



**Annual Report Number 3**  
**Work of the Safety Ombudsman**  
**July 2021 – June 2022**

**Report Date: July 31, 2022**

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**Safety Ombudsman**



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## Overview

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SoCalGas (Defendant) and the State Attorney General, City Attorney for the City of Los Angeles, County Counsel for the County of Los Angeles, and the County of Los Angeles (collectively referred to as Government Plaintiffs) entered a Consent Decree to resolve claims raised by the Government Plaintiffs associated with the natural gas leak that occurred at the Aliso Canyon natural gas storage Facility (Facility) in October 2015. The terms and conditions of the Consent Decree required SoCalGas to, among other things, form an internal safety committee, and select and retain a third-party subsurface gas storage industry expert (Safety Ombudsman) who shall act as a safety advocate for the Facility. A copy of the Consent Decree may be accessed via this link: [Click Here](#)

Section 4.2 of the Consent Decree outlines the requirements for SoCalGas to establish a Well and Storage Operations Safety Committee (WSOC). The duties of the WSOC include but are not limited to the following:

- Meet quarterly to review safety issues at the Facility;
- Review operational safety issues and promote safe operations at the Facility consistent with applicable laws, rules, regulations, and orders;
- Review Facility-related information, materials, or work product to assess safety at the Facility;
- Make recommendations to SoCalGas for repairs, improvements, policies, and/or upgrades to the Facility or infrastructure therein;
- Facilitate the role of, and work in cooperation with, the Safety Ombudsman;
- In coordination with the Safety Ombudsman, conduct periodic safety audits or safety-related Strengths, Weaknesses, Opportunities, Threats (“SWOT”) analyses of the Facility; and
- Review California Public Utility Commission (CPUC), California Department of Conservation Geologic Energy Management Division (CalGEM), audit reports of the Facility.

Section 4.3 of the Consent Decree outlines the requirements for SoCalGas to select and retain a Safety Ombudsman and the duties associated with that role. The duties of the Safety Ombudsman include the following:

- Participate in all Well and Storage Operations Safety Committee (WSOC) meetings;
- Have access to all non-privileged materials, information, records, and work product in SoCalGas’ possession, custody, and control necessary to accomplish the tasks required of the Safety Ombudsman;
- Review CPUC and CalGEM audit reports of the Facility;
- Review and evaluate all incidents reported to the public and State and local agencies pursuant to Section 4.1 of the Consent Decree;
- Review and advise on the WSOC’s efforts, findings, and recommendations for improvements;
- Serve as a non-exclusive repository for safety-related concerns reported by the public with respect to the Facility;
- Serve as a point of contact to receive safety complaints or concerns relating to the Facility from anyone who wishes to remain anonymous, and provide any anonymous reports of safety concerns to SoCalGas;

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- Maintain the privacy of the person or member of the public confidentially making safety complaints or concerns relating to the Facility;
- Generate annual reports (Annual Reports) that detail the following:
  - The work of the Safety Ombudsman;
  - The work of the WSOC; and
  - Recommendations, if any, for improvements related to safety and prevention of leaks at the Facility.
- Provide the Annual Reports to the Attorney General, the City Attorney, County Counsel, the CPUC and CalGEM. The Annual Reports shall also be made public via the Aliso Canyon Website and the local community shall be provided with an opportunity to comment on the Annual Reports. The Safety Ombudsman shall schedule at least one public meeting each year to explain and respond to questions regarding the Annual Reports.

A new person filling the role of the Safety Ombudsman began with the September 2021 meeting, where the past Ombudsman introduced the new Ombudsman. The former Ombudsman completed his duties with respect to the role with the annual public meeting held virtually on October 6, 2021.

This report has been prepared in accordance with the requirements outlined in Section 4.3, (b), (ix), (2) of the Consent Decree, and summarizes the work of the Safety Ombudsman during the period of July 2021 – June 2022. It is the third such annual report.



## I. WSOC Meeting Participation

During the period of July 2021 – June 2022, four (4) WSOC meetings were held, virtually or in person as noted below on the following dates:

- September 13, 2021 (virtual);
- December 9, 2021 (virtual);
- March 23, 2022 (virtual); and
- June 15, 2022 (in person).

The Safety Ombudsman participated in the three virtual meetings via video conference and the June 15, 2022 meeting in person. The quarterly meeting agenda generally includes:

1. Review and approval of the prior meeting minutes;
2. Update from Safety Ombudsman concerning public inquiries and other relevant topics;
3. Update from WSOC members concerning safety-related matters associated with the Aliso Canyon Facility;
4. CalGEM audit status; and
5. Joint discussion of other relevant matters related to the Aliso Canyon Facility.

