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7 **STATE OF CALIFORNIA**
8 **NATURAL RESOURCES AGENCY**
9 **DEPARTMENT OF CONSERVATION**
10 **DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES**

11 **ORDER TO:**
12 **TEST AND TAKE TEMPORARY ACTIONS**
13 **UPON RESUMING INJECTION:**
14 **ALISO CANYON GAS STORAGE FACILITY**

15 [Pub. Resources Code, §§ 3106, 3217, and 3224]

16 [Cal. Code Regs., tit. 14, §§ 1724.9, and 1724.10, subd. (h)]

17 **Order No. 1118**

18 **July 19, 2017**

19 **Operator: Southern California Gas Company (S4700)**

20 **Aliso Canyon Field**

21 **Los Angeles County**

22 **BY**

23 **Kenneth A. Harris Jr.**

24 **STATE OIL AND GAS SUPERVISOR**

1 I. Introduction

2 The State Oil and Gas Supervisor (Supervisor), acting under the authority of the Public
3 Resources Code (PRC), including PRC sections 3106, 3224, and 3357, can order tests or
4 remedial work concerning oilfield operations which, “in his judgment are necessary to prevent
5 damage to life, health, property, and natural resources . . . , to the best interests of the
6 neighboring property owners and the public” (quote from Pub. Resources Code, § 3224) and, as
7 part of an investigation, can request technical or monitoring reports (Pub. Resources Code, §
8 3357, subd. (b)(1)). The Supervisor exercised this authority through previous enforcement
9 orders (No.’s 1104, 1106, and 1109) to address an emergency at the Aliso Canyon Gas Storage
10 Facility (Facility) due to uncontrolled flow of fluids from well Standard Sesnon 25 (API no.
11 037-00776). The Supervisor’s requirements in these previous orders included a comprehensive
12 review to demonstrate the integrity and safety of all the other wells in the Facility, and any
13 necessary remedial work to render the wells safe. Because of the emergency, and while the
14 review and remedial work was performed, the Supervisor required a suspension on injection at
15 the Facility.

16 After the Supervisor’s orders above, and also specific to the Facility, PRC section 3217
17 (as added through Senate Bill 380 in May 2016) mandates certain environmental protections
18 which include specific production processes, pressure monitoring, leak inspection, and other
19 requirements the Supervisor may specify. (Pub. Resources Code, § 3217, subds. (g) and (h).) In
20 addition, since 2016, the Supervisor has specific authority to request additional information, and
21 oversee additional testing, monitoring, and leak detection requirements such that the Division of
22 Oil, Gas, and Geothermal Resources (Division) can continuously evaluate underground injection
23 projects. (See, e.g., Cal. Code Regs., tit. 14, § 1724.9.) Regardless, the operator of an injection
24 project must always maintain data to show, among other things, that no damage to life, health,
25 property, or natural resources is occurring by reason of the project. (Cal. Code Regs., tit. 14, §
26 1724.10, subd. (h)).

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At all times relevant to this Order, **Southern California Gas Company**¹ (SoCalGas or Operator) is the “Operator,” as defined in PRC section 3009, of certain “wells,” as defined in PRC section 3008, subdivision (a), and is conducting “operations” as defined in California Code of Regulations, title 14, (Regulations) section 1720, subdivision (f), at a gas storage project (see Cal. Code Regs., tit. 14, § 1724.9) in the Aliso Canyon Field in Los Angeles County.

The Supervisor hereby lifts the prohibition on injection at the Facility, subject to the requirements of this order. Operator has demonstrated the integrity and safety of the wells at the Facility thus allowing the Supervisor to lift the prohibition on injection, which he does so, herein, and in accordance with Senate Bill 380. And, to further demonstrate the integrity and safety of the wells after injection resumes, in addition to new regulations that may be forthcoming, the Supervisor determined that there is a need for Operator to perform tests and take temporary actions. The Division and the California Public Utilities Commission (CPUC) initially identified these temporary post-emergency requirements in their October 21, 2016 joint letter to Operator. **Therefore, according to PRC sections 3013, 3106, 3217, 3224, and 3357, and Regulations sections 1724.9, and 1724.10, subdivision (h), the Supervisor is ordering Operator to perform tests and take temporary actions identified below (Section III; Operator’s Requirements).**

II. Definitions

The following definitions apply to the terms used in this Order:

PRC section 3008, subdivision (a), defines “Well” to mean, among other things, “any well drilled for the purpose of injecting fluids or gas for stimulating oil or gas recovery[.]”

PRC section 3009 defines “Operator” to mean “a person who, by virtue of ownership, or under the authority of a lease or any other agreement, has the right to drill, operate, maintain, or control a well or production facility.”

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¹ The Operator Code the Division uses for Southern California Gas Company is S4700.

