

AMENDED IN SENATE MARCH 28, 2016

**SENATE BILL**

**No. 887**

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**Introduced by Senator Pavley**  
**(Coauthors: Senators Allen and De León)**  
(Coauthor: Assembly Member Wilk)

January 20, 2016

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An act to add Chapter 6 (commencing with Section 42710) to Part 4 of Division 26 of the Health and Safety Code, and to amend Section 3236.5 of, and to add Sections 3133, 3134, 3135, 3136, 3137, 3138, 3139, 3140, 3141, 3142, 3143, and 3144 to, the Public Resources Code, relating to natural gas.

LEGISLATIVE COUNSEL'S DIGEST

SB 887, as amended, Pavley. Natural gas storage wells.

Under existing law, the Division of Oil, Gas, and Geothermal Resources in the Department of Conservation regulates the drilling, operation, maintenance, and abandonment of oil and gas wells in the state. Existing law provides that a person who fails to comply with specific laws relating to the regulation of oil or gas operations is guilty of a misdemeanor.

This bill would ~~require~~, *require the division*, before January 1, 2018, and annually thereafter, ~~the division~~ to inspect all natural gas storage wells serving or located in a natural gas storage facility and would prescribe standards for a natural gas storage well. This bill would require a natural gas storage well in existence on December 31, 2016, to be brought into compliance with the provisions of this bill by an unspecified date and the use of wells older than an unspecified age to be phased out by an unspecified date. This bill would prohibit the division from issuing a permit for a new natural gas storage well located within an unspecified

distance of a sensitive receptor, as defined, and would require the division to order operators to cease the use of, and plug and abandon, an existing natural gas storage well that is within an unspecified distance of a sensitive receptor by an unspecified date. This bill would require, in the event of a loss of the integrity of a natural gas storage well, well casing, or cementing resulting in a significant, uncontrolled leak of natural gas, that preparations for the drilling of a relief well begin within 24 hours of the discovery of the leak. This bill would require the operator, in the event of a leak of any size from a natural gas storage well, to notify the division immediately and would require the division to post information about the leak on its Internet Web site, as prescribed. This bill would require the division to convene an independent panel of recognized experts to develop best practices for natural gas storage facilities and to review and incorporate the best practices developed by the panel into its regulations for natural gas storage wells, as appropriate, and for other wells under the division's jurisdiction, as applicable. This bill would require the division, in consultation with the Office of Environmental Health Hazard Assessment, the State Department of Public Health, and the Department of Industrial Relations, to perform a risk assessment of natural gas storage wells and to report the findings of the risk assessment to the Legislature. This bill would require the State Air Resources Board, in consultation with any local air district and the division, to develop guidelines for a monitoring program that includes continuous monitoring of the ambient concentration of natural gas at sufficient locations throughout a natural gas storage facility or planned natural gas storage facility to identify natural gas leaks, leaks and the presence of natural gas emissions in the atmosphere. *The bill would require an operator of a natural gas storage facility to develop and submit to the board a facility monitoring plan that satisfies the program requirements, and would require the board to review the plan and to either approve or disapprove the plan. This bill would require monitoring data to be provided to the board. This bill would require the division to post and make available on its Internet Website all materials that are provided to the board or division in order to comply with these the provisions to be posted and available to the public on its Internet Web site. added by this act.* Because a violation of these requirements would be a crime, the bill would impose a state-mandated local program.

Existing law requires the operator of a well to file a written notice of intention to commence drilling with, and prohibits any drilling until

approval is given by, the supervisor or district deputy. Under existing law, the notice is deemed approved if the supervisor or district deputy fails to respond to the notice in writing within 10 working days from receipt and is deemed canceled if operations have not commenced within one year of receipt. Existing law provides that these provisions also apply to the deepening or redrilling of the well, any operation involving the plugging of the well, or any operations permanently altering in any manner the casing of the well.

This bill would require certain materials, relating to wells serving or located in a natural gas storage facility, to be submitted by the operator and approved at the supervisor's discretion before approval of the notice. This bill would provide that the public has a right to review the ~~location~~ *locations* of all new natural gas storage wells or existing wells converting to a natural gas storage well ~~well~~ *wells* before the approval of the notice.

Existing law requires the owner or operator of any well to keep, or cause to be kept, a careful and accurate log, core record, and history of the drilling of the well.

