

## Background

Canyon Storage Facility, located in Los Angeles County. The Division, which investigated and oversaw efforts to stop the leak, ordered Southern California Gas Company (SoCalGas) to cease injection into the Aliso Canyon Storage Facility and to immediately begin work on a relief well. The Division, in close coordination with a panel of technical experts from Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, and Sandia National Laboratory (National Laboratories), reviewed data provided by SoCalGas to ensure work was done in a manner that was both safe and effective.

On January 6, 2016, Governor Edmund G. Brown Jr. issued a proclamation of a state of emergency relating to the gas storage leak at the Aliso Canyon Storage Facility. The proclamation required the Division to continue to prohibit SoCalGas from injecting gas into the Aliso Canyon Storage Facility until a comprehensive safety review, utilizing independent experts, of the gas storage wells at the Aliso Canyon Storage Facility and of the surrounding community is completed. On March 4, 2016, the Division ordered SoCalGas to undertake a Safety Review Testing Regime at the Aliso Canyon Storage Facility. The Safety Review Testing Regime entails a comprehensive suite of well tests developed in consultation with the National Laboratories in order to verify the mechanical integrity of each well at the Aliso Canyon Storage Facility. On May 10, 2016, SB 380 was enacted, requiring that a comprehensive safety review of the gas storage wells be completed at the Aliso Canyon Storage Facility before the Division considers lifting the prohibition on injection. In accordance with SB 380, each of the 114 wells within the Aliso Canyon Storage Facility must fulfill safety requirements in one of three ways for the comprehensive safety review to be complete:

- a) The gas storage well must have completed testing and remediation under the testing program developed by the Division in consultation with independent experts and in accordance with the specifications of SB 380;
- b) The gas storage well must have completed the first battery of testing under the testing program and have been temporarily abandoned and isolated from the reservoir to the Division's satisfaction and in accordance with the specifications of SB 380; or
- c) The gas storage well must have been fully plugged and abandoned to the Division's satisfaction and in accordance with statutory requirements.

The Safety Review Testing Regime requires that every active gas storage well in the Aliso Canyon Storage Facility successfully complete two batteries of tests:

- **Battery One** – The first battery of testing includes a temperature log and a noise log. These tests are conducted to detect any temperature anomalies or noise signatures that would indicate gas escaping or fluid movement near the wellbore. After these tests are completed on the well, and any remediation of the well is completed, the operator will either conduct the additional tests required in Battery Two or remove the well from operation and isolate it from the underground gas reservoir.
- **Battery Two** – The second battery of tests includes a casing inspection using electromagnetic and ultra-sonic technologies, and a multi-arm caliper inspection; a cement bond log; and a positive pressure test. The casing inspection will examine the condition of the casing and the cement bond log will examine the contact between the external casing of the well and the geologic formation to ensure a seal that prevents fluids and gases from migrating. After ensuring the condition of the casing and cement, each well is required to undergo a pressure test, which determines the well's ability to withstand normal operating pressures. This test is a multi-part process during which the interior casing is isolated and pressure-tested, and then the annular space between the tubing and casing is pressure-tested to ensure that there is an adequate seal between the tubing and casing, which confirms the integrity of the packers.

Before resumption of injection can be authorized, wells that have not successfully completed all required testing must either be fully plugged and abandoned or be temporarily plugged and isolated from the gas storage reservoir. Wells that are temporarily isolated must either complete all required testing or be fully plugged and abandoned within one year.

SB 380 requires that the Division hold a public meeting to provide an opportunity for comment about the findings of the Safety Review Testing Regime prior to authorizing resumption of injection.

SB 380 also requires that the Division establish maximum and minimum pressure limits for the Aliso Canyon Storage Facility and that the public be given an opportunity to provide comment on the proposed limits. Prior to a Division determination, SoCalGas must provide the Division with its proposed maximum reservoir pressure and include data and calculations supporting the basis for the pressure limit. SoCalGas' pressure limit proposal must account for the pressure required to inject intended gas volumes at all proposed inventory levels and cannot exceed the design pressure limits of the reservoir, wells, wellheads, piping, or associated facilities with an appropriate margin for safety. The proposed maximum reservoir pressure is subject to review and approval by the Division, and the Division must consult with independent experts regarding the appropriate maximum and minimum reservoir pressure at the Aliso Canyon Storage Facility. Resumption of injection cannot be authorized until the Division has approved maximum and minimum pressure limits for the Aliso Canyon Storage Facility, following an opportunity for public comment.

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### **Summary of Well Safety Review Findings**

As of the date of this public notice, based on the Division's review and evaluation of the test results and other data concerning the 114 wells associated with the Aliso Canyon Storage Facility, the Division finds that the results of the Safety Review Testing Regime are as follows:

- 34 wells have passed the first and second batteries of the Safety Review Testing Regime, demonstrating that the mechanical integrity of the well has been ensured. Accordingly, these wells may be used for injection if and when the Division authorizes injection operations to resume at the Aliso Canyon Storage Facility. These findings of safety are as of this point in time, and the Division underscores that ongoing monitoring and testing are necessary to ensure the continued integrity of these wells.
- 79 wells have passed the first battery testing of the Safety Review Testing Regime and have been temporarily plugged and isolated from the underground gas storage reservoir (taken out of service). Monitoring and testing of the wells will continue as required by Order 1109 and any applicable law. Any of these wells that do not pass the second battery of tests within one year of being isolated from the reservoir must be plugged and abandoned in accordance with Public Resources Code section 3208.
- No well has been properly plugged and abandoned in accordance with Public Resources Code section 3208 and based on the Division's review. Any well plugged and abandoned may not be returned to service without complying with all applicable laws, including the requirement to file a notice of intent and the Division's regulations specific to injection operations.