The meetings provide a forum for face-to-face discussions between the WSOC members and the Safety Ombudsman on safety-related matters at the Facility. Topics vary from meeting to meeting depending upon current issues, maintenance and construction work activity at the Facility, and safety concerns. Members of the WSOC typically provide updates of construction and/or maintenance work at the Facility with the emphasis on safety, the status of ongoing discussions with CalGEM staff concerning SoCalGas' Risk Management Plan for the Facility, and the status of periodic audits of the Facility by CPUC and CalGEM staff. These updates provide an opportunity for the Safety Ombudsman to probe any safety concerns and establish a dialog directly with the appropriate subject matter experts. They also provide an opportunity for direct feedback to the WSOC concerning committee work or other safety-related initiatives at the Facility.

During the period of July 2021 – June 2022, discussion topics included but were not limited to:

- The development of additional and enhancement of existing Gas Standards relevant to the safety of underground natural gas storage facilities;
- Preparation of the Safety Ombudsman Annual Reports;
- Audits performed by the WSOC examining adherence to SoCalGas' Gas Standards;
- Status of the CalGEM/PHMSA audit report from October 2020 and other CalGEM/PHMSA audits through the July 2021 – June 2022 period;
- SIMP (Storage Integrity Management Program) Reassessments/Update
- Status of review of the Aliso Canyon Risk Management Plan (RMP) with CalGEM;
- Safety Ombudsman virtual public meeting in October 2021;
- Concerns/Issues submitted to the Safety Ombudsman by members of the public;



- Recommendations for safety improvements generated by the Safety Ombudsman;
- SoCalGas plans in response to Safety Ombudsman’s recommendations; and
- Well assessment/re-assessment updates.

Individual links to the minutes of the WSOC meetings are included immediately below, including the June 2021 meeting minutes, which were not included in Annual Report Number 2. Names of individuals have been redacted from the meeting minutes.

- June 2021 meeting minutes link: [Click Here](#)
- September 2021 meeting minutes link: [Click Here](#)
- December 2021 meeting minutes link: [Click Here](#)
- March 2022 meeting minutes link: [Click Here](#)
- June 2022 meeting minutes link: [Click Here](#)

The June 15, 2022 meeting included a facility tour for the new Safety Ombudsman. The Ombudsman observed safety protocols at well workover sites and discussed valve integrity testing and maintenance at typical wellheads with WSOC members.

In accordance with the WSOC Charter, a change in membership occurred for the 2022 – 2024 period. The WSOC Chairman introduced new members of the WSOC at the March 23, 2022 meeting.

## **II. Safety Ombudsman Virtual Public Meeting – October 6, 2021**

The terms of the Consent Decree require that the Safety Ombudsman provide three Annual Reports to the Attorney General, the City Attorney, County Counsel, the CPUC, and CalGEM. The Safety Ombudsman is required to make available to the public for review and comment a copy of each of the three Annual Reports and schedule at least one public meeting each year wherein the Safety Ombudsman shall explain and respond to questions regarding the Annual Reports. The three reports provide an overview of the following:

1. The work of the Safety Ombudsman;
2. The work of the WSOC; and
3. Recommendations for improvements related to safety and prevention of leaks at the Facility.

Previous Annual Reports covering the April 2019 – June 2020 period and the July 2020 – June 2021 period were posted to the Safety Ombudsman website prior to the annual public meetings.

The July 2020 – June 2021 period Annual Reports were posted on September 20, 2021 and notice was provided on September 21, 2021 via email to representatives from the CPUC and CalGEM and to approximately three dozen groups/parties whose contact information was supplied by SoCalGas’ Public Affairs Group. The individuals/groups who received the meeting notice were the same groups included in SoCalGas’ public outreach initiative associated with the Aliso Canyon incident. The email notice included information concerning a virtual public meeting to be hosted by the Safety Ombudsman on October 6, 2021, at 6:00 pm. The purpose of the meeting was to provide an overview of the work performed by the Safety Ombudsman during the July 2020 – June 2021 period, as detailed in three Annual Reports.



The virtual meeting included an approximately 30-minute presentation covering the three reports mentioned above, followed by an open question/answer period. The presentation included an overview of the Safety Ombudsman's professional experience and the role of the Safety Ombudsman. However, no public participants logged into and joined the virtual meeting. The presentation was recorded and posted to the Ombudsman website. There were no public questions concerning the annual reports that came to the Ombudsman from persons who might have reviewed the recorded presentation after the live virtual meeting.

