



Annual Report Number 1
Work of the Safety Ombudsman
April 2019 – June 2020

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Overview

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 into 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 generally 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 CPUC and CalGEM (formerly DOGGR) 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 generally include the following:

- Participate in all WSOC meetings;
- Have access to all non-privileged materials, information, records and work product in SoCalGas’s 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 Paragraph 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;



- Maintain the confidentiality of the person or member of the public making any confidentially-made 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.

This report has been prepared in accordance with the requirements outlined in Section 4.3, (b), (ix), (1) of the Consent Decree, and summarizes the work of the Safety Ombudsman during the period of April 2019 – June 2020. It is the first such annual report.



I. WSOC Meeting Participation

During the period of April 2019 – June 2020, a total of five (5) WSOC meetings were held, four (4) of which were held in person at the Aliso Canyon Facility. A fifth meeting was held virtually in mid-June due to the coronavirus. They occurred on the following dates:

- April 10, 2019;
- July 23, 2019;
- October 8, 2019; and
- January 16, 2020
- June 15, 2020 (virtual meeting)

The Safety Ombudsman attended all four of the face-to-face meetings at the Facility and participated in the virtual meeting via video conference. The agenda for these quarterly meetings generally includes the following:

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; and
4. 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. 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 April 2019 – June 2020 discussion topics included, but were not limited to:

- The WSOC and its Charter;
- Status of the Comprehensive Safety Review of the Facility;
- Status of review of the Aliso Canyon Risk Management Plan (RMP) with CalGEM;
- Impacts to the Facility associated with the July 2019 Ridge Crest earthquake;
- Safety Ombudsman public meeting in July 2019;
- Emissions monitoring devices and equipment at the Facility;
- A mock emergency drill conducted at the Facility in September 2019;
- Impacts to the Facility associated with the Saddleridge fire in October 2019;
- CalGEM/PHMSA safety inspection in October 2019; and
- Status of Seismic Risk Events study.



Individual links to the minutes of the WSOC meetings are included immediately below (June 2020 meeting minutes are not yet available as of the date of issuance of this report). Names of individuals, other than the Safety Ombudsman's, have been redacted from the meeting minutes.

- April 2019 meeting minutes link: [Click Here](#)
- July 2019 meeting minutes link: [Click Here](#)
- October 2019 meeting minutes link: [Click Here](#)
- January 2020 meeting minutes link: [Click Here](#)

II. Safety Ombudsman Public Meeting – July 24, 2019

A public meeting was held by the Safety Ombudsman on July 24, 2019 at 7:30 pm at the Northridge Center, California State University, Northridge. The purpose of the meeting was to introduce the Safety Ombudsman, the role of the Safety Ombudsman, and the Safety Ombudsman website to members of the public, interested state, federal, and local officials, and local community groups. Advance notice of the meeting was provided via email to approximately three dozen groups/parties whose contact information was supplied by SoCalGas's Public Affairs Group. The individuals/groups who received the meeting notice were the same groups included in SoCalGas's public outreach initiative associated with the Aliso Canyon incident.

The meeting included a 30-minute presentation followed by a 60-minute question/answer period. An overview of the Safety Ombudsman website was provided, including a discussion on how to access the website and communicate with the Safety Ombudsman. The meeting was attended by approximately one dozen individuals, including a representative from the California Public Utilities Commission, the City Attorney's office, staff from Representative Katie Hill's office, and various private citizens.

During the presentation portion of the meeting the Safety Ombudsman provided an overview of his technical expertise, and roles and responsibilities as Safety Ombudsman. SoCalGas established a Well and Storage Operations Safety Committee (WSOC) associated with the Facility and the WSOC serves as the interface between the Safety Ombudsman and SoCalGas. The presentation also included information on how to utilize the Safety Ombudsman website. The purpose of the website is to serve as a non-exclusive repository for safety-related issues/complaints concerning the Facility as reported by the public. Safety issues/complaints may be submitted in an anonymous fashion, and the Safety Ombudsman will maintain the confidentiality of the identity of anyone who submits a concern or complaint about the Aliso Canyon Facility.