This bill would require the well history to include all operations, injection, production, and emplacement of any materials into a natural gas storage well, and to be disclosed to the division by the operator, as specified.

Under existing law, a person who violates certain statutes or regulations relating to oil and gas well operations is subject to a civil penalty not to exceed \$25,000 for each violation. Existing law provides that the unreasonable waste of natural gas by act, omission, sufferance, or insistence is opposed to the public interest and is unlawful.

This bill would provide that a violation of the prohibition against the unreasonable waste of natural gas is subject to the civil penalty not to exceed \$25,000 for each violation.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority. Appropriation: no. Fiscal committee: yes.  
State-mandated local program: yes.

*The people of the State of California do enact as follows:*

1 SECTION 1. The Legislature finds and declares as follows:

2 (a) Public transparency regarding regulations and regulatory  
3 activity to protect public health and welfare and natural resources  
4 is essential.

5 (b) *Safe operation of gas storage wells and associated piping*  
6 *and equipment is essential in order to provide for public,*  
7 *environmental, and occupational health and welfare, and includes*  
8 *a proactive approach to potential problems.*

9 ~~(b)~~

10 (c) On October 23, 2015, a significant, uncontrolled leak from  
11 a natural gas storage well that was originally drilled over 60 years  
12 ago was discovered in the Aliso Canyon natural gas storage facility  
13 located in the County of Los Angeles. Initial efforts to stop the  
14 leak failed.

15 ~~(c)~~

16 (d) The Division of Oil, Gas, and Geothermal Resources in the  
17 Department of Conservation responded swiftly to the leak,  
18 including by issuing two orders that, among other things, require  
19 the use of relief wells. The division ~~has been working~~ worked  
20 around the clock overseeing efforts to stop the leak.

21 ~~(d)~~

22 (e) It was several days before the community was notified of  
23 the leak, although numerous residents started reporting odor  
24 concerns almost immediately. The leaking well is up the hill and  
25 approximately one and one-quarter miles away from the nearest  
26 home. Other natural gas storage wells serving this facility are  
27 located closer to homes.

28 ~~(e)~~

29 (f) The Governor declared a state of emergency on January 6,  
30 2016, in order to facilitate the ongoing state response and efforts  
31 to stop the leak.

32 (g) *On February 18, 2016, the Division of Oil, Gas, and*  
33 *Geothermal Resources in the Department of Conservation certified*  
34 *that the Aliso Canyon leak had been stopped. Reports estimate*  
35 *almost 100,000 metric tons of the potent greenhouse gas methane*  
36 *was emitted to the atmosphere. Community health concerns*  
37 *continue postleak with over one hundred fifty complaints reported*  
38 *to the County of Los Angeles.*

1     (Ⓕ)

2     (h) The standards for natural gas storage wells need to be

3 improved in order to reflect 21st century technology, recognize

4 that these facilities may be in locations near population centers,

5 and ensure a disaster like the Aliso Canyon leak does not happen

6 again.

7     SEC. 2. Chapter 6 (commencing with Section 42710) is added

8 to Part 4 of Division 26 of the Health and Safety Code, to read:

9

10     CHAPTER 6. NATURAL GAS STORAGE FACILITY MONITORING

11

12     42710. (a) The state board, in consultation with any local air

13 district and the Division of Oil, Gas, and Geothermal Resources

14 in the Department of Conservation, shall develop a natural gas

15 storage facility monitoring program that includes continuous

16 monitoring of the ambient concentration of natural gas at sufficient

17 locations throughout a natural gas storage facility or planned

18 natural gas storage facility to identify natural gas ~~leaks~~. *leaks and*

19 *the presence of natural gas emissions in the atmosphere. The*

20 *continuous monitoring program may be supplemented by daily*

21 *leak detection measurements.*

22     (b) The program shall include guidelines for the continuous

23 monitoring which shall include, at minimum, ~~spectral-visual~~ *optical*

24 *gas imaging and accurate quantitative* ~~chemical-analytical~~

25 ~~monitoring~~. *monitoring of natural gas concentrations. The program*

26 *shall include protocols for both stationary and mobile monitoring,*

27 *as well as fixed and temporary monitoring locations.*

28     (c) *An operator of a natural gas storage facility shall develop*

29 *and submit to the state board a facility monitoring plan that*

30 *satisfies program requirements pursuant to subdivision (a). The*

31 *state board shall review the plan and may approve or disapprove*

32 *the plan.*

33     (Ⓖ)

34     (d) *Monitoring data shall be provided to the state board. All*

35 *materials provided to comply with this section shall be posted and*

36 *available to the public on the Internet Web site of the Division of*

37 *Oil, Gas, and Geothermal Resources.*

38     SEC. 3. Section 3133 is added to the Public Resources Code,

39 to read:

1 3133. (a) As used in this article, “natural gas storage well”  
 2 means an active or idle natural gas storage well serving or located  
 3 in a natural gas storage facility.

