1	Department of Conservation, Division of Oil, Gas, and Geothermal Resources
2	Legal Office for the STATE OIL AND GAS SUPERVISOR 801 K Street, MS 24-03
3	Sacramento, California 95814-3530
4	Telephone (916) 323-6733 Facsimile (916) 445-9916
5	Pacsimile (910) 443-9910
6	
7	STATE OF CALIFORNIA
8	NATURAL RESOURCES AGENCY
9	DEPARTMENT OF CONSERVATION
10	DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES
11	CECOND EMEDOENCY ODDED TO
12	SECOND EMERGENCY ORDER TO
13	PROVIDE DATA AND TAKE SPECIFIED ACTIONS
14	RE: ALISO CANYON GAS STORAGE FACILITY
15	
16	[Pub. Resources Code, §§ 3013, 3106, 3224, 3226, 3300, and 3403.5.]
17	[Cal. Code Regs., tit. 14, §§ 1724, 1724.6, 1724.7, subd. (e), and 1724.10]
18	
19	Emergency Order No. 1106
20	December 10, 2015
21	Operator: Southern California Gas Company (S4700)
22	Aliso Canyon Field
23	Los Angeles County
24	
25	BY
26	Kenneth A. Harris Jr.
27	STATE OIL AND GAS SUPERVISOR
28	1
-	

Emergency Order No. 1106; Provide Data and Take Specified Actions Re: Aliso Canyon Storage Facility

2

3 4

6

5

7 8

10 11

12

13 14

15

16 17

18

19 20

21 22

23 24

25

26

27 28

Introduction

I.

Under the authority of the Public Resources Code (PRC), the State Oil and Gas Supervisor (Supervisor) may order tests and remedial work concerning oil field operations which, in his judgment, are necessary to prevent damage to life, health, property, and natural resources. (See PRC §§ 3106 and 3224.) Further, the Supervisor is to ensure that "no damage occurs to the environment by reason of injection and withdrawal of gas" in underground gas storage facilities. (PRC § 3403.5.) To that end, the Supervisor may request from the operator any data that are pertinent and necessary for the Division of Oil, Gas, and Geothermal Resources (Division), and its District Deputy, to properly evaluate underground injection projects. (See, e.g., Cal. Code Regs., tit. 14, §§ 1724.6 and 1724.7, subd. (e).) The operator must maintain those data and make them available to Division personnel to show, among other things, that no damage to life, health, property, or natural resources is occurring by reason of the project. (Cal. Code Regs., tit. 14, § 1724.10, subd. (h).) Moreover, in an emergency, "the [S]upervisor may order or undertake the actions he or she deems necessary to protect life, health, property, or natural resources." (PRC § 3226.)

At all times relevant to this Order, Southern California Gas Company¹ (SoCal Gas 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 Regulations section 1724.9) in the Aliso Canyon Field in Los Angeles County (Field).

Based on data in Division files, discussions with Operator, and Division site visits, the Supervisor determined that there is an uncontrolled flow of fluids (see Regulations section 1722.5) from well "Standard Sesnon" 25, API no. 037-00776 ("SS 25") and a waste of gas in the Field, which Operator is and has been addressing. Operator's efforts to address the upset have included ongoing tests and remedial work. The efforts have not yet remedied the

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

1 | u
2 | ii
3 | a
4 | re
5 | 3
6 | (3

8

7

9 10

11

1213

1415

16

1718

1920

21

22

2324

2526

27

28

uncontrolled flow of fluids or stopped the waste of gas. Finding that an emergency exists, and in order to protect life, health, property, and natural resources, the Supervisor needs immediate access to data to monitor and address the uncontrolled flow of fluids and current and future remedial work. Therefore, according to PRC sections 3013, 3106, 3224, 3226, 3300, and 3403.5, and Regulations sections 1724.6, 1724.7, subdivision (e), and 1724.10, subdivisions (a), (h), and (k), the Supervisor hereby orders Operator to provide the data and take the actions identified below.

II. <u>Definitions</u>

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

PRC section 3008, subdivision (a), defines "**Well**" to include "any well drilled for the purpose of injecting fluids or gas for stimulating oil or gas recovery, repressuring or pressure maintenance of oil or gas reservoirs, or disposing of waste fluids from an oil or gas filed; [and] any well used to inject or withdraw gas from an underground storage facility[.]"

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."

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

III. Statutory and Related Authority

PRC section 3013 states that the oil and gas law (Division 3 of the PRC, commencing with section 3000) "shall be liberally construed to meet its purposes" and grants the Supervisor "all powers" that may be necessary to carry out those purposes.