During the question/answer session, members of the public raised questions concerning the Facility, the role of the Safety Ombudsman, and the scope of the Safety Ombudsman's duties. The range of questions included, but was not limited to, who the public should reach out to concerning health issues, how the Safety Ombudsman interfaces with SoCalGas, and how answers to safety questions/concerns/complaints will be communicated back to the public. There were also questions concerning the initiative to reduce the utilization of the Facility or, ideally, completely shut it down. Members of the public in attendance were uniformly concerned with the safety of the Facility.

The Safety Ombudsman is obligated to generate three separate reports annually which document the work of the Safety Ombudsman, work of the WSOC, and recommendations, if any, for improvements related to



safety and prevention of leaks at the Facility. Members of the public will have an opportunity to review these reports and a public meeting will be scheduled to address public concerns/comments regarding the reports.

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's 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.

A total of six (6) data requests were submitted to SoCalGas during the period from March 2019 – June 2020. The scope of these data requests generally covered all facets of operations related to storage well integrity and maintenance and associated unintended leak prevention. The requests included, but were not limited to, operating data, integrity data, and SoCalGas's gas standards. The responses provided by SoCalGas aid in responding to safety issues/concerns raised by the public and serve to inform the Safety Ombudsman of potential safety issues warranting discussion with the WSOC.

Data Request Number 1 was submitted to SoCalGas on March 15, 2019. There were a total of twelve (12) specific requests contained in this data request, each of which was directed toward information covering a specific time period. The requested information included the following:

1. Fence line methane monitoring excursions above regulatory threshold levels and actions taken to investigate and resolve the issue since the date of commissioning of the monitoring system;
2. A copy of the Aliso Canyon Risk Management Plan submitted to CalGEM;
3. Wells which do not meet the requirements of CalGEM regulation 1726.5 as of April 1, 2019 (Well Construction Requirements);
4. Summary of results of annual noise and temperature monitoring log inspections since January 1, 2017 (CalGEM regulation 1726.3.d.1);
5. Summary of results of casing inspection logs since January 2017, including the number of Class I-IV joints and apparent corrosion rate (CalGEM regulation 1726.a.2);
6. Summary of the results of the most recent annual material balance analysis/study (CalGEM regulation 1726.7.b.1);
7. Listing of any unintentional surface or cellar gas releases since October 1, 2018 and investigations into cause(s) and remedial response (CalGEM regulation 1726.7.c);
8. Listing of any anomalous gas pressure readings since October 1, 2018 and investigations into causes, and corrective actions taken (CalGEM regulation 1726.7.d.2);
9. Summary of gas detection monitoring logs and the responsive action to any anomalous results since January 1, 2017 (CalGEM regulation 1726.7.e);
10. Listing of any surface or subsurface safety valves which failed semi-annual function testing since October 1, 2018 and remedial actions taken (CalGEM regulation 1726.8.a);



11. Summary of the results of the wellhead leak detection program since October 1, 2018, including actions taken to address any leaks which exceed the reportable thresholds (CalGEM regulation 1726.9.a.1); and
12. Summary of the results of any other programs related to well integrity monitoring and leak detection since October 1, 2018 mandated by CalGEM or any other regulatory agency with jurisdiction oversight.

SoCalGas provided a response to each of these requests. Given the extensive nature of the request list, it was agreed between the Safety Ombudsman and SoCalGas that SoCalGas's subject matter experts could provide a response to individual questions as they completed the response process. For the most part, their responses were adequate to inform the Safety Ombudsman of the desired information. For request number 5, SoCalGas did not provide the apparent corrosion rate data as requested. Also, they labeled as confidential their response to Question 6 but did provide the requested information; as such, their actual response to Question 6 has been redacted in the link below to Data Request Number 1. In a few instances a follow-up request for additional information was made because the requested information was not available at that time, or the response contained only part of the requested information. Several of the requests in this initial data request pertain to data or information that is collected on an on-going basis, or that is programmatic. Thus, the Safety Ombudsman anticipates similar requests will be made on an annual basis or some other reasonable representative basis.