The Aliso Canyon Storage Facility comprehensive gas storage well safety review and related documents and information are available on the Division's website at

<http://www.conservation.ca.gov/dog/AlisoCanyon/Pages/Well-Detail.aspx>.

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### **Proposed Minimum and Maximum Pressure Limits**

SoCalGas has submitted to the Division a pressure limit proposal for the Aliso Canyon Storage Facility that includes data and calculations in support of the proposal. The Division has reviewed the proposal and has consulted with subject matter experts at the National Laboratories and the University of Texas

regarding the allowable minimum and maximum reservoir pressure. Based on this review and analysis, the Division's determination is that the minimum reservoir pressure in the Aliso Canyon Storage Facility should be 1,080 pounds per square inch absolute (psia) and the maximum bottom-hole reservoir pressure at the dedicated pressure observation well, Porter 69, should be 2,926 psia.

The proposed minimum and maximum pressure for the Aliso Canyon Storage Facility and supporting documents and information are available on the Division's website at <http://www.conservation.ca.gov/dog/Pages/AlisoCanyon.aspx>.

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### **Range of Working Gas Necessary to Ensure Safety and Reliability**

The CPUC will summarize its analysis of the range of working gas necessary to ensure safety and reliability in the region and just and reasonable rates in California, as required by SB 380, including:

- The amount of natural gas production at the Aliso Canyon Storage Facility needed to meet safety and reliability requirements;
- The number of wells and associated injection and production capacity required; and
- The availability of sufficient natural gas production using gas storage wells that have satisfactorily completed all required testing and remediation.

The report containing this analysis will be made available in advance of the meeting on the CPUC's website at the URL <http://www.cpuc.ca.gov/aliso/>.

The CPUC will also provide additional information about how to participate in a future CPUC proceeding to determine the feasibility of minimizing or eliminating the use of the Aliso Canyon Storage Facility.

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### **Submission of Written Comments**

Any person, or his or her authorized representative, may submit written comments, statements, or arguments relevant to the safety review findings and on the proposed pressure limit to the Department of Conservation. **The written comment period closes at 5:00 p.m. on Monday, February 6, 2017.** The Division will not consider any comments received after that time. Comments may be submitted by email to [Alisocomments@conservation.ca.gov](mailto:Alisocomments@conservation.ca.gov) or by facsimile (FAX) to (916) 324-0948. Please indicate the subject line: "**Aliso Canyon Comprehensive Safety Review.**"

Comments can also be submitted by mail and addressed to:

ATTN: **Aliso Canyon Comprehensive Safety Review**

Department of Conservation

801 K Street, MS 24-02

Sacramento, CA 95814

Couriers delivering hard copies of comment letters must check in at the 24th floor reception desk, please contact Mr. Tim Shular, Office of Governmental and Environmental Relations, at (916) 322-3080.

In addition, any person, or his or her authorized representative, may submit written comments, statements, or arguments relevant to the CPUC's analysis of the range of working gas needed to ensure safety and reliability. Comment on the report can be sent via mail to the CPUC's Public Advisor's Office, which is located at: CPUC Public Advisor, 505 Van Ness Avenue, San Francisco, CA 94102, or via email to [public.advisor@cpuc.ca.gov](mailto:public.advisor@cpuc.ca.gov). These comments should include "**Aliso Canyon Working Gas Inventory, Production Capacity, Injection Capacity, and Well Availability For Reliability - Updated Report - Section 715 of the Public Utilities Code**" in the subject line of any written or emailed correspondence.

**Comments are due by close of business on February 6, 2017.** Public comments received will help further inform the CPUC about reliability issues related to Aliso Canyon Storage Facility.

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**Accessibility**

Services, such as language translation, may be provided upon request. To ensure availability of these services, please make your request no later than ten working days prior to the hearing by calling the staff person referenced in this notice.

Servicios, como traducción de inglés a otros idiomas, pueden hacerse disponibles si usted los pide con tiempo. Para asegurar la disponibilidad de éstos servicios, por favor haga su petición al mínimo de diez días laborables antes de la reunión y llama a la persona del personal mencionada en este aviso.

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**Future Notices**

The Division will hold the public meetings at the time and place noted above. Any change in the date, time, and place of the public meetings or comment periods will be noticed on the Division's website at <http://www.conservation.ca.gov/dog> and the CPUC's website at <http://www.cpuc.ca.gov/aliso/>.

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**Contact Information**

If you have any questions regarding the process of the proposed action, please contact Mr. Tim Shular, Office of Governmental and Environmental Relations, at (916) 322-3080, or by email at [Alisocomments@conservation.ca.gov](mailto:Alisocomments@conservation.ca.gov).