During the presentation, the Safety Ombudsman provided an overview of the information contained in each of the three Annual Reports. In a typical meeting, participants are invited to raise questions or concerns regarding the Annual Reports, or any other relevant issue, and are invited to post their questions directly to the Safety Ombudsman website.

The Ombudsman will consider hosting an in-person meeting in Q4 of 2022 covering the Annual Reports posted for the period July 2021 – June 2022.

### **III. Safety Ombudsman Data Requests**

The Consent Decree stipulates that the Safety Ombudsman shall have access to all non-privileged materials, information, records, and work product in SoCalGas' possession, custody, or control necessary to accomplish the Ombudsman's tasks. SoCalGas is prohibited from unreasonably denying the Ombudsman access to such information or withholding information based on a privilege not supported by applicable law.

Four (4) data requests (numbers 7-10) were submitted to SoCalGas during the period of July 2020 - July 2021, while six (6) data requests were submitted to SoCalGas during the period from March 2019 – June 2020. The two (2) prior period data requests were reviewed in detail in the 2020 and 2021 Safety Ombudsman Annual Reports and will not be covered in this report. Several of the requests addressed in the 2020 Annual Report pertain to data or information that is collected on an on-going basis, or that is programmatic. Thus, the Safety Ombudsman anticipates requests for the same or similar information will be made in the future to track SoCalGas' integrity monitoring progress.

Three (3) data requests (11-13) were generated by the Safety Ombudsman during the July 2021 – June 2022 period.

#### **Data Request #11**

Data Request #11 was submitted to SoCalGas on September 24, 2021, primarily concerning basic information to help the new person filling the role of the Safety Ombudsman become familiar with the SoCalGas RMP-SIMP and the human and organizational capacity to implement it.

SoCalGas provided a response to each of the questions in Data Request #11 on November 5, 2021, based upon the best available non-privileged information known at the time and subject to change and/or supplementation as additional information becomes available.

A summary of Data Request #11 questions and responses is as follows:

1. Could an organizational chart/layout be provided to the Ombudsman? The chart should show the departments responsible for various aspects of gas storage safety and risk-informed integrity



management, the reporting alignment and relationship, and how interdepartmental communications flow.

- a. SoCalGas Response: SoCalGas provided the organizational chart to the Ombudsman at the December 9, 2021 WSOC meeting.
2. Is there a regular/periodic timing of SIMP procedures review and update? Is there a list of procedures (title, last update, dept owner)?
  - a. SoCalGas Response: SoCalGas provided a PDF document titled “SO Request – List of SIMP Docs” which can be accessed at the following link: [Click Here](#)
3. Can the latest updated draft of the RMP for Aliso Canyon be provided? (it sounded like there were ongoing changes – the original RMP still not approved by CalGEM, but since submission of the RMP the continued storage integrity management activities have provided learning opportunities and RMP modification opportunities. In addition, the Ombudsman’s review of the RMP resulted in ~39 recommendations – so what is the current draft RMP?)
  - a. SoCalGas Response: SoCalGas provided a PDF document titled “SO RMP Feedback” for a summary of SoCalGas responses to the previous Ombudsman’s feedback on the RMP. This document can be accessed at the following link: [Click Here](#). The RMP consists of the SIMP chapters, with a short field-specific introduction and then a few appendices. SoCalGas has updated SIMP chapters since the submittal of the RMP to CalGEM in April of 2019. The next RMP was submitted in April of 2022 to meet the CalGEM requirement to resubmit the RMP on a 3-year frequency.

### **Data Request #11A**

In reviewing the SoCalGas responses, additional questions were generated in Data Request 11A, made to SoCalGas on December 13, 2021, and SoCalGas response was received on February 3, 2022.

Following on the SIMP documents, roles, and responsibilities as described therein and as further discussed at the WSOC meeting on December 9, 2021, the Ombudsman requested additional information and documents related to those referenced within the SIMP chapters and which could help the Ombudsman address the public inquiry of October 27, 2021 (see [Section VII](#) of this report); the questions below form Data Request #11A.