4 (b) Before January 1, 2018, and annually thereafter, the division  
 5 shall inspect all natural gas storage wells.

6 (c) A natural gas storage well in existence on December 31,  
 7 2016, shall be brought into compliance with this article by \_\_\_\_.  
 8 The use of a natural gas storage well older than \_\_\_\_ shall be  
 9 phased out by \_\_\_\_.

10 SEC. 4. Section 3134 is added to the Public Resources Code,  
 11 to read:

12 3134. A natural gas storage well shall meet all of the following  
 13 standards:

14 (a) The well shall have an automatic downhole shutoff system,  
 15 including, but not limited to, *surface-controlled* subsurface safety  
 16 valves, deployed in order to limit leaks associated with a loss of  
 17 the integrity of a well, well casing, or cementing. The shutoff  
 18 system shall be tested and the results of the test shall be reported  
 19 to the division no less than annually.

20 (b) Proactive evaluation of the integrity of the well, well casing,  
 21 ~~or~~ *and* cementing across the entire length of the well shall be  
 22 conducted ~~in order to~~ *quantitatively thoroughly, quantitatively,*  
 23 *and accurately assess their condition. These assessments shall be*  
 24 *performed using the best available technology. Based upon these*  
 25 *assessments, the risks posed by erosion, corrosion, aging, scaling,*  
 26 *cracking, and any other process that may produce natural gas leaks.*  
 27 ~~This evaluation shall include visual imaging along the entire length~~  
 28 ~~of the well. leaks shall be determined. A natural gas storage well~~  
 29 *that has lost integrity or that is at risk of an imminent loss of*  
 30 *integrity shall be immediately repaired before returning to service.*  
 31 *A natural gas storage well at high risk of a loss of integrity shall*  
 32 *be evaluated pursuant to the measures in this subdivision at least*  
 33 ~~annually if the well was originally drilled more than 20 years ago.~~  
 34 *annually.*

35 (c) Natural gas injection and production shall be through tubing  
 36 only and isolated from contact with the well casing.

37 (d) Annular pressure and production or injection flow rate shall  
 38 be continuously monitored.

39 SEC. 5. Section 3135 is added to the Public Resources Code,  
 40 to read:

1 3135. (a) For the purposes of this section, “sensitive receptor”  
2 includes, but is not limited to, a school, hospital, and residential  
3 housing.

4 (b) In addition to the requirements of Section 3134, a natural  
5 gas storage well that is within 10,000 feet of a sensitive receptor  
6 shall meet both of the following requirements:

7 (1) Have continuous ~~air quality~~ monitoring ~~for~~ *of natural gas*  
8 *concentrations to identify* natural gas leaks at the wellhead.

9 (2) Be evaluated pursuant to the measures in subdivision (b) of  
10 Section 3134 at least annually.

11 (c) The division shall not issue a permit for a new natural gas  
12 storage well located within \_\_\_\_\_ feet of a sensitive receptor, and  
13 the division shall order operators to cease the use of, and plug and  
14 abandon, an existing natural gas storage well within \_\_\_\_\_ feet of  
15 a sensitive receptor by \_\_\_\_\_.

16 SEC. 6. Section 3136 is added to the Public Resources Code,  
17 to read:

18 3136. (a) The operator of a natural gas storage well shall  
19 submit for the supervisor’s approval the following materials:

20 (1) A regular maintenance program for the well and the portion  
21 of the facility within the division’s jurisdiction. *The maintenance*  
22 *program shall include training for site personnel and proactive*  
23 *replacement of equipment at risk of failure to ensure safe*  
24 *operation.*

25 (2) ~~Operating~~ *Design and operating* conditions and parameters  
26 for the well and the portion of the facility within the division’s  
27 jurisdiction.

