AMENDED IN ASSEMBLY AUGUST 19, 2016

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AMENDED IN SENATE MARCH 28, 2016

SENATE BILL No. 887

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

January 20, 2016

An act to add Chapter 6 (commencing with Section 42710) to Part 4 of Division 26 of the Health and Safety Code, to amend Section 3403.5 of, and to add Article 3.5 (commencing with Section 3180) to Chapter 1 of Division 3 of, the Public Resources Code, and to add Section 1103 to the Public Utilities Code, relating to natural gas.

LEGISLATIVE COUNSEL'S DIGEST

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

(1) 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 the operator of a gas storage well, before January 1, 2018, to have commenced a mechanical integrity testing regime specified by the division and would require the division to promulgate regulations that establish standards for all gas storage wells, as specified. This bill would require the division to determine by regulation what constitutes a reportable leak from a gas storage well and the timeframe for reporting those leaks, as specified. Until the regulations are in effect, this bill would require the operator to notify the division immediately of a leak of any size from a gas storage well. This bill would require the division to post information about a reported leak that cannot be controlled within 48 hours on its Internet Web site, as prescribed. This bill would require the supervisor, within 72 hours of being notified of a reportable leak, to determine if a relief well is necessary. If the supervisor makes that determination, whether within the first 72 hours or after, the bill would require the operator to immediately begin preparation for, ~~and~~ *and, as soon as practicable at the determination of the supervisor,* commence the drilling of, a relief well. This bill would require an operator of a gas storage well to develop and maintain a comprehensive gas storage well training and mentoring program for those employees whose job duties involve the safety of operations and maintenance of gas storage wells and associated equipment, as specified. This bill would require certain materials, relating to wells serving or located in a natural gas storage facility, including, among others, a ~~site-specific~~ risk management plan, to be submitted by the operator and approved at the supervisor's discretion. This bill would require the division to perform unannounced random onsite inspections of some gas storage wells annually. 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 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 state board a facility monitoring plan that satisfies the program requirements, and would require the state board to review the plan and to either approve or disapprove the plan. This bill would require an operator of a natural gas storage facility to provide the monitoring data to the state board. This bill would require the state board or the division, as applicable, to post and make available

on its respective Internet Web site all materials that are provided to the state board or division, as applicable, in order to comply with the provisions added by this act. Because a violation of these requirements would be a crime, the bill would impose a state-mandated local program.

(2) 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 the division, on a weekly basis, to post on its Internet Web site a list of the notices of intention received by the division, and to provide copies of those notices to the public upon request.

(3) Under existing law, the supervisor is required to impose an annual charge computed at a uniform rate based on the number of wells used to inject and withdraw gas from an underground storage facility during the preceding calendar year. Existing law requires the charge to defray the costs incurred by the state in maintaining surveillance over those facilities.

This bill would instead require that annual charge to be the proportionate share of the total regulatory costs projected for each fiscal year based on the field capacity and number of wells of each underground gas storage ~~facility.~~ *facility, as specified.* The bill would require an additional charge to be imposed on an operator, if an uncontrolled leak or release of gas occurs at the operator's underground gas storage facility, to defray the costs of the response effort of the division, as specified.

(4) The Administrative Procedure Act governs the procedure for the adoption, amendment, or repeal of regulations by state agencies and for the review of those regulatory actions by the Office of Administrative Law. Existing law provides that, if a state agency makes a finding that the adoption of a regulation or order of repeal is necessary for the immediate preservation of the public peace, health and safety, or general welfare, the regulation or order of repeal may be adopted as an emergency regulation or order of repeal. Under existing law, a

regulation, amendment, or order of repeal adopted as an emergency regulation remains in effect no more than 180 days unless the adopting agency and the Office of Administrative Law comply with certain requirements.

Until January 1, 2019, this bill would instead require that emergency regulations adopted by the division effective February 5, 2016, continue in effect until the adoption, amendment, or repeal of the regulation is promulgated by the division pursuant to the act.