1. Please provide the following two documents, which will help me to understand the statement in SIMP.3 Threat ID and Risk Assessment, Section 3, “...SoCalGas evaluates the potential threats, including threat interactions, impacting storage wells, reservoirs, and surface assets, utilizing available data in accordance with Section 3 of MANUAL SIMP.2”:
  - a. Summary of Potential Threats to Natural Gas Storage Wells in Depleted Hydrocarbon Reservoirs
  - b. Potential Integrity Threats to Wells at Aliso Canyon Storage Field
2. Please provide the following SIMP-related Gas Standards:
  - a. GS 224.119 Pressure Monitoring – Storage Wells and Reservoirs
  - b. GS 224.109 Abnormal Operating Conditions – Underground Storage

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- c. GS 224.110 Wellsite Security and Safety
  - d. GS 224.02 Operation of Underground Storage Wells
  - e. GS 224.118 Plugged Well Inspections
  - f. GS 224.0030 Well Kill and Loading
  - g. GS 224.102 Drilling Storage Wells
  - h. GS 224.103 Well Workover
3. In SIMP.2 Data Collection, Section 3 Data Collection, it is stated that “SoCalGas shall use available information including, but not limited to, industry incident and failure records, performance data collected throughout the field history, operations and maintenance (O&M) activities, and geotechnical data such as well logs, engineering data, and completion reports to determine susceptibility to threat and hazard-related events and to assess threat interaction.”
    - a. Can you document how this is done, such as notes from an annual QAP review meeting, or other notes?
  4. References to GS 224.132, Reservoir Integrity Assessment occur in several places in SIMP chapters, but it is not clear that GS 224.132 is completed. Can you confirm the status of GS 224.132? If completed, please provide a copy of GS 224.132 for the Ombudsman’s review.
  5. In SIMP.5, Preventive and Mitigative Measures, Section 4.1.2. Surface and/or Subsurface Automatic or Remote-Actuated Safety Valves, it is stated that “SoCalGas has performed a risk evaluation for the employment of Surface Controlled Subsurface Safety Valves. The risk evaluation was completed based on the application of the (California) regulations (as cited in SIMP.5, 4.1.2).”
    - a. Please provide a copy of the evaluation and summary of decisions resulting from the evaluation.
  6. In SIMP.8, Quality Assurance Plan, Section 5.1, an annual SIMP QAP review is to be conducted. Can you provide documentation of the most recent annual SIMP QAP review and the notes defining what was discussed and what actions were identified for improvement? Is there a standing agenda that has developed maturity beyond the minimum requirements defined in SIMP.8 Section 5.1 and could include, for example, the elements described in Sections 5.2 and 5.3 of SIMP.8?
  7. In SIMP.8, Section 7.2.2, it is stated that “SoCalGas is conducting an assessment of human factors in operating and maintenance procedures.” Please define the status of the referenced assessment. If completed, what/how did the human factors assessment affect SIMP procedures?
  8. In SIMP.8, Section 8, several SIMP QAP metrics are identified, and it is indicated that these metrics, at a minimum, are tracked. The metrics identified in SIMP.8 include:
    - a. Number of Wells Assessed
      - i. Number of Wells Assessed by Assessment Type
      - ii. Number of Actionable Condition Findings
    - b. Number of Audits performed within SIMP Audit Program & Regulatory Agencies
      - i. Number of Corrective Actions Identified



ii. Number of Corrective Actions Completed

Please provide a summary showing the tracking of the above metrics for the period 2018-2021 inclusive. Please include other metrics tracking if additional metrics have been added to those identified in SIMP.8 Section 8 as noted above.

SoCalGas provided all requested materials pursuant to Data Request #11A. The SoCalGas response to Data Request Number #11A, along with selected non-confidential materials, may be accessed via these links:

- [Click Here](#) (Safety Ombudsman Follow Up DR#11)
- [Click Here](#) (Reports: Summary of Potential Threats to Natural Gas Storage Wells in Depleted Hydrocarbon Reservoirs)
- [Click Here](#) (Potential Integrity Threats to Wells at Aliso Canyon Storage Field)
- [Click Here](#) (QAP Metrics Aliso Canyon YR 2020)
- [Click Here](#) (QAP Metrics Aliso Canyon YR 2021)

**Data Request #12**

Data Request #12, also known as Email Inquiry 02, was submitted to SoCalGas on November 5, 2021, pursuant to a public inquiry made on October 27, 2021.

SoCalGas provided responses on November 30, 2021 based upon the best available non-privileged information known at the time and subject to change and/or supplementation as additional information becomes available.