SoCalGas's response to Data Request Number 1 may be accessed via these links:

- [Click Here](#)
- [Click Here](#)
- [Click Here](#)
- [Click Here](#)
- [Click Here](#)
- [Click Here](#)

Data Request Number 2 was submitted to SoCalGas on August 2, 2019. This data request consisted of ten (10) separate items, some of which contained several sub-requests. Three of the requests involved follow-up questions to the first data request because the information supplied did not fully address what had been requested. Questions 6, and 8 through 10 related to conclusions and/or recommendations contained in the Blade Energy Root Cause Analysis (RCA), and the remaining three questions involved other more general well integrity issues. The requested information included the following:

1. A map illustrating the location and status of each storage well which has either passed the requirements of the Comprehensive Safety Review, been plugged and abandoned, or where remediation and/or plug and abandonment activity is pending;
2. A summary of the risk ranking results of the wells and reservoir that was provided to CalGEM to meet the April 1, 2019 deadline (CalGEM regulation 1726.3.c). This was a follow-up request from Data Request Number 1, Question 2;
3. A summary of any noise/temperature log anomalies detected since January 1, 2017, the depth of the anomaly, and remedial steps taken to address the anomaly. This was a follow-up request from



Data Request Number 1, Question 4. SoCalGas initially supplied the actual log data but not an interpretation of that data;

4. A summary of the casing inspection results for all wells which have passed the safety review process and have been approved for return to injection service, including the number of joints in Class I-IV in each well and the apparent corrosion rate. SoCalGas initially supplied the actual log data but not an interpretation of that data;
5. Did the Aliso Canyon Facility observe any surface gas release events in the days and weeks following the July 4-5, 2019 Ridge Crest earthquake?
6. Whether SoCalGas has considered the potential need to map remnant accumulations of residual gas associated with the SS-25 leak which may remain trapped in relatively shallow sub-surface sediments. This request was related to information/discussions contained in the Blade Energy Root Cause Analysis (RCA).
7. Whether SoCalGas has recovered and retained casing from any of the wells which it plugged and abandoned for the purpose of inspecting the casing for evidence of corrosion and correlation of pit depth results with casing inspection logging tool results;
8. Whether the casing inspection logging results to date have revealed any corrosion trends. This request was related to information/discussions contained in the RCA.
9. Whether SoCalGas has developed a process for determining downhole corrosion rates and an associated data tracking and reporting system; whether any of the storage wells have cathodic protection (CP) applied to them and if so, how does SoCalGas determine the effectiveness of the applied CP; and, whether SoCalGas has a process for characterizing the inflow performance relationship (IPR) for each of the injection/withdrawal wells. This request was related to information/discussions contained in the RCA; and
10. Whether SoCalGas has or will review the merits of adopting relevant portions of ISO Technical Specification 16530-1, Petroleum and Natural Gas Industries – Well Integrity Life Cycle Governance as it relates to potential improvements in storage well integrity management systems.

SoCalGas provided a response to each question contained in this data request on October 19, 2019. The responses received for Questions 1, 3, and 5 were adequate to inform the Safety Ombudsman of the desired information. SoCalGas exerted a claim of privilege in responding to Question No. 2, and thus, did not provide the requested information. The corrosion rate information requested in Question Number 4 was not available at the time of the request; a subsequent follow-up request has been made for this information because it appears that CalGEM regulation 1726.6.a.2 requires a storage operator to determine the corrosion rate. For Questions 6 and 8 through 10, SoCalGas indicated they had not yet fully reviewed and evaluated the RCA as of the date of their response; they indicated they anticipate more fully addressing the issues raised in these questions after doing so. A follow-up request has since been made to SoCalGas seeking an update to their review/evaluation process.

