



March 10, 2017

Ms. Irena Asmundson  
Chief Economist  
California Department of Finance  
915 L Street  
Sacramento, CA 95814

Dear Ms. Asmundson:

Thank you for your letter dated January 29, 2017, providing comments on the Standardized Regulatory Impact Assessment (SRIA) for the proposed underground gas storage regulations. Attached please find a summary of each of your comments followed by a Department of Conservation response.

The Department of Conservation appreciates the comments and assistance provided during the preparation and submittal of the SRIA. We will make the changes necessary to respond to your comments to the Initial Statement of Reasons and as an attachment to Standard Form 399.

Please contact me or Blair Gollihur at the Office of Governmental and Environmental Relations should you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Ben Turner".

Ben Turner  
Assistant Director  
Governmental and Environmental Relations

Cc: Justin Turner, Department of Conservation Acting Chief Counsel

**Department of Conservation**  
**Underground Gas Storage Regulations**  
**Response to Comments on Standardized Regulatory Impact Assessment (SRIA)**

- 1. DOF: First, even though these regulations are imposing costly regulatory requirements to all gas operators, the SRIA assumes that these costs will not be passed down to consumers in the form of higher prices of gas and electricity, which may be a particular burden for businesses that are intensive users of natural gas. This assumption allows the SRIA to estimate an increase of the state's employment level and gross state product, which may not ultimately occur once energy prices increase.*

**DOC:** This comment correctly points out that the economic impact estimate generated by the DOC's I-O model does not incorporate potential electricity and gas rate increases resulting from the regulations. Rate setting is a very complex and multi-faceted process outside the outside the DOC's authority, and any estimate in this SRIA would be highly speculative. However, our conversations with California Public Utilities Commission (CPUC) indicate that the proposed regulations would likely lead to higher energy costs for consumers. For the investor owned utilities such as Southern California Gas and Pacific Gas and Electric Company, who operate 76 percent of the gas storage wells in the state, these impacts would be tempered because the costs imposed by the regulations represent a small fraction of their revenue requirements and would be spread across a large number of ratepayers. For the customers of the independent operators this impact has the potential to be more substantial.

We acknowledge that higher electricity and gas costs could affect the hiring, saving, and consumption decisions by intensive users of natural gas such that some of the estimated economic impacts identified by the SRIA could be muted. Thus, the effects of this economic impact analysis (i.e., the gross output impact, employment impact, and value added) should be considered as an upper bound on the initial change in economic activity.

- 2. DOF: Second, the SRIA fails to acknowledge that these regulations may have a fiscal impact on other local and state agencies. The analysis only takes into account that the enforcement of these regulations requires a permanent increase of Conservation's workforce (20 positions). But as the Aliso Canyon leakage event showed, the monitoring and the execution of the leak response protocols are all actions that require the coordinated response of multiple agencies. The analysis should discuss whether the enforcement of these regulations has a fiscal effect on other local and state level agencies, and estimate what these effects will be.*

**DOC:** The proposed regulations have the expected effect of minimizing the likelihood of a major gas leakage by imposing new performance standards, additional testing, monitoring, risk management, and reporting on underground gas storage operators. While the SRIA describes the emergency response actions of several local and state agencies, including the DOC, the Governor's Office of Emergency Services, the Division of Occupational Safety and Health Administration, the California Public Utilities

Commission, the Office of Environmental Health Hazard Assessment, the California Air Resources Board, and California Energy Commission, there is no specific portion of the proposed regulation that prescribes what a coordinated response should look like. In other words, the regulations do not impose specific mandates on local and state agencies nor do they require state reimbursement as a result of the regulation.

As a result, any monitoring or emergency response actions stemming from the recent gas leakage experience at Aliso Canyon are determined independently of these proposed regulations. Each agency may already be conducting activities that align with the regulations at this time, however, we cannot and do not prescribe what those activities should look like. Ultimately, we expect the execution of the proposed regulations to create cost savings in the long-run on local and state agencies due to the decreased risk of a major gas leakage.

3. **DOF:** *Third, these regulations require operators to develop and implement an inspection and leak detection protocol, but provide that once the California Air Resources Board (CARB) implements regulation which assume responsibility for these protocols, the Division's requirements will cease to apply. CARB's regulations are anticipated to be fully implemented in 2018. In the SRIA, the direct costs of ambient air monitoring associated with the Division's proposed regulations is set to zero in 2018. Finance's methodology for estimating costs requires that they be estimated relative to the currently existing regulatory environment – not relative to future anticipated (but uncertain) regulatory changes. Thus, the direct costs of ambient air monitoring **must be included in the analysis throughout the full period (2017-2021).***

**DOC:** DOC is required by statute, SB 887, to develop in consultation with CARB, a natural gas storage facility monitoring program. (See Health & Saf. Code, § 42710; Pub. Resources Code, § 3180.) SB 887 states that storage facility continuous monitoring requirements may be supplemented by daily leak detection measurements required by DOGGR. As such, DOGGR's proposed regulations require operators to develop leak detection protocols and monitor for daily leaks at gas wellheads until continuous monitoring at gas storage facilities is developed and implemented by CARB. CARB's proposed regulations, *Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities*, details the continuous monitoring plan.