The questions in Data Request #12 and the SoCalGas responses are as follows:

1. Please provide annulus pressure monitoring readings for all wells in the field for the period October 5, 2021 through November 5, 2021. Note any wells that have annulus pressure or flow in excess of any designated thresholds for action or for further investigation and testing and what actions SoCalGas has taken or anticipates taking.
  - a. SoCalGas Response: SoCalGas interprets this request to seek pressures for the surface casing, production casing, and inner string annuli for the period October 5, 2021 through November 5, 2021. SoCalGas further interprets this request to seek information regarding wells that exceed the designated pressure limits outlined in Company Standard 224.119 for the period October 5, 2021 through November 5, 2021. (SoCalGas provided a Microsoft Excel file attachment, Aliso Canyon Pressure Report 10.05.2021-11.05.2021; however, this information is included in the Ombudsman's response to the October 27, 2021 public inquiry – see [Section VII](#) of this report).
2. Please provide wellhead pressure and flow readings for all wells in the field for the period October 5, 2021 through November 5, 2021. Note any wells that have pressure or flow readings that are out of norm or out of expected and what actions SoCalGas has taken or anticipates taking.
  - a. SoCalGas Response: SoCalGas interprets this request to seek tubing pressure for the period October 5, 2021 through November 5, 2021. SoCalGas further interprets this request to seek information regarding wells that exceed the designated pressure limits outlined in Company



- Standard 224.119 for the period October 5, 2021 through November 5, 2021. At Aliso Canyon, total flow leaving the facility is measured; however, individual flow meters are not installed on individual wells. (SoCalGas provided a Microsoft Excel file attachment, Aliso Canyon Pressure Report 10.05.2021-11.05.2021; however, this information is included in the Ombudsman's response to the October 27, 2021 public inquiry – see [Section VII](#) of this report).
3. Please provide surface well-site monitoring information related to instrumented gas detection monitoring during the period October 5, 2021 through November 5, 2021. Note any wells that have gas detection occurrences above typical levels or above levels for further action and investigation, and what actions SoCalGas has taken or anticipates taking.
    - a. SoCalGas Response: SoCalGas interprets this request to seek information related to the LEL gas monitoring sensors installed at the wellhead. (SoCalGas provided a Microsoft Excel file attachment, 20211005-20211105 AC CARB LEL; however, this information is included in the Ombudsman's response to the October 27, 2021 public inquiry – see [Section VII](#) of this report). SoCalGas had no gas detection occurrences above the threshold of 10,000 ppm for 5 days or 50,000 ppm for 5 minutes during the period October 5, 2021 through November 5, 2021. Any exceedances during this period were investigated and determined to be caused by ambient humidity.
  4. Please provide any plugged well monitoring information such as pressures and fluids collected during the period October 5, 2021 through November 5, 2021. Note any wells that have occurrences that per Company standards will require follow up actions and what SoCalGas has done or is planning on doing.
    - a. SoCalGas Response: SoCalGas interprets this request to seek pressures for isolated and out of service wells for the period October 5, 2021 through November 5, 2021. (SoCalGas provided a Microsoft Excel file attachment, Aliso Canyon Pressure Report 10.05.2021-11.05.2021; however, this information is included in the Ombudsman's response to the October 27, 2021 public inquiry – see [Section VII](#) of this report). SoCalGas further interprets this request to seek information regarding any isolated and out of service wells which exceed the designated pressure limits outlined in Company Standard 224.119 for the period October 5, 2021 through November 5, 2021. SoCalGas does not collect well fluids for wells that are isolated and out of service.
  5. Please provide any findings from the well integrity logging or well workover activities since the September WSOC meeting that the Ombudsman has not yet been informed about. Please include any activities that occurred since September 13, 2021 to present that included blowdowns of wells and other releases of gas that might have been flared or flowed without flare.
    - a. SoCalGas Response: SoCalGas interprets this request to seek updates on the well integrity logging or well workover activities since the September 2021 WSOC meeting that the Safety Ombudsman attended. Since September 13, 2021, SoCalGas has performed 36 mechanical integrity tests and 38 casing integrity tests on 14 active wells at Aliso Canyon. (SoCalGas provided a Microsoft Excel file attachment, MIT Logs and Block Tests Since 09.13.2021; however, this information is included in the Ombudsman's response to the October 27, 2021 public inquiry – see [Section VII](#) of this report).



SoCalGas did not perform blowdowns or releases of gas from wells during the requested period.

6. Note any other occurrences in the gas storage or observation or plugged wells that were discovered during the October 5, 2021 to November 5, 2021 period that would be described by the Company as an Abnormal Operating Condition, an Incident as defined by PHMSA, or a Safety-Related Condition as defined by the Company and PHMSA, whether reportable or not reportable to PHMSA.
  - a. SoCalGas Response: As required by California Code of Regulations (CCR), Title 17, Division 3, Chapter 1, Subchapter 10 Climate Change, Article 4, SoCalGas does not have any occurrences to report for the requested period that falls under the Company's definition of Abnormal Operating Condition, PHMSA's definition of an Incident, or Safety-Related Condition as defined by the Company and PHMSA.