28 (3) ~~A~~ *An inspection, leak detection, and* monitoring program  
29 for the well and the portion of the facility within the division’s  
30 jurisdiction that includes ~~air quality~~ *monitoring of natural gas*  
31 *concentrations* pursuant to Chapter 6 (commencing with Section  
32 42710) of Part 4 of Division 26 of the Health and Safety Code.  
33 ~~Air quality~~ *Ambient natural gas* monitoring sufficient to include  
34 *monitoring* of a new or reworked well shall be in operation before  
35 a new well is drilled or *a well is* reworked.

36 (4) *A site-specific risk management plan to identify and plan*  
37 *for mitigation of all hazards and potential hazards associated with*  
38 *natural gas storage well operation. The risk management plan*  
39 *shall provide for regular review and revision, as needed, to ensure*  
40 *the plan appropriately reflects current conditions. The risk*

1 *management plan shall include, but is not limited to, all of the*  
2 *following:*

3 ~~(4)~~

4 (A) A natural gas leak prevention and response program that  
5 addresses the full range of natural gas leaks possible at the facility  
6 with specific response plans that provide for immediate control of  
7 the leak. The prevention and response program shall include, but  
8 is not limited to, all of the following:

9 ~~(A)~~

10 (i) A protocol for public notice of the leak to the community by  
11 the operator.

12 ~~(B)~~

13 (ii) Prepositioning and identification of materials and personnel  
14 necessary to respond to leaks. This shall include materials,  
15 including equipment to capture leaked gas, to respond to the leak  
16 itself as well as to protect public health.

17 ~~(C)~~

18 (iii) A training program to ensure site personnel are prepared  
19 to respond to a leak.

20 (B) *A plan for corrosion monitoring and evaluation.*

21 (C) *A schedule for regular well and reservoir integrity*  
22 *assessments.*

23 (D) *An assessment of the risks associated with the natural gas*  
24 *storage well and its operation.*

25 (E) *Planned risk mitigation efforts.*

26 (b) All of the materials described in subdivision (a) shall be  
27 approved by the supervisor, at his or her discretion, and in the  
28 possession of the division before the supervisor or district deputy  
29 approves a notice required pursuant to Section 3203.

30 (c) All of the materials described in subdivision (a) shall be  
31 reported to the division annually. The operator shall not deviate  
32 from the ~~programs~~ *programs, plans,* and other conditions and  
33 protocols contained in the materials without prior written approval  
34 by the supervisor.

35 SEC. 7. Section 3137 is added to the Public Resources Code,  
36 to read:

37 3137. The public has a right to review the location of a natural  
38 gas storage well or conversion of an existing well to a natural gas  
39 storage well before the approval of any notice required pursuant  
40 to Section 3203.

1 SEC. 8. Section 3138 is added to the Public Resources Code,  
2 to read:

3 3138. In the event of a loss of the integrity of a natural gas  
4 storage well, well casing, or cementing resulting in a significant,  
5 uncontrolled leak of natural gas, preparations for the drilling of a  
6 relief well shall begin within 24 hours of the discovery of the leak  
7 regardless of any other activities undertaken to stop the leak.

8 SEC. 9. Section 3139 is added to the Public Resources Code,  
9 to read:

10 3139. In the event of a leak of any size from a natural gas  
11 storage well, the operator shall notify the division immediately.  
12 Within 24 hours of notification, the division shall post information  
13 about the leak on its Internet Web site and provide regular updates  
14 to the public until the leak is stopped.

15 SEC. 10. Section 3140 is added to the Public Resources Code,  
16 to read:

17 3140. (a) The division shall convene an independent panel of  
18 recognized experts to develop best practices for natural gas storage  
19 facilities. The panel shall consider at least ~~of~~ all *of* the following:

20 (1) The proximity of a natural gas storage facility and wells to  
21 ~~population.~~ *populations of people.*

22 (2) The age ~~when~~ *or condition at which* a well should be plugged  
23 and abandoned, and what standards the plugging and abandonment  
24 should meet.

25 (3) The range of proactive methods to assess the integrity of a  
26 well, well casing, and ~~cementing.~~ *cementing, and identifying the*  
27 *best available technology for these assessments.*

28 (4) A thorough analysis of the risks associated with the  
29 conversion of a well for use as a natural gas storage well.

30 (5) Natural gas storage well operating, maintenance, and  
31 monitoring standards.