(5) Under existing law, the Public Utilities Commission has regulatory authority over public utilities, including gas corporations. The Public Utilities Act prohibits any gas corporation from beginning the construction of, among other things, a line, plant, or system, or of any extension thereof, without having first obtained from the commission a certificate that the present or future public convenience and necessity require or will require that construction.

This bill, if a new underground gas storage facility is proposed, would require the commission to ensure that a risk assessment evaluating the potential impact of a leak from the facility on public and environmental health, safety, and welfare is conducted by the project proponent, as specified. This bill would require that the findings of any risk assessment conducted pursuant to these provisions be subjected to peer review by independent experts and reported to the Legislature, as specified.

(6) 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 risks, the regulations designed
3 to mitigate those risks, and regulatory activity are essential to
4 protect public health and welfare and natural resources.
5 (b) Public disclosure and safe operation of gas storage wells
6 and associated piping and equipment are essential in order to
7 provide for public, environmental, and occupational health and
8 welfare, including a proactive approach to potential problems.

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

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

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

(f) The operator of the leaking well had removed a subsurface safety valve decades earlier and had not replaced it. Regulations in effect at that time did not require approval or replacement of the valve. There was no automatic downhole shutoff system installed in the event of a leak. In 2014, the operator acknowledged publicly in a filing to the Public Utilities Commission that many of its wells needed additional assessment and repair. There was no requirement to disclose to potential homebuyers and business owners the existence of the Aliso Canyon natural gas storage facility and its attendant risks.

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

(h) On February 18, 2016, the Division of Oil, Gas, and Geothermal Resources in the Department of Conservation certified that the Aliso Canyon leak had been stopped. Reports estimate almost 100,000 metric tons of the potent greenhouse gas methane were emitted to the atmosphere. In addition to climate risks, community health concerns continue postleak with hundreds of complaints reported to the County of Los Angeles along with widespread concern about the short- and long-term impacts of the leak on public health and economic welfare in the area.

(i) The standards for natural gas storage wells need to be improved in order to reflect 21st century technology, disclose and

mitigate any risks associated with those wells, recognize that these facilities may be in locations near population centers, and ensure a disaster like the Aliso Canyon leak does not happen again.

SEC. 2. Chapter 6 (commencing with Section 42710) is added to Part 4 of Division 26 of the Health and Safety Code, to read:

Chapter 6. Natural Gas Storage Facility Monitoring

42710. (a) The state board, in consultation with any local air district and the Division of Oil, Gas, and Geothermal Resources in the Department of Conservation, shall develop a natural gas storage facility 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 and the presence of natural gas emissions in the atmosphere. The continuous monitoring program may be supplemented by daily leak detection measurements.

(b) (1) The program shall include guidelines for the continuous monitoring which shall include, at minimum, optical gas imaging, where applicable, and accurate quantitative monitoring of natural gas concentrations. The program shall include protocols for both stationary and mobile monitoring, as well as fixed and temporary monitoring locations.

(2) The program shall require optical gas imaging when a large, ongoing leak occurs.

(c) An operator of a natural gas storage facility shall develop and submit to the state board a facility monitoring plan that satisfies program requirements pursuant to subdivisions (a) and (b). The state board shall review the plan and may approve or disapprove the plan.

(d) An operator of a natural gas storage facility shall conduct monitoring in accordance with the facility monitoring plan approved by the state board pursuant to subdivision (c).

(e) An operator of a natural gas storage facility shall provide monitoring data to the state board. All materials provided to comply with this section shall be posted and available to the public on the Internet Web site of the state board.

SEC. 3. Article 3.5 (commencing with Section 3180) is added to Chapter 1 of Division 3 of the Public Resources Code, to read:

Article 3.5. Natural Gas Storage Wells

3180. (a) As used in this article, "gas storage well" means an active or idle well used primarily to inject natural gas into or withdraw natural gas from an underground natural gas storage facility.