### **Data Request #12A**

In reviewing the SoCalGas responses received on December 1, 2021, additional questions were generated in Data Request 12A, made to SoCalGas on December 13, 2021. SoCalGas provided responses on January 26, 2022.

The Safety Ombudsman reviewed the information provided by SoCalGas in response to Data Request #12 and performed detailed review of well pressures (tubing, casing, annulus 1, and annulus 2 pressures) and wellhead and lateral methane monitoring readings covering the period October 5, 2021, to November 5, 2021, inclusive, and then requested additional responses related to the following questions forming Data Request #12A:

1. Response indicates "SoCalGas had no gas detection occurrences above the threshold of 10,000 ppm for 5 days or 50,000 ppm for 5 minutes" – which are regulatory thresholds. Does SoCalGas perform trend analysis and define any other action levels below the regulatory thresholds? Are findings below thresholds combined with other information such as annulus pressures, tubing/casing pressure, or other indications that together might suggest reason for further investigation?
  - a. The Ombudsman's review of the October 5-November 5, 2021 data indicates that the following locations had readings in excess of 50,000 ppm for 5 minutes:
    - i. SS29 lateral (58 occurrences)
    - ii. SS29 wellhead (4 occurrences)
    - iii. P26 lateral (1 occurrence)
    - iv. P26 wellhead (8 occurrences)
    - v. P37 wellhead (18 occurrences)
    - vi. SS4A lateral (4 occurrences)
    - vii. SS44B lateral (121 occurrences)
  - b. The Ombudsman did not find any occurrences of  $\geq 10,000$  ppm that persisted for 5 days or more.
  - c. The initial SoCalGas response stated that "...SoCalGas had no gas detection occurrences above the threshold of 10,000 ppm for 5 days or 50,000 ppm for 5 minutes during the period



- October 5, 2021, through November 5, 2021. Any exceedances during this period were investigated and determined to be caused by ambient humidity.”
- i. The Ombudsman does not have the information concerning the stated exceedance investigations. As noted in 1.a, there were many exceedances of the 50,000 ppm for 5 minutes criterion.
  - ii. Please provide a description of the process of investigating the occurrences where the 50,000 ppm/5 minutes criterion was exceeded.
  - iii. The initial response implies that ambient humidity is the cause of all such readings. It is difficult to understand without additional transparency how this explanation addresses readings/exceedances that only occur at a few wells. Please provide the investigations and the results thereof of each exceedance or set of exceedances (as when there are multiple/consecutive readings in excess of 50,000 ppm) for the five wells listed in 1.a above.
2. The Ombudsman reviewed the well tubing, casing, annulus 1, and annulus 2 pressure data and compared the information to the wellhead and lateral methane monitoring information.
- a. SS29 has low tubing pressure readings throughout the period and a general declining trend, coupled with high occurrences at both wellhead and lateral methane monitors plus many instances of exceeding the 50,000 ppm/5-minute criterion. Please explain the pressure and methane monitoring information for SS29 and why SoCalGas is or is not concerned about well integrity.
  - b. FF33 has low tubing pressure readings throughout the period, suggesting either a partial gas/partial liquid column in the wellbore or other reason for wellhead pressure much lower than typical field pressure at other wells. Please explain the low tubing pressure readings at FF33.
  - c. What is done to clean up or note the probable spurious pressure readings that sometimes occur such as the tubing pressure reading for well P25R on November 2, 2021?
3. Several wells have relatively persistent methane and some annulus pressure variability, causing me to question what else is known about well integrity or the source of the pressure and methane readings. The following wells have relatively high frequency of occurrences of non-zero methane along with casing or annulus readings that fluctuate:
- a. P32B
  - b. SS4A
- Please explain SoCalGas’ currently understood validation of well integrity for the above two wells.
4. The wells listed below have relatively persistent, relatively high methane readings; these wells are not included in the wells identified in questions 1, 2, or 3 above:
- a. P44
  - b. FF35C
  - c. FF35E
  - d. FF38B
  - e. P26A



- f. P26C
- g. P42A
- h. P69H
- i. P72B
- j. SS4O
- k. SS9

Please explain SoCalGas' currently understood validation of well integrity for the above eleven wells.

The SoCalGas responses to the above questions in DR#12A are included in the Ombudsman's response to the October 27, 2021 public inquiry – see [Section VII](#) of this report.

