribution (%)	30-Year Cancer Risk	Contribution (%)	30-Year Cancer Risk	Contribution (%)	25-Year Cancer Risk	Contribution (%)
-	ALL	4.70E-06	100%	2.35E-06	100%	2.49E-06	100%	2.80E-07	100%
71432	Benzene	1.47E-07	3.12%	7.34E-08	3.12%	7.77E-08	3.12%	8.76E-09	3.13%
106990	1,3-Butadiene	5.33E-07	11.36%	2.67E-07	11.36%	2.82E-07	11.36%	3.18E-08	11.37%
50000	Formaldehyde	3.70E-06	78.77%	1.85E-06	78.77%	1.96E-06	78.77%	2.21E-07	78.86%
91576	2MeNaphthalene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
83329	Acenaphthene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
208968	Acenaphthylene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
205992	B[b]fluoranthen	4.98E-09	0.11%	2.49E-09	0.11%	2.64E-09	0.11%	8.51E-11	0.03%
192972	B[e]pyrene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
191242	B[g,h,i]perylen	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
218019	Chrysene	2.08E-09	0.04%	1.04E-09	0.04%	1.10E-09	0.04%	3.56E-11	0.01%
206440	Fluoranthene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
86737	Fluorene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
91203	Naphthalene	2.98E-08	0.63%	1.49E-08	0.63%	1.58E-08	0.63%	1.78E-09	0.63%
85018	Phenanthrene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
129000	Pyrene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
95636	1,2,4TriMeBenzene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
75070	Acetaldehyde	2.79E-07	5.94%	1.39E-07	5.94%	1.48E-07	5.94%	1.66E-08	5.94%
100414	Ethyl Benzene	1.15E-09	0.02%	5.76E-10	0.02%	6.10E-10	0.02%	6.88E-11	0.02%
110543	Hexane	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
67561	Methanol	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
100425	Styrene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
108883	Toluene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
1330207	Xylenes	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
7664417	NH3	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%

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Cancer Risk by Source for All Pollutants Combined at PMI, MEIR, MEIW and Sensitive Receptor
HRCM HRA

Sources	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
	receptor #	4239	receptor #	17	receptor #	3	receptor #	11
	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
	354724	3813034	355367	3813743	354835	3812871	354817	3813077
	30-Year Cancer Risk	Contribution (%)	30-Year Cancer Risk	Contribution (%)	30-Year Cancer Risk	Contribution (%)	25-Year Cancer Risk	Contribution (%)
ALL	4.70E-06	100%	2.35E-06	100%	2.49E-06	100%	2.80E-07	100%
COMP1	1.12E-06	23.85%	5.98E-07	25.48%	5.70E-07	22.92%	6.52E-08	23.28%
COMP2	1.14E-06	24.34%	5.91E-07	25.15%	5.98E-07	24.07%	6.73E-08	24.02%
COMP3	1.20E-06	25.46%	5.83E-07	24.84%	6.33E-07	25.45%	7.18E-08	25.63%
COMP4	1.24E-06	26.35%	5.76E-07	24.53%	6.85E-07	27.56%	7.58E-08	27.07%

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Maximum Chronic Hazard Index by Pollutant at PMI, MEIR, MEIW and Sensitive Receptor
HRCM HRA

Pollutant CAS	Pollutant	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
		receptor #	4239	receptor #	17	receptor #	3	receptor #	11
		UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
		354724	3813034	355367	3813743	354835	3812871	354817	3813077
		Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)
-	ALL	3.10E-02	100%	1.55E-02	100%	1.64E-02	100%	2.23E-02	100%
71432	Benzene	7.23E-04	2.33%	3.61E-04	2.33%	3.83E-04	2.33%	5.19E-04	2.33%
106990	1,3-Butadiene	6.57E-04	2.12%	3.28E-04	2.12%	3.48E-04	2.12%	4.72E-04	2.12%
50000	Formaldehyde	2.89E-02	93.26%	1.45E-02	93.26%	1.53E-02	93.25%	2.08E-02	93.26%
91576	2MeNaphthalene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
83329	Acenaphthene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
208968	Acenaphthylene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
205992	B[b]fluoranthen	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
192972	B[e]pyrene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
191242	B[g,h,i]perylen	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
218019	Chrysene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
206440	Fluoranthene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
86737	Fluorene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
91203	Naphthalene	4.07E-05	0.13%	2.04E-05	0.13%	2.16E-05	0.13%	2.92E-05	0.13%
85018	Phenanthrene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
129000	Pyrene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
95636	1,2,4TriMeBenzene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
75070	Acetaldehyde	2.94E-04	0.95%	1.47E-04	0.95%	1.56E-04	0.95%	2.11E-04	0.95%
100414	Ethyl Benzene	9.78E-08	0.00%	4.89E-08	0.00%	5.18E-08	0.00%	7.02E-08	0.00%
110543	Hexane	7.80E-07	0.00%	3.90E-07	0.00%	4.13E-07	0.00%	5.60E-07	0.00%
67561	Methanol	3.08E-06	0.01%	1.54E-06	0.01%	1.63E-06	0.01%	2.21E-06	0.01%
100425	Styrene	1.29E-07	0.00%	6.47E-08	0.00%	6.85E-08	0.00%	9.29E-08	0.00%
108883	Toluene	4.78E-06	0.02%	2.39E-06	0.02%	2.53E-06	0.02%	3.44E-06	0.02%
1330207	Xylenes	1.30E-06	0.00%	6.49E-07	0.00%	6.87E-07	0.00%	9.31E-07	0.00%
7664417	NH3	1.76E-03	5.66%	8.78E-04	5.66%	9.30E-04	5.66%	1.26E-03	5.66%