SoCalGas's response to Data Request Number 2 may be accessed via these links:

- [Click Here](#)
- [Click Here](#)
- [Click Here](#)



- [Click Here](#)

Data Request Number 3 was submitted to SoCalGas on October 16, 2019. Data Request Number 3 consisted of two (2) questions. The first related to providing an overview of a mock emergency exercise conducted at the Aliso Canyon Facility on September 18, 2019, including a summary of the lessons learned and refinements, if any, which SoCalGas anticipates incorporating into its emergency response plans. Question No. 2 related to two instances in October 2019 when the fence line methane monitoring system detected what may have been elevated methane levels. The first occurred on October 11 and the second three days later. For this second question the following information was requested:

1. A copy of the part per million (ppm) methane concentration levels for all eight (8) monitoring stations during the period two hours prior to reaching threshold concentration levels of 25 ppm and extending through the period when readings returned to normal background levels of 2 ppm, including wind direction data;
2. A summary of actions taken in response to the exceedance events on October 11 and October 14;
3. A summary of SoCalGas's determination of what caused the methane sensors to detect levels above background; and
4. If the exceedance levels were caused by methane leakage, an explanation of how SoCalGas made that determination and confirmed it.

SoCalGas provided a response to each question contained in this data request on November 27, 2019. They exerted a claim of privilege in their response to Question No. 1, but did provide a partial response, nonetheless. An adequate response was received for Question No. 2 to inform the Safety Ombudsman of the desired information. As for the unanswered portion of Question No. 1, SoCalGas indicated they had not yet completed their evaluation of lessons learned and would provide that at a later date. A follow-up request has since been made seeking that information.

SoCalGas's response to Data Request Number 3 may be accessed via these links:

- [Click Here](#)
- [Click Here](#)
- [Click Here](#)

Data Request Number 4 was submitted to SoCalGas on January 23, 2020. This request consisted of two (2) questions as follows:

1. Please provide a complete copy of CalGEM's safety inspection report related to the safety inspection they performed at the Aliso Canyon Facility during their visit on October 29 – November 1, 2019; and
2. Please provide a listing and brief summary of any recommendations to SoCalGas developed by the WSOC for repairs, improvements, policies, and/or upgrades to the Aliso Canyon Facility or infrastructure therein since April 1, 2019.

The Safety Ombudsman confirmed via phone contact in mid-April 2020 that SoCalGas, as of that time, had not received any written feedback from CalGEM concerning the safety inspection performed in October 2019. SoCalGas did not provide any response to the second question in Data Request Number 4.



Data Request Number 5 was submitted to SoCalGas on May 29, 2020. This request consisted of eight (8) questions, six of which were originally included in Data Request Number 2, which was submitted to SoCalGas on August 2, 2019. Previously, SoCalGas provided only partial responses to these questions (see SoCalGas's response to Data Request Number 2 via this link: [Click Here](#)); they indicated at the time that some of the information was not available because analyses related to the issue(s) had not yet been completed. One of these questions related to SoCalGas's progress in estimating downhole corrosion rates from the corrosion logging data they have acquired since January 2017. The Safety Ombudsman had initially requested this information in March 2019. The last two questions were the same questions posed in Data Request Number 4, for which a written response had not been received. The requested information included the following:

1. I had also requested that SoCalGas provide its estimate of the apparent corrosion rate based on the worst defect in each well - please see attached request with highlighted text. Is there some reason this information was not included in the response you provided?
2. On page 136 of the Blade Energy Root Cause Analysis report there is discussion concerning two potential channels for the leaked gas to flow away from the SS-25 well during the blowout; a shallow zone at approximately 169 feet below surface and a deeper zone at 741 feet below surface. The report suggests that gas in the shallow interval may have fully dissipated at the surface due to abundant near-vertical fractures, while at depths below 200-300 feet the gas would have flowed more laterally than vertically. The report leaves open the question of whether there remains any residual gas trapped within relatively shallow sediments (last bullet on page 159). Has SoCalGas considered the potential need to map remnant accumulations of residual gas associated with the SS-25 leak which may remain trapped in relatively shallow subsurface sediments?
3. Of the approximately 47-48 wells which were plugged and abandoned, was production casing recovered from any of them? If so, are there any plans to visually/physically inspect the recovered casing for evidence of microbially-influenced corrosion (MIC)? Are there any plans to correlate actual corrosion pit depth and/or geometry with either the Vertilog results or ultra-sonic inspection tool (USIT) results?
4. On page 205 of the Blade Energy Root Cause Analysis report the authors mention they reviewed casing inspection log results from 76 of 116 wells that had production casing inspection logs available. They further indicate that 27 of the 76 wells exhibited indications of shallow external corrosion, and that in all but two cases the corrosion was below the surface casing shoe. They further concluded that shallow corrosion was prevalent field wide and close to the surface casing shoe. Are other corrosion trends evident from the results of the casing inspection logs? If so, please provide a discussion which summarizes the trend(s).
5. Starting on page 231 of the Blade Energy Root Cause Analysis report the authors discuss 12 mitigation solutions which address the root causes associated with the uncontrolled release of gas from the SS-25 well. The authors state the 12 solutions would have mitigated or prevented the incident. Several of the solutions have since been addressed in the form of the new DOGGR storage well regulations, while it is unknown whether others have been, or are in the process of being addressed. These include the following:
 - a. Has a process been developed and implemented for determining downhole corrosion rates for the Aliso Canyon wells? If so, please explain the process.



- b. Has a data tracking and reporting system related to casing inspection logging results been developed and implemented? If so, please explain the system and how it will be used to select wells for follow-up (repeat downhole integrity) inspections.
 - c. Do any of the Aliso Canyon wells have cathodic protection (CP) applied to them? If so, which wells and how is the effectiveness of CP determined? If not, are there any plans to install CP or evaluate the potential benefits associated with it?
 - d. Is there an existing process for characterizing the inflow performance relationship (IPR) curve for each injection/withdrawal well? If so, please explain the process. If not, are there plans to implement a process?
6. On pages 237-238 of the Blade Energy Root Cause Analysis report the authors address root causes, one of which relates to organizational structures and job function roles. The authors state they were unable to ascertain whether organizational elements could have been a factor in the incident because of a lack of data and evidence. They point to ISO Technical Specification 16530-1, Petroleum and Natural Gas Industries – Well Integrity Life Cycle Governance as a reference guide for roles, responsibilities, and competencies for well integrity functions. Has or will SoCalGas review and evaluate the merits of adopting relevant portions of this specification as it relates to potential improvements in its storage well integrity management systems?
 7. Please provide me with a complete copy of CalGEM's safety audit report of the Aliso Canyon Facility as a result of their inspection and site visit on October 29 - November 1, 2019. I understand that as January 16, 2020 they may not have completed their internal review and had not provided SoCalGas with their findings/report. That said, once SoCalGas receives a copy I would appreciate it if you would forward a copy to me.
 8. Please provide me with a listing and summary of any recommendations to SoCalGas developed by the WSOC for repairs, improvements, policies, and/or upgrades to the Aliso Canyon Facility or infrastructure therein since April 1, 2019.

SoCalGas provided a response to each question contained in this data request on June 29, 2020. Their response to the first question included results from only 24 of the 66 active wells. A follow-up request has been made for data on the remaining wells. SoCalGas provided an adequate response to the remaining questions.

SoCalGas's response to Data Request Number 5 may be accessed via these links:

- [Click Here](#)
- [Click Here](#)
- [Click Here](#)
- [Click Here](#)

Data Request Number 6 was submitted to SoCalGas on June 15, 2020. This request consisted of six (6) questions. The requested information included the following:

1. During the July 23, 2019 WSOC meeting we discussed the Risk Management Plan (RMP) which SoCalGas submitted to CalGEM as required by CalGEM's Underground Gas Storage Regulations.



As of that date, you have had two meetings with CalGEM staff to review/assist them in understanding the RMP.