32 (b) Upon completion of the panel's work pursuant to subdivision  
33 (a), the division shall review and incorporate best practices  
34 developed by the panel into its regulations for natural gas storage  
35 wells, as appropriate, and for other wells under the division's  
36 jurisdiction, as applicable.

37 SEC. 11. Section 3141 is added to the Public Resources Code,  
38 to read:

39 3141. (a) The division, in consultation with the Office of  
40 Environmental Health Hazard Assessment, the State Department

1 of Public Health, and the Department of Industrial Relations, shall  
2 perform a risk assessment of natural gas storage wells. The risk  
3 assessment shall include, but is not limited to, all of the following  
4 information:

- 5 (1) The age *and construction* of a well.
- 6 (2) The service history and operating conditions of the well.
- 7 (3) The potential impact of a leak on public, occupational, and  
8 environmental ~~health~~ *health, safety, and welfare*.

9 (b) The risk assessment shall be subjected to peer review by  
10 independent experts.

11 (c) The findings of the risk assessment shall be reported to the  
12 Legislature in accordance with Section 9795 of the Government  
13 Code.

14 SEC. 12. Section 3142 is added to the Public Resources Code,  
15 to read:

16 3142. To ensure that the division has all the records it needs  
17 to evaluate natural gas storage wells, the well history maintained  
18 pursuant to Section 3213 shall include all operations, injection,  
19 production, and emplacement of any materials into the well. The  
20 operator shall disclose the well history to the division for each  
21 operation, injection, production, and emplacement of any material  
22 into the well.

23 SEC. 13. Section 3143 is added to the Public Resources Code,  
24 to read:

25 3143. All materials provided to the division to comply with  
26 Section 3133 to 3142, inclusive, shall be posted and available to  
27 the public on the Internet Web site of the division.

28 SEC. 14. Section 3144 is added to the Public Resources Code,  
29 to read:

30 3144. A member of the public may bring suit for writ of  
31 mandate against the division for failure to enforce Sections 3133  
32 to 3143, inclusive.

33 SEC. 15. Section 3236.5 of the Public Resources Code is  
34 amended to read:

35 3236.5. (a) A person who violates this chapter or a regulation  
36 implementing this chapter is subject to a civil penalty not to exceed  
37 twenty-five thousand dollars (\$25,000) for each violation. A person  
38 who commits a violation of Article 3 (commencing with Section  
39 3150) or Section 3300 is subject to a civil penalty of not less than  
40 ten thousand dollars (\$10,000) and not to exceed twenty-five

1 thousand dollars (\$25,000) per day per violation. An act of God  
2 and an act of vandalism beyond the reasonable control of the  
3 operator shall not be considered a violation. The civil penalty shall  
4 be imposed by an order of the supervisor pursuant to Section 3225  
5 upon a determination that a violation has been committed by the  
6 person charged. The imposition of a civil penalty under this section  
7 shall be in addition to any other penalty provided by law for the  
8 violation. When establishing the amount of the civil penalty  
9 pursuant to this section, the supervisor shall consider, in addition  
10 to other relevant circumstances, all of the following:

- 11 (1) The extent of harm caused by the violation.
  - 12 (2) The persistence of the violation.
  - 13 (3) The pervasiveness of the violation.
  - 14 (4) The number of prior violations by the same violator.
- 15 (b) An order of the supervisor imposing a civil penalty shall be  
16 reviewable pursuant to Article 6 (commencing with Section 3350).  
17 When the order of the supervisor has become final and the penalty  
18 has not been paid, the supervisor may apply to the appropriate  
19 superior court for an order directing payment of the civil penalty.  
20 The supervisor may also seek from the court an order directing  
21 that production from the well or use of the production facility that  
22 is the subject of the civil penalty order be discontinued until the  
23 violation has been remedied to the satisfaction of the supervisor  
24 and the civil penalty has been paid.

25 (c) Any amount collected under this section shall be deposited  
26 in the Oil, Gas, and Geothermal Administrative Fund.

27 SEC. 16. No reimbursement is required by this act pursuant to  
28 Section 6 of Article XIII B of the California Constitution because  
29 the only costs that may be incurred by a local agency or school  
30 district will be incurred because this act creates a new crime or  
31 infraction, eliminates a crime or infraction, or changes the penalty  
32 for a crime or infraction, within the meaning of Section 17556 of  
33 the Government Code, or changes the definition of a crime within  
34 the meaning of Section 6 of Article XIII B of the California  
35 Constitution.