Notes:
Individual pollutants are not additive because risk is based on specific target organs, which may be different per pollutant

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Chronic Hazard Index by Source for All Pollutants Combined at PMI, MEIR, MEIW and Sensitive Receptor
HRCM HRA

Sources	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
	receptor #	4239	receptor #	17	receptor #	3	receptor #	11
	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
	354724	3813034	355367	3813743	354835	3812871	354817	3813077
	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)
ALL	3.10E-02	100%	1.55E-02	100%	1.64E-02	100%	2.23E-02	100%
COMP1	7.40E-03	23.85%	3.95E-03	25.48%	3.76E-03	22.92%	5.18E-03	23.28%
COMP2	7.55E-03	24.34%	3.90E-03	25.15%	3.95E-03	24.07%	5.35E-03	24.02%
COMP3	7.90E-03	25.46%	3.85E-03	24.84%	4.18E-03	25.45%	5.71E-03	25.63%
COMP4	8.17E-03	26.35%	3.81E-03	24.53%	4.53E-03	27.56%	6.03E-03	27.07%

Notes:
Individual sources are not additive because risk is based on specific target organs, which may be different per source

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Maximum Acute Hazard Index by Pollutant at PMI, MEIR, MEIW and Sensitive Receptor
HRCM HRA

Pollutant CAS	Pollutant	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
		receptor #	4254	receptor #	37	receptor #	3	receptor #	10
		UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
		354276	3813524	355317	3813893	354835	3812871	354855	3812789
		Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)
-	ALL	2.02E-01	100%	1.26E-01	100%	1.11E-01	100%	1.11E-01	100%
71432	Benzene	3.29E-03	1.63%	2.05E-03	1.63%	1.80E-03	1.63%	1.81E-03	1.63%
106990	1,3-Butadiene	8.14E-05	0.04%	5.09E-05	0.04%	4.47E-05	0.04%	4.49E-05	0.04%
50000	Formaldehyde	1.94E-01	95.99%	1.21E-01	95.99%	1.06E-01	95.98%	1.07E-01	95.99%
91576	2MeNaphthalene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
83329	Acenaphthene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
208968	Acenaphthylene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
205992	B[b]fluoranthen	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
192972	B[e]pyrene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
191242	B[g,h,i]perylen	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
218019	Chrysene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
206440	Fluoranthene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
86737	Fluorene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
91203	Naphthalene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
85018	Phenanthrene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
129000	Pyrene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
95636	1,2,4TriMeBenzene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
75070	Acetaldehyde	3.59E-03	1.78%	2.24E-03	1.78%	1.97E-03	1.78%	3.59E-03	3.23%
100414	Ethyl Benzene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
110543	Hexane	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
67561	Methanol	1.80E-05	0.01%	1.12E-05	0.01%	9.88E-06	0.01%	1.80E-05	0.02%
100425	Styrene	2.27E-07	0.00%	1.42E-07	0.00%	1.25E-07	0.00%	2.27E-07	0.00%
108883	Toluene	1.64E-05	0.01%	1.03E-05	0.01%	9.03E-06	0.01%	1.64E-05	0.01%
1330207	Xylenes	1.69E-06	0.00%	1.05E-06	0.00%	9.27E-07	0.00%	1.69E-06	0.00%
7664417	NH3	4.49E-03	2.23%	2.80E-03	2.23%	2.47E-03	2.23%	4.49E-03	4.04%

Notes:
Individual pollutants are not additive because risk is based on specific target organs, which may be different per pollutant

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Acute Hazard Index by Source for All Pollutants Combined at PMI, MEIR, MEIW and Sensitive Receptor
HRCM HRA

Sources	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
	receptor #	4254	receptor #	37	receptor #	3	receptor #	10
	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
	354276	3813524	355317	3813893	354835	3812871	354855	3812789
	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)
ALL	2.02E-01	100%	1.26E-01	100%	1.11E-01	100%	1.11E-01	100%
COMP1	5.13E-02	25.43%	3.17E-02	25.13%	2.85E-02	25.74%	2.78E-02	25.05%
COMP2	5.07E-02	25.14%	3.16E-02	25.08%	2.74E-02	24.78%	2.81E-02	25.31%
COMP3	5.01E-02	24.86%	3.15E-02	24.97%	2.70E-02	24.33%	2.74E-02	24.68%
COMP4	4.96E-02	24.57%	3.13E-02	24.82%	2.79E-02	25.15%	2.77E-02	24.97%

Notes:
Individual sources are not additive because risk is based on specific target organs, which may be different per source

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 30777 Los Angeles, CA 90030-0777

ACCOUNTS PAYABLE

Wells Fargo
Minneapolis, MN 55479

N9301-0
1

VENDOR NO	CHECK NO	DATE	AMOUNT
105817	2223337	05/09/22	****$35,795.79

PAY: THIRTY-FIVE THOUSAND SEVEN HUNDRED NINETY-FIVE and 79/100 USD

TO THE ORDER OF: SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 COPLEY DRIVE
DIAMOND BAR CA 91765

VOID AFTER SIX MONTHS

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

⑈0222333 7⑈ ⑆061209756⑆ 20799004 20230⑈

SoCalGas

A Sempra Energy utility P.O. Box 30777 Los Angeles, CA 90030-0777

PLEASE RETAIN THIS STATEMENT FOR YOUR RECORDS

ACCOUNTS PAYABLE

NAME	Vendor No	Check No	Date	Amount
SOUTH COAST AIR QUALITY MANAGE	105817	2223337	05/09/22	***$35,795.79

YOUR REFERENCE	DATE	PO	ITEM	VOUCHER	GROSS	DISCOUNT	AMOUNT PAID
HRCM PTC APP FEE	05/05/22			1901534381	35,795.79	0.00	35,795.79