(b) On or before January 1, 2018, the operators of all gas storage wells shall have commenced a mechanical integrity testing regime specified by the division. The testing regime shall include all of the following:

(1) Regular leak testing.

(2) Casing wall thickness inspection.

(3) Pressure test of the production casing.

(4) Any additional testing deemed necessary by the division to demonstrate the integrity of the well.

(c) All anomalies identified in the testing shall be immediately reported to the appropriate district office and explained to the supervisor's satisfaction.

(d) (1) The division shall promulgate regulations that establish standards for the design, construction, and maintenance of all gas storage wells to ensure that integrity concerns with a gas storage well are identified and addressed before they can become a threat to life, health, property, the climate, or natural resources.

(2) The regulations shall require that gas storage wells be designed, constructed, and maintained to ensure that a single point of failure does not pose an immediate threat of loss of control of fluids, as determined by the supervisor.

(3) In developing the regulations, the division shall consider enhanced design, construction, and maintenance measures that could meet the standard in paragraph (2), including any of the following:

(A) Primary and secondary mechanical well barriers to isolate the storage gas within the storage reservoir and transfer storage gas from the surface into and out of the storage reservoir.

(B) Production casing to the surface with the required integrity to contain reservoir pressure.

(C) Tubing and packer and production tree with the required integrity to contain reservoir pressure.

(D) Surface controlled subsurface safety valves or Christmas tree valves with the required integrity to contain reservoir pressure that halt flow through the well.

(E) Secondary barrier with overlapping cement casing between two concentric casings with good quality cement bond.

(F) Wellhead with annular valves and seals and the required integrity to contain reservoir pressure.

(G) Casing with a hanger and seal assembly.

(H) Any other well construction requirements the supervisor determines would improve the protection of public health, safety, the environment, and natural resources.

(4) In developing the regulations, the division shall develop a schedule for ongoing mechanical integrity testing.

(e) In order to facilitate consistency, standardization, and training for site inspection and maintenance, to the extent that the regulations promulgated by the division pursuant to subdivision (d) address surface equipment associated with an underground gas storage facility, the division shall ensure that those regulations are consistent with comparable requirements in Parts 190 to 199, inclusive, of Title 49 of the Code of Federal Regulations.

3181. (a) The operator of a gas storage well shall submit for the supervisor's approval the following materials:

(1) Data describing the gas storage project and gas storage wells that demonstrate that stored gas will be confined to the approved zone or zones. Updated data shall be provided to the division if conditions change or if more accurate data become available.

(2) A ~~site-specific~~ risk management plan to identify and plan for mitigation of all threats and hazards and potential threats and hazards associated with gas storage well operation in order to ensure internal and external mechanical integrity of a ~~well.~~ *well, including site-specific information.* The risk management plan shall provide for regular review and revision, as needed, to ensure the plan appropriately reflects current conditions. ~~The operator shall consult with local emergency response entities on the risk management plan.~~ The risk management plan shall include, but is not limited to, all of the following:

(A) A natural gas leak prevention and response program that addresses the full range of natural gas leaks possible at the facility with specific response plans that provide for immediate control of the leak. *The operator shall consult with local emergency response*

entities on the response plans. The prevention and response program shall include, but is not limited to, all of the following:

(i) A protocol for public notice of a large, uncontrollable leak to any ~~community within two miles of the leak~~ *potentially impacted community, as defined in the risk management plan,* if the leak cannot be controlled within 48 hours of discovery by the operator.

(ii) Prepositioning, as feasible, and identification of materials and personnel necessary to respond to leaks. This shall include materials and equipment to respond to and stop the leak itself as well as to protect public health.

(iii) The identification of personnel responsible for notifying regulatory authorities with jurisdiction over the range of leaks possible.

(B) A plan for corrosion monitoring and evaluation.

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

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

(E) Planned risk mitigation efforts.