### **Data Request #13**

Data Request 13 was submitted to SoCalGas on July 7, 2022. This data request sought to verify the status of internal and external audits and safety recommendations. The questions were as follows:

1. With respect to the audit of the Casing and Tubing Inspection Field Procedure (GS-224.106):
  - a. Please provide a copy of the report and summary findings
  - b. Please provide an updated spreadsheet "WSOC Audit Material and Well List against GS 224.106", originally provided in July 2021, which lists the ten wells chosen for the audit in columns E through N and references to GS 224.106 requirements in columns A thru D.
2. While the Safety Ombudsman believes that the quarterly WSOC meetings likely covered recommendations for safety improvements made by the WSOC to SoCalGas, I am asking now to verify that understanding and to determine if any recommendations were made since the June 15, 2022 WSOC meeting.
3. Please verify that no other CPUC Safety and Enforcement Division (SED) audits or inspections have occurred at the Aliso Canyon facility since April 2021. However, if an audit/inspection by CPUC SED has occurred more recently than April 2021, please inform me of the status of their findings and furnish me a copy of preliminary and/or final letters.
4. Please provide copies of CalGEM/PHMSA 2020, 2021, and 2022 audit and inspection activities, including dates of audit or inspection, question sets covering procedures and documentation, post-inspection letters, SoCalGas responses to preliminary regulatory agency findings, and final/closure letters returned from the regulatory agency.
  - a. NOTES to Question #4:
    - i. Responses to DR#9 indicate that the October 20-23, 2020 CalGEM/PHMSA inspection final report had not been received as of July 2021, when the SO last asked about the 2020 audit.
    - ii. You do not need to resubmit materials that had been submitted in response to DR#9 (made in July 2021 by the SO).



SoCalGas provided a response to each question contained in this data request on July 29, 2022. The responses received were, in general, adequate to inform the Safety Ombudsman of the desired information.

SoCalGas' response to Data Request #13 can be accessed via these links:

- Response summary – [Click Here](#)
- Materials included in response to DR#13, Question 1 – [Click Here](#); [Click Here](#)

SoCalGas provided all audit-related materials as requested, but we are not linking to the information here as the audits covered all SoCalGas storage facilities encompassed by the SoCalGas Gas Standards, and other non-confidential information related to the audits can be accessed via agency websites. Essential information relative to the audits can be found in this report, [Section IV](#) below.

#### **IV. California Public Utility Commission (CPUC) and California Department of Conservation Geologic Energy Management Division (CalGEM) Audit Reports**

SoCalGas is subject to regulation by the CPUC. Among other things, the CPUC has safety jurisdiction over the operation of the Facility, and specifically the surface facilities/equipment. The 2021 Annual Report indicated that the Safety Enforcement Division (SED) of CPUC conducted a Comprehensive Operation and Maintenance Inspection of the Aliso Canyon Facility on April 5-9, 2021. The findings, SoCalGas responses, resolutions and closure declaration were covered in the 2021 Annual Report.

SoCalGas is also subject to regulation by CalGEM. Safety oversight of sub-surface underground natural gas storage facilities such as Aliso Canyon is vested with CalGEM. Thus, CalGEM's jurisdiction is limited to the gas storage wells and sub-surface facilities at the Aliso Canyon Facility. The regulations include construction, operation and maintenance, monitoring, and safety requirements for the storage wells and storage reservoir.

CalGEM's regulations for underground natural gas storage wells and reservoirs meets, and in many cases exceeds, federal safety regulations that were implemented by the Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) in January 2018. CalGEM entered into an agreement with PHMSA to act as its agent for safety inspections of the Facility, though PHMSA retained safety enforcement authority. PHMSA's authority includes reviewing CalGEM's findings/recommendations prior to issuance of their inspection report to SoCalGas.

The third annual CalGEM/PHMSA audit was conducted virtually during the week of October 11, 2021, and a site visit, including well sites and well work activities, was conducted in person at Aliso Canyon on October 6, 2021. Audit questions covered Reporting, Integrity Management, and Site Security. SoCalGas received a Notice of Amendment (NOA) from PHMSA in December of 2021; the NOA noted that SoCalGas needed to revise procedures to specify data elements collected to evaluate threats in SIMP.2. SoCalGas added a data table to SIMP.2 as the response and in February 2022 resubmitted to PHMSA, which accepted the updates. Additionally, there was a suggestion to improve the SoCalGas Gas Standard (GS) on testing and inspection of safety valves and wellhead valves.