1 **Regulations section 1720, subdivision (f), defines “Operations” to mean “any one or all**
2 **of the activities of an operator covered by Division 3 of the Public Resources Code [i.e., the oil**
3 **and gas law, commencing with PRC section 3000].”**

4 **III. Operator’s Requirements**

5 Based on the facts, and in accord with the legal authorities described in this Order, the
6 Supervisor has determined that Operator needs to perform certain tests and take temporary
7 actions immediately before and soon after resuming injection. **Therefore, pursuant to PRC**
8 **sections 3013, 3106, 3217, 3224, and 3357, and Regulations sections 1724.9, and 1724.10,**
9 **subdivision (h), the Supervisor HEREBY ORDERS Operator to:**

10 **Immediately before injection resumes:**

- 11 • **At least once during the two-week period prior to resuming injection, conduct a**
12 **flight with an appropriately equipped aircraft downwind of the Facility to measure**
13 **total site methane emissions.**
- 14 • **At least once during the two-week period prior to resuming injection, complete a**
15 **leak survey for the entire facility with all results reported to the CPUC and the**
16 **Division within three days of completion and prior to resuming operations.**

17 **After Injection Resumes:**

- 18 • **Complete a leak survey for the entire Facility within 72 hours after resuming**
19 **injection operations, with results reported to the CPUC and the California Air**
20 **Resources Board (CARB) within three days of completion of the survey. The leak**
21 **survey shall be conducted in accordance with the Leak Survey Plan that Operator**
22 **submitted to the Division in its November 1, 2016 letter, Attachment B, Checklist No**
23 **10.**
- 24 • **In addition to the daily monitoring for leaks required under the Division’s**
25 **regulations, complete leak surveys for the entire Facility immediately after one**
26 **month of injection operations and quarterly thereafter for one year (five surveys**
27 **total), with results reported to the CPUC and CARB within seven days of**
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1 completion. After the first year, leak surveys must be completed in line with
2 applicable CARB regulations.

- 3 • Report daily reservoir pressure estimates to the CPUC and the Division during the
4 first 30 days of resuming injection.
- 5 • Report daily reservoir injection and withdrawal volume measurements to the CPUC
6 and the Division during the first 30 days of resuming injection.
- 7 • Report average daily tubing and annulus pressure measurement to the CPUC and
8 the Division during the first 30 days of resuming injection.
- 9 • Within five working days after resuming injection, provide the Division with a
10 workplan for completing the appropriate testing protocols or plugging and
11 abandoning each well that was isolated. The workplan shall provide for monthly
12 status updates to the Division.
- 13 • If the Division identifies any additional data gaps in the project file, Operator shall
14 address the data gaps within 30 days of this order.
- 15 • After injection has resumed, conduct two flights with an appropriately equipped
16 aircraft downwind of the Facility to measure total site methane emissions. The two
17 post-injection measurements must be within one week of each other. If both
18 measurements show the site to emit below 250 kg CH₄/hour, then no further flights
19 will be required. If the measurements suggest that there are leaks, then the flights
20 must continue until the leaks have been fixed, no new leaks have been found, and
21 emissions are below 250 kg CH₄/hour. The exact timing of the flights will be
22 dependent on meteorology allowing for the flights to make successful measurements
23 of total methane emissions from the site.
- 24 • Within ten working days after resuming injecting, provide the Division with a
25 workplan for completing the seismic risk study to the satisfaction of the Division
26 using a third party consultant approved by the Division and National Laboratories.
27 At a minimum, the study must include a Probabilistic Seismic Hazards Analysis, a
28 Probabilistic Fault Displacement Analysis, and complete an evaluation of any

eventual mitigation measures. The workplan shall identify the date that the study will be completed and shall provide for monthly status updates to the Division.

VI. Operator's Appeal Rights

Operator may appeal this Order to the Director of the Department of Conservation by filing a written notice of appeal with the Director as described in PRC section 3350. (The Legal Office for the State Oil and Gas Supervisor [801 K Street, MS 24-03, Sacramento, California 95814-3530; Facsimile (916) 445-9916] will accept appeal notices on the Director's behalf). Failing to file a notice of appeal within the timeframe prescribed in PRC section 3350, subdivision (a), waives Operator's right to challenge this Order and makes the Order final. If Operator timely files a notice of appeal, Operator will be informed of the appeal hearing date, time, and place. After the close of the hearing, Operator will receive a written decision that affirms, sets aside, or modifies the Order.

VII. Court Order and Other Potential Actions to Enforce This Order

Failing to comply with **Section III (Operator's Requirements)** of this Order could subject Operator to further enforcement action. For example, the Supervisor could deny approval of proposed well operations until compliance is achieved, order the plugging and abandonment of wells, and/or assess a civil penalty. (Pub. Resources Code, §§ 3203, subd. (c), 3236.5, and 3237, subd. (a)(3)(C).)

Further, PRC section 3236 makes it a misdemeanor to fail, neglect, or refuse to furnish any report or record that the Supervisor may require under the oil and gas law. The misdemeanor is punishable by a fine of not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000), or by imprisonment not exceeding six months, or by both the fine and imprisonment for each separate offense. PRC section 3359 makes it a misdemeanor to fail or neglect to comply with an order of the Supervisor or to fail, refuse, or neglect to produce books, papers, or documents as demanded in the order. Each day's further failure, refusal, or neglect is a separate and distinct offense.

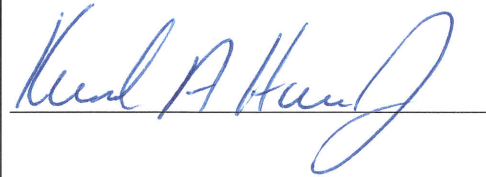
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1 DATED: July 19, 2017

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3 Kenneth A. Harris Jr.

4 State Oil and Gas Supervisor

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6 A handwritten signature in blue ink, reading "Kenneth A. Harris Jr.", is written over a horizontal line.

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9 Certified mail receipt number: 7014 2120 0000 5989 3720