- a. Has SoCalGas received any feedback from CalGEM staff concerning the RMP?
 - i. If so, would you please provide a copy of CalGEM's feedback?
 - b. When does SoCalGas plan to issue the next update of the RMP?
2. SoCalGas has a Pressure Monitoring Standard which sets forth responsive actions to be taken in the event of anomalous pressure readings on any of the storage wells at Aliso Canyon. Have there been any exceedances of annular pressure above the threshold limits established for the Aliso Canyon injection/withdrawal and observation/monitor wells since May 1, 2019?
 3. At the October 2019 WSOC meeting an overview was provided concerning the newly installed continuous ambient methane monitors at each well (a new California Air Resources Board (CARB) regulatory requirement). Have there been any exceedances of the CARB threshold limit since commissioning these new monitors (>50,000 ppm instantaneous total hydrocarbon emissions, >10,000 ppm for 5 days, or any leak that poses a significant hazard to public safety, property, or the environment)?
 4. Are FLIR camera surveys still being performed daily? If not, when was that activity terminated?
 5. As a follow-up item from Data Request Number 3 concerning the mock emergency exercise (tabletop drill) SoCalGas conducted at the Aliso Canyon facility on September 18, 2019, I had requested a copy of the Lessons Learned. In SoCalGas's response they indicated that the review process of the drill had not been completed as of November 27, 2019 and that a copy of any Lessons Learned would be provided if/when they become available. Has the review process been completed, and if so, would it be possible to obtain a copy of the Lessons Learned?
 6. Does SoCalGas have a group or department that performs audits on departmental compliance associated with company standards? If so, I recommend the WSOC engage that group to undertake a compliance audit of one or two of SoCalGas standards related to underground gas storage. Two of the standards which may be worth addressing include the Casing Inspection Standard and the Pressure Monitoring Standard. It appears that such audit activity is consistent with what is contemplated in Section 4.2.b.v of the Consent Decree.

SoCalGas provided a response to each question contained in this data requests on June 30, 2020. Their responses adequately address the questions that were posed.

SoCalGas's response to Data Request Number 6 may be accessed via these links:

- [Click Here](#)
- [Click Here](#)

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

SoCalGas is subject to regulation by the California Public Utilities Commission (CPUC). Among other things, the CPUC has safety jurisdiction over the operation of the Facility, and specifically the surface facilities/equipment. The Safety Enforcement Division of CPUC periodically conducts safety



inspections/audits of the Facility. According to officials at CPUC, the most recent standard safety inspection/audit was conducted on November 27, 2017, and the next standard safety inspection will not be scheduled until 2021. Thus, no CPUC safety inspection/audit was available for review by the Safety Ombudsman during the period of March 2019 – June 2020. A review of the CPUC's inspection/audit activity will be performed by the Safety Ombudsman after their next inspection.

SoCalGas is also subject to regulation by CalGEM. CalGEM's jurisdiction is largely limited to the gas storage wells and sub-surface facilities at the Aliso Canyon Facility. Safety oversight of sub-surface underground natural gas storage facilities such as Aliso Canyon is vested with CalGEM. 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.

CalGEM, acting as an agent for the federal PHMSA Office of Pipeline Safety (OPS), coordinated and conducted a general safety inspection of the Facility during the period from October 29 – November 1, 2019. An inspector from the CPUC also participated in the inspection. The scope of their inspection focused largely on facility records; however, a site inspection was conducted on October 31. CalGEM supplied SoCalGas with a list of 71 questions in advance of their visit to facilitate the process; those questions formed the basis of the inspection event. A copy of the list of questions and the inspection results report may be accessed via this link: [Click Here](#). The findings of the inspection report identify four (4) items of concern related to the Facility, indicating that SoCalGas's records did not:

- demonstrate that site specific characteristics of the reservoir and wells were all accounted for as required by API 1171, Section 9.2.1;
- show that plugged and abandoned third-party wells were included in their risk assessment as required by API 1171, Section 8.3.2;
- contain evidence of a request to third-party operators for well integrity data, as required by API 1171, Section 9.3.1; or
- demonstrate that SoCalGas evaluated each occurrence of annular gas that exceeded operator-defined threshold levels in accordance with API 1171, Section 9.3.2.