SoCalGas submitted its RMP update to CalGEM on April 1, 2022, as required. SoCalGas demonstrated compliance with CalGEM requirements by referring to the various SIMP chapters in the RMP. The original SoCalGas RMP submittal was in April 2019, and while the Company did not receive a formal response in



writing from CalGEM, the Company has learned from the past several years of RMP/SIMP implementation, inputs from the Safety Ombudsman, and incorporated such lessons learned and recommendations into its 2022 RMP revisions. Additionally, SoCalGas maintains a standing monthly meeting with CalGEM and uses the meetings for a detailed look at quantitative risk analysis, communication of details of learnings and developments to CalGEM, and fostering question and answer sessions. Part of the process of continual improvement of the RMP is review of the procedures referred to in the SIMP chapters. Some documents require reviews every year, and others are reviewed every three (3) years.

## **V. Safety Ombudsman Review and Evaluation of Incidents Involving Methane Emissions Above Threshold Levels**

The Safety Ombudsman is charged with review and evaluation of all incidents reported to the public and State and local agencies pursuant to Section 4.1 of the Consent Decree. Section 4.1 addresses methane emissions detected by a fence line methane monitoring system installed at the Facility to detect and monitor methane emissions that may be associated with the leakage of stored natural gas from the Facility.

The monitoring system detects and records methane concentrations in real time. If methane concentrations exceed 25 parts per million (ppm) averaged over a 30-minute period SoCalGas is required to provide public notice on the Aliso Canyon Website, including a general explanation as to the cause of the detection and the responsive actions taken, if any. They are also required to notify the Government Plaintiffs of the detection(s), their responsive actions, and that they have posted the same information on the Aliso Canyon Website. Lastly, SoCalGas is required to submit quarterly reports to the Government Plaintiffs outlining each time during the quarter that the fence line monitoring system detects methane concentrations in excess of 10 ppm averaged over any 30-minute period. The same reporting obligations exist for this level of exceedance as noted above, i.e., identification of the cause of the detection and responsive action(s). Normal background methane level is approximately 2 parts-per-million (ppm).

During the period of July 2021 – June 2022 there were no known fence line monitoring methane concentration exceedance events.

## **VI. Review and Advise on the WSOC's Efforts, Findings, and Recommendations for Improvements**

The Safety Ombudsman duties include reviewing and advising the WSOC on their efforts, findings, and recommendations for improvements at the Aliso Canyon Facility. The specifics of this obligation are outlined in separate reports, Annual Report Number 3 – Work of the Aliso Canyon Well and Storage Operations Safety Committee, Section III, and Annual Report Number 3 – Recommendations for Improvements Related to Safety and Leak Prevention, Section II, and will not be repeated here.

The Safety Ombudsman made additional suggestions for improvement of the SoCalGas RMP and SIMP chapters after reviewing materials provided by the Company pursuant to Data Request #11. The Safety Ombudsman requested an update on SoCalGas review and response to the additional recommendations made by the Ombudsman in December 2021. The Ombudsman comments and SoCalGas response can be accessed at the following link: [Click Here](#)





## VII. Safety-related Concerns Reported by the Public

The Safety Ombudsman functions as a non-exclusive, confidential repository for safety-related concerns related to the Facility and which are reported by the public, including employees of SoCalGas. The Safety Ombudsman maintains strict confidentiality of anyone who submits a safety concern or complaint regarding the Facility. Anyone who submits a concern or complaint has the option of providing their contact information or remaining completely anonymous. For those who elect to provide contact information, their identity and contact information is known only to the Safety Ombudsman and is never revealed. Providing contact information affords the opportunity for the Safety Ombudsman to contact the individual who submitted the complaint and clarify the issue, as necessary. This, in turn, helps facilitate the review/investigation process and response to the issue.

During the period from July 2021 – June 2022 one (1) concern was submitted to the Safety Ombudsman. The concern was first reviewed to confirm whether the issue fell within the Safety Ombudsman's scope/purview. A response was posted on the Safety Ombudsman website at the conclusion of the investigation. The Safety Ombudsman reached out to the individual who raised the concern via email, alerting them that the issue would be investigated and then updated the individual on the progress of the investigation and its ultimate conclusion.

On the evening of October 27, 2021, the Safety Ombudsman received the following question via email: "I am not sure if this role is still active, but if it is, can you please tell us if there is a leaking gas well at the Aliso facility right now?"

The response to this concern is posted on the Safety Ombudsman website as February 25, 2022 Submission #5 and can be accessed via this link: [Click Here](#)

The response to the public inquiry includes many links to information in other Data Requests noted in this report.