(F) A regular maintenance program for the well and the portion of the facility within the division's jurisdiction. The maintenance program shall include training for site personnel and proactive replacement of equipment at risk of failure to ensure safe operation.

(3) In addition to other factors deemed relevant by the supervisor, the risk management plan required in paragraph (2) shall consider all of the following:

(A) The facility's distance from dwellings, other buildings intended for human occupancy, or other well-defined outside areas where people may assemble such as campgrounds, recreational areas, or playgrounds.

(B) The risks to and from the well related to roadways, rights of way, railways, airports, and industrial facilities.

(C) Proximity to environmentally or culturally sensitive areas.

(D) The risks of well sabotage.

(E) The current and predicted development of the surrounding area.

(F) Topography and local wind patterns.

(b) All of the materials described in subdivision (a) shall be reported to the division according to a schedule approved by the supervisor. The operator shall not deviate from the programs, plans,

and other conditions and protocols contained in the materials without prior written approval by the supervisor.

3182. On a weekly basis, the division shall post a list of notices received pursuant to Section 3203 on the division's Internet Web site. Copies of any notice shall be provided to members of the public upon request.

3183. (a) The division, in consultation with the State Air Resources Board, shall determine and adopt by regulation what constitutes a reportable leak from a gas storage well and the timeframe for reporting that leak. The regulations shall require an operator to immediately report to the division a leak that poses a significant present or potential hazard to public health and safety, property, or to the environment.

(b) Until the regulations pursuant to subdivision (a) are in effect, a leak of any size from a gas storage well shall be deemed a reportable leak, and the operator shall notify the division immediately.

(c) If a leak from a gas storage well that is reported to the division pursuant to subdivision (a) or (b), as applicable, cannot be controlled within 48 hours, the division shall post information about the leak on its Internet Web site and provide regular updates to the public until the leak is stopped.

3184. (a) Within 72 hours of being notified of a reportable leak, pursuant to Section 3183, the supervisor shall determine if the reportable leak poses a significant present or potential hazard to public health and safety, property, or to the environment such that a relief well is necessary. If the supervisor makes that determination, the operator shall immediately begin preparation for, ~~and~~ *and, as soon as practicable at the determination of the supervisor,* commence the drilling of, a relief well.

(b) Nothing in subdivision (a) shall prevent the supervisor from making a determination after the initial 72-hour period that a reportable leak poses a significant hazard to public health and safety, property, or to the environment and that a relief well is necessary. If the supervisor makes that determination, the operator shall immediately begin preparation for, ~~and~~ *and, as soon as practicable at the determination of the supervisor,* commence the drilling of, a relief well.

(c) If the operator is required to drill a relief well under subdivision (a) or (b), the operator's efforts to drill the relief well

shall continue until the reportable leak has been stopped and the cause of the reportable leak has been fully addressed or the supervisor determines that other means of controlling the reportable leak are appropriate.

3185. The division shall perform unannounced random onsite inspections of some gas storage wells annually. The results shall be posted and available to the public on the division's Internet Web site.

3186. An operator of a gas storage well shall develop and maintain a comprehensive gas storage well training and mentoring program for those employees whose job duties involve the safety of operations and maintenance of gas storage wells and associated equipment. The training program shall include, but is not limited to, gas storage well operations, including best practices to prevent leaks, maintenance and testing, gas storage well safety regulations, emergency response, and incident reporting. If storage field employees are represented by a labor union, the operator shall consult with the relevant union local on safety issues and, when requested, establish a framework to provide training through a joint labor-management training program.

3187. All materials provided to the division and approved by the supervisor to comply with Sections 3181, 3184, and 3185 shall be posted and available to the public on the Internet Web site of the division in a timely manner.

SEC. 4. Section 3403.5 of the Public Resources Code is amended to read:

3403.5. (a) The Legislature finds that there are underground storage facilities for gas that utilize depleted or partially depleted oil or gas reservoirs. Purchased gas, usually from out of state, is injected for storage and withdrawn during peak load periods. The supervisor is required to maintain surveillance over these facilities to ensure 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.