A warning letter from PHMSA dated May 28, 2020 outlining the above deficiencies was issued to SoCalGas. PHMSA concluded the letter by indicating they determined that no enforcement action or penalty assessment would be levied at this time, though they did advise SoCalGas to correct the items listed above. Further, that failure to do so will result in SoCalGas being subject to additional enforcement action. A copy of the letter from PHMSA may be accessed via this link: [Click Here](#).

During the June 15, 2020 WSOC meeting, the WSOC recommended that SoCalGas review and address the PHMSA audit letter dated May 28, 2020 prior to the next scheduled PHMSA Audit of the Facility.



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 Paragraph 4.1 of the Consent Decree. Paragraph 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 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).

During the period of April 2019 – June 2020 there were two (2) events/incidents when the fence line methane monitoring system detected methane concentrations in excess of 25 ppm. The first occurred on October 11, 2019, and the second on October 14, 2019.

On October 11, 2019 at approximately 2:15 a.m., the methane detector in Area 7 detected methane levels slightly above 60 ppm and which averaged above the 25-ppm threshold for over 30 minutes. Normal background level is approximately 2 ppm. The methane detector in Area 5 also detected levels which averaged above the 25-ppm threshold for over 30 minutes starting at approximately 4:30 a.m. on the same date. The detectors in Areas 4, 6, and 8 also recorded methane levels above background starting at approximately 1:05 a.m. and extending through approximately 6:40 a.m., although ppm readings were well below the threshold reporting level. During this entire period wind direction was somewhat variable but generally from the north-northeast.

The Safety Ombudsman noted this detection event and requested information concerning it from SoCalGas, as required by the Consent Decree. The requested information for the event included:

- ppm readings for all 8 of the fence line methane monitors for the period extending 2 hours prior to methane levels climbing above background level through the period when methane levels returned to normal background level;
- a summary of actions taken by SoCalGas in response to the elevated concentrations;
- a summary of the causative factors; and
- if the exceedance was not caused by methane leakage, how SoCalGas made that determination and confirmed it.

The actual data request and SoCalGas's response is contained in Question No. 2 of Data Request Number 3, dated October 16, 2019. The ppm methane concentration readings of all 8 methane sensors associated with the October 11, 2019 event may be accessed via this link: [Click Here](#).



Based upon the information SoCalGas supplied to the Safety Ombudsman in response to the above mentioned data request, it is clear that the timing of this detection event coincided with the Saddleridge fire that occurred in the area on that date and was widely reported on regional and national television stations. The fire originated to the east of the Facility and ultimately spread through it. Due to the nature and severity of the fire the Aliso Canyon Facility was evacuated. Once the evacuation was lifted, crews assessed the Facility and confirmed there was no actual leakage of methane; the elevated readings were determined to be attributable to heat and smoke from the fire as it passed through the Facility.

SoCalGas experienced some minor damage to its fiber optic systems, resulting in the temporary loss of communications to the Facility wells. There was also a work trailer that was damaged by the fire, and some minor paint blistering to some of the surface piping. SoCalGas reported that the requisite notifications were made to the Government Plaintiffs, including their responsive actions, as required by the Consent Decree. SoCalGas also indicated they posted the requisite public notice on the Aliso Canyon website.

On October 14, 2019, elevated methane readings were again recorded on the fence line methane monitoring system, although they did not reach the threshold reporting level. SoCalGas nonetheless provided a courtesy notice on the Aliso Canyon website. The Safety Ombudsman noted this detection event at the same time as the October 11th event and requested the same information for this event as for the event three days earlier. The ppm methane concentration readings of all 8 methane sensors associated with the October 14, 2019 event may be accessed via this link: [Click Here](#).