PRC section 3106, subdivision (a), authorizes the Supervisor to "supervise the drilling, operation, maintenance, and abandonment of wells and the operation, maintenance, and removal

or abandonment of tanks and facilities attendant to oil and gas production ... so as to prevent, as far as possible, damage to life, health, property, and natural resources ... [and] loss of oil, gas, or reservoir energy[.]"

PRC section 3224 requires the Supervisor to "order such tests or remedial work as in his judgment are necessary to prevent damage to life, health, property, and natural resources[.]"

PRC section 3226 states: "Notwithstanding any other provisions of Section 3224, 3225, or 3237, if the supervisor determines that an emergency exists, the supervisor may order or undertake the actions he or she deems necessary to protect life, health, property, or natural resources."

PRC section 3300 states that "[t]he blowing, release, or escape of gas into the air shall be prima facie evidence of unreasonable waste."

PRC section 3403.5 states that "[t]he supervisor is required to maintain surveillance over [underground gas storage] facilities to insure that the original reserves are not lost, that drilling of new wells is conducted properly, and that no damage occurs to the environment by reason of injection and withdrawal of gas."

Regulations section 1724 specifies the types of well records that an operator must maintain and includes "[s]uch other information as the Supervisor may require for the performance of his or her statutory duties."

Regulations section 1724.6 allows the Supervisor to require from an operator "any data that, in the judgment of the Supervisor, are pertinent and necessary for the proper evaluation of the proposed project."

Regulations section 1724.7, subdivision (e), requires the following, where applicable: "Other data as required for large, unusual, or hazardous projects, for unusual or complex structures, or for critical wells. Examples of such data are: isogor maps, water-oil ratio maps, isobar maps, equipment diagrams, and safety programs."

Regulations section 1724.10, subdivision (a), requires that any changes to an injection project "shall not be carried out without Division approval."

Regulations section 1724.10, subdivision (h), states: "Data shall be maintained to show performance of the [injection] project and to establish that no damage to life, health, property or natural resources is occurring by reason of the project. Injection shall be stopped if there is evidence of such damage ... or upon written notice from the Division. Project data shall be available for periodic inspection by Division personnel."

Regulations section 1724.10, subdivision (k), authorizes the Supervisor to request "[a]dditional data requirements or modifications [as] necessary to fit specific circumstances and types of projects."

SoCal Gas's Aliso Canyon gas storage project approval letter (dated April 18, 1989, revised July 26, 1989) conditions 10 and 11, among others, require SoCal Gas to provide the Division, upon its request, with data that it deems necessary to monitor the injection project operations and to notify the Division and obtain its approval before making any changes to the project that would alter the conditions that were originally approved in the letter.

IV. Reasons Why the Actions and Provision of Data Ordered Are Pertinent and Necessary

The Division is requiring Operator to undertake actions and to supply additional project data to the Division so it can continue to properly monitor Operator's Aliso Canyon gas storage project and the leaking well within the project (SS 25). These additional actions and data requirements are to ensure that Operator is taking all actions to prevent damage to life, health, property, and natural resources by stopping the uncontrolled flow of fluids and gas from the well as quickly and safely as possible.

These requirements are, necessarily, in addition to the data Operator has supplied and continues to supply, as well as the actions Operator has taken and will continue to take, to address the uncontrolled flow of fluids and gas.

In addition to requiring the data for its own ongoing analysis and oversight, the Division is convening a panel of technical experts from Lawrence Berkeley National Laboratory,

1 L
2 "]
3 m
4 ex
5 an
6 re
7 di
8 en
9
10
11

Lawrence Livermore National Laboratory, and the Sandia National Laboratory (collectively, the "National Laboratories") that will provide independent expertise to assist the Division in monitoring and evaluating Operator's actions. This group of scientists will, with particular expertise in the areas of rock mechanics, well completion, cementing, fluid dynamics, materials and corrosion, review data and information that the Division has received and continues to receive from Operator. The Division expects Operator to perform the following tasks, as discussed in part or in whole in recent technical meetings between the Division and Operator, to ensure the Division's access to additional data it requires.