(b) In order to help support the regulatory effort of the supervisor, there shall be imposed an annual charge on operators of underground gas storage facilities to defray the regulatory costs incurred by the state in conducting the activities described in subdivision (a). Each underground gas storage facility operator shall pay a proportionate share of the total regulatory costs

projected for each fiscal year based on the field capacity and number of wells for each underground gas storage facility. For each underground gas storage facility, the portion owed by the operator shall be computed by multiplying the operator's field capacity by the number of the operator's wells, and dividing that product by the ~~product~~ *statewide sum across all underground gas storage facilities of the product* of the field capacity of ~~all~~ *each individual* underground gas storage ~~facilities statewide~~ *facility* multiplied by the number of wells ~~for all underground gas storage facilities statewide.~~ *at that facility.*

(c) In order to defray the costs of the response effort of the division in the event of a large, uncontrolled release of gas from an underground storage facility that poses a significant present or potential hazard to public health and safety, property, or to the environment, there shall be an additional charge imposed entirely on the operator of the underground storage facility at which the uncontrolled leak or release of gas occurred. The charge shall be in the amount of the total directly associated costs incurred by the division in the previous calendar year in the course of responding to the release, including personnel hours, travel expenses, contracting costs, and any other directly associated costs incurred by the division.

(d) For purposes of this section, the following terms have the following meanings:

(1) "Field capacity" means the *total* gas storage ~~capacity~~ *capacity, including base and working gas capacity,* of an underground gas storage facility, in cubic feet.

(2) "Wells" means all wells associated with an underground gas storage facility except those that have been plugged and abandoned pursuant to Section 3208 before the preceding calendar year.

SEC. 5. Section 1103 is added to the Public Utilities Code, to read:

1103. (a) If a new underground gas storage facility is proposed, the commission shall ensure that a risk assessment evaluating the potential impact of a leak from the facility on public and environmental health, safety, and welfare is conducted by the project proponent. Both acute and chronic exposures from a range of expected emissions and emissions rates shall be evaluated. The evaluation shall include consideration of population density in proximal communities, environmentally sensitive areas, emergency

response times, evacuation times, possible leak duration, possible chemical species emitted, and local meteorology.

(b) In evaluating the potential risks and impacts of acute and chronic exposures from emissions from a proposed new gas storage facility, the project proponent shall assess or cause to be assessed risks associated with the proposed facility's proximity to any living quarters, including private homes, condominiums, apartments, retirement homes, prisons, dormitories, or other housing; education resources, including preschools and schools operating kindergarten or any of grades 1 to 12, inclusive; day care centers; and health care facilities, including hospitals, nursing homes, and long-term care and hospice facilities. Based on the risk analysis, appropriate setbacks to the listed structure types shall be determined by the commission.

(c) The risk assessment conducted pursuant to this section shall be subjected to peer review by independent experts whose demonstrated expertise includes, but is not limited to, the fields of public health, epidemiology, and toxicology.

(d) The findings of any risk assessment required by this section shall be reported to the Legislature in accordance with Section 9795 of the Government Code.

SEC. 6. (a) Notwithstanding Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code, including subdivisions (e) and (h) of Section 11346.1 of the Government Code, the emergency regulations amending Section 1724.9 of Title 14 of the California Code of Regulations adopted by the Division of Oil, Gas, and Geothermal Resources in the Department of Conservation effective February 5, 2016, shall continue in effect until the adoption, amendment, or repeal of the regulations is promulgated by the division pursuant to Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code.

(b) This section shall remain in effect only until January 1, 2019, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2019, deletes or extends that date.

SEC. 7. This act shall neither impair nor diminish requirements imposed by Chapter 14 of the Statutes of 2016 related to the Aliso Canyon natural gas storage facility located in the County of Los Angeles.

SEC. 8. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

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