The methane detection event on October 14 occurred between 3 – 3:30 pm at the Area 3 detector. The elevated methane readings were attributable to routine maintenance work and not caused by a natural gas leak. SoCalGas performs weekly inspections of the fence line methane monitoring stations/equipment. The process includes a calibration check, where a filter is placed on the methane sensor to detect a simulated elevated methane concentration reading. In this instance, the filter was not removed before maintenance mode was turned off, thereby triggering an elevated reading. The filter was removed immediately after the elevated readings were detected. No further action was necessary as there was no actual leakage of methane.

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 a separate report, Annual Report Number 1 – Work of the Aliso Canyon Well and Storage Operations Safety Committee, Section III and Annual Report Number 1 – Recommendations for Improvements Related to Safety and Leak Prevention, Section II, and will not be repeated 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 fully respond to the issue.

During the period from April 2019 – June 2020 three (3) concerns were submitted to the Safety Ombudsman. Each concern was reviewed to confirm whether the issue fell within the Safety Ombudsman's scope/purview. In all three instances a response was posted on the Safety Ombudsman website. The Safety Ombudsman also sent an email to the individual who raised the concern/complaint alerting them that the issue had been investigated and, where appropriate (i.e., within the scope of the Safety Ombudsman's duties), a response posted on the Safety Ombudsman website.

The first concern/complaint submitted to the Safety Ombudsman website related directly to the safety of the wells/Facility. The concern/complaint consisted of four separate and distinct issues as noted below. An investigation was conducted into each issue and a detailed response to each issue was posted on the Safety Ombudsman website. The concern/complaint was as follows:

- Issue 1: "The concern that Kew, in 1929, characterized the geologic region as riddled with faults that make gas escaping from the storage field a certainty" (the individual who submitted the concern included a copy of a technical paper published by William Kew in 1929, which characterized the regional geology and seismic activity of the Simi Valley and Santa Susana Mountains, including the site of the Facility);
- Issue 2: "The oils that were previously native to the storage reservoir contain toxic materials including benzene and other petroleum products that when mixed with natural gas pose a hazard in the event they escape from the storage formation";
- Issue 3: "Placement of gas monitors has not been shown to coincide with known faults"; and
- Issue 4: "Gas analysis has not been done periodically to show the gases do not contain hazardous materials".

The response to this concern is posted on the Safety Ombudsman website and may be accessed via this link: [Click Here](#)

The second issue/concern related to work being performed by SoCalGas on its gas distribution system near the Facility. This issue was clearly outside the scope of the Safety Ombudsman's role and an appropriate response was provided to the individual who made the inquiry via the Safety Ombudsman website.

The second issue/concern submitted by the public to the Safety Ombudsman was as follows:

"I am not sure if your role is limited to inside the fence at Aliso. If it is, then please just let me know. If not, residents have asked me about the public notice they found on a local website, which is a published SoCalGas press release about pipe inspection work to be done on a street in Granada Hills (the link to the website is no longer active, otherwise it would be included here). People are asking why this is being done now in a residential street when school is in session and not during the summer break. If this is necessary, then is it really just an inspection as the press release says? How can one get the proper information? You can understand that neither the community nor I trust an answer from SoCalGas's customer-service people, so I am asking others who may know".

The response to this concern is posted on the Safety Ombudsman website and may be accessed via this link: [Click Here](#)



The third issue/concern submitted to the Safety Ombudsman related to what may be described as a noise issue. While this type of event may arguably fall outside the scope of the Ombudsman's role, an inquiry was nonetheless made with SoCalGas to address the concern and a response was posted on the Safety Ombudsman website. This was done to err on the side of a broad view of safety-related events associated with well integrity and maintenance and associated unintended leak prevention.

The third concern submitted by the public was as follows:

“Residents living near the Aliso Canyon Facility reported rumbling sounds coming from the Facility during several evenings the first week of May. Can the Safety Ombudsman please investigate and identify the cause”?

The response to this concern is posted on the Safety Ombudsman website and may be accessed via this link: [Click Here](#)