V. <u>Actions Required of Operator</u>

Based on the facts, and in accord with the legal authorities, described in this Order, the Supervisor has determined that an emergency exists and that he needs Operator to take the following actions to advance the process of monitoring and addressing the uncontrolled flow of fluids and waste of gas at Operator's gas storage injection project in the Field. **Therefore, IT IS HEREBY ORDERED, pursuant to PRC sections 3013, 3106, 3224, 3226, 3300, and 3403.5, and Regulations sections 1724, 1724.6, 1724.7, subdivision (e), and 1724.10 that Operator:**

17

12

13

14

15

16

- 18 || 19 ||
- 20
- 2122
- 2324
- 2526

27

28

- (A) Expeditiously and aggressively pursue options to maximize the capture of leaking gas, in order to minimize releases while the relief wells are constructed and other actions are implemented to permanently shut in the well.
- (B) Prepare and deliver to the Division no later than Monday, December 14, 2015, at 1700 hours, an updated detailed schedule for the completion of relief well number 1.
- (C) Prepare and deliver to the Division no later than Wednesday, December 16, 2015, at 1700 hours, a detailed schedule for the completion of additional well pad preparation, mobilization of a drilling rigs, and spudding of additional relief wells.

- (D) Develop and deliver to the Division no later than Tuesday, December 22, 2015, at 1700 hours, a list of engineering approaches and options along with risks and mitigation measures to plug and abandon well SS 25 once a relief well has penetrated well SS 25.
- (E) Allow the Division access to contractors for any and all discussions, plans, and issues with respect to any efforts related to the closure of SS 25, as well as having contractor's representative from the well control firm and drilling rig(s) and company(s) in attendance in morning briefings.
- (F) Expeditiously and aggressively pursue options to safely maximize the capture of gas and to minimize releases while relief wells are constructed and other actions are implemented to permanently shut in the well.
- (G) Immediately notify the Division's onsite representative of any planned nonemergency changes to all schedules which SoCal Gas supplies to the Division.
- (H) File all necessary notices as required and within 24 hours to the following email address:

dogdist2@conservation.ca.gov

VI. Further Actions for Operator to Perform or Continue to Perform

Based on the facts, and in accord with the findings and legal authorities described in section V and elsewhere in this Order, the Supervisor further orders Operator to perform or continue to perform the following tasks:

(A) Conduct daily briefings with the Division to report progress to stop the existing leak and drill relief wells, identify for the Division issues that could result in delays in these activities and present and discuss planned actions and strategies to eliminate and/or minimize potential delays.

- (B) Work with Division staff, and the Division's contractors, agents, and advisors, to confirm and/or adjust priorities and develop and/or modify schedules to protect public health and safety and stop the release of fluids.
- (C) Provide the Division, and Division's contractors, state agencies assisting with the issue, and advisors, including experts from the National Laboratories, access to the well site and attendant facilities, and immediate access to all relevant data and information.
- (D) Utilize surrounding wells to gather additional subsurface data to evaluate the presence, extent, and concentration of storage gas.
- (E) Reduce reservoir pressure in the vicinity of SS 25 by continuing to produce from wells in proximity to SS 25.
- (F) Maximize the rate of withdrawal from the reservoir to reduce reservoir pressure to aid in the control and plugging of SS 25.
- (G) Withdraw gas from SS 25 at as high a rate as is safe.
- (H) Hire additional contractors, as necessary, that specialize in well control, cementing, well fluid dynamics, well-killing techniques, and any and all other specialties needed for sealing SS 25 as quickly and safely as possible.
- (I) Provide all equipment, personnel, and supplies necessary to remediate SS 25 directly; ensure relief well Porter 39A (relief well number 1) is completed as quickly and safely as possible; complete the preparation of a well pad, and mobilization and assembly of a second drilling rig for a second relief well; and spud, drill, and complete the second relief well as quickly and safely as possible.
- (J) Hire contractors, as necessary, to assess slope stability and prepare for significant rain events.

- (K) Continue to not inject gas into the gas storage facility until injection is authorized by the Division.
- (L) Meet with the public and local officials as requested to update them on current status of progress.

VII. 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 Supervisor 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) accepts appeal notices on the Supervisor's behalf. Because this is an emergency order issued under PRC section 3226, the filing of an appeal of this Order will not operate as an automatic stay of this Order. (PRC § 3350, subd. (b)(1).) 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.

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

Failing to comply with Sections V (Actions Required Of Operator) and VI (Further Actions for Operator to Perform or Continue to Perform) of this Order will subject Operator to potential significant further enforcement action. Such enforcement action can include a civil penalty of up to \$25,000 per violation (PRC section 3236.5) and/or criminal prosecution, as a misdemeanor, punishable by a fine up to \$1,000, imprisonment up to six months, or both, for each offense (PRC section 3236). Similarly, the Supervisor could deny approval of