The timeframe for CARB's monitoring is outlined in CARB's ISOR, Appendix A: Proposed Regulation Order, which states that owners or operators of gas storage facilities shall submit to CARB a monitoring plan, including continuous monitoring and daily screening of each natural gas wellhead by January 1, 2018. By March 1, 2018, the CARB Executive Officer will approve or disapprove the monitoring plan, and by September 1, 2018, owners or operators shall monitor each facility according to the monitoring plan approved by CARB. (See proposed Cal. Code of Regs., tit. 17, § 95668, subd.(i).) Both the DOC and CARB are responding to statutory requirements, and daily monitoring will continue until CARB's program is in effect.

Because CARB's regulations are expected to be fully implemented by September 1, 2018, the DOC did not consider the uncertainty around these anticipated regulatory

changes in the current economic impact analysis. The SRIA currently sets air monitoring staff costs to zero for a portion of 2018 and all of 2019 onward. DOC will revise the ambient air monitoring costs and the derived economic impact from that cost to reflect the currently existing regulatory environment through 2021 (see Table 1 for revised direct costs). DOC will submit the revisions with the ISOR and as an attachment to Form 399.

**Table 1: Direct Air Monitoring Costs Under the Existing Regulatory Environment \***

<b>Direct Air Monitoring Costs</b>	<b>2017 Cost</b>	<b>2018 Cost</b>	<b>2019 Cost</b>	<b>2020 Cost</b>	<b>2021 Cost</b>
Leak detection equipment	\$3,990,000	\$0	\$0	\$0	\$0
Ambient Air Monitoring Staff	\$2,160,000	\$2,160,000	\$2,160,000	\$2,160,000	\$2,160,000
<b>Total Air Monitoring Costs</b>	<b>\$6,150,000</b>	<b>\$2,160,000</b>	<b>\$2,160,000</b>	<b>\$2,160,000</b>	<b>\$2,160,000</b>

\* These direct costs represent the revised costs of air monitoring whereby CARB does not assume responsibility for air monitoring regulations as expected on Sep. 1, 2018.

## Appendix A: Direct Costs Associated with SB 887 and the Proposed Regulations

Cost Driver	2017 Cost	2018 Cost	2019 Cost	2020 Cost	2021 Cost
Noise and Temperature Logs (Leak tests)	\$5,243,200	\$5,243,200	\$5,243,200	\$5,243,200	\$5,243,200
Casing Pressure Test	\$55,822,000	\$55,822,000	\$55,822,000	\$55,822,000	\$55,822,000
Electromagnetic Test (well casing thickness test)	\$92,208,000	\$92,208,000	\$92,208,000	\$92,208,000	\$92,208,000
Tubing and Packer	\$40,950,000	\$40,950,000	\$40,950,000	\$40,500,000	\$40,050,000
Subsurface Safety Valves	\$6,250,000	\$6,250,000	\$6,250,000	\$6,250,000	\$6,250,000
Maintenance	\$100,000	\$192,000	\$284,000	\$376,000	\$468,000
New Well Construction	\$24,000,000	\$24,000,000	\$24,000,000	\$24,000,000	\$24,000,000
Plug and Abandonment	\$3,112,000	\$2,334,000	\$1,556,000	\$1,167,000	\$389,000
Production casing to surface equivalence/remediation	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$1,500,000
Leak Detection Equipment	\$3,990,000	\$0	\$0	\$0	\$0
Ambient Air Monitoring Staff*	\$2,160,000	\$2,160,000	\$2,160,000	\$2,160,000	\$2,160,000
Additional Observation wells	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Records management	\$240,000	\$0	\$0	\$0	\$0
Risk Management Plan	\$270,000	\$0	\$0	\$0	\$0
Assessment Fees	\$4,172,000	\$3,269,000	\$3,269,000	\$3,269,000	\$3,269,000
<b>Total</b>	<b>\$243,017,200</b>	<b>\$236,928,200</b>	<b>\$236,242,200</b>	<b>\$235,495,200</b>	<b>\$233,359,200</b>

\* Revised to account for DOF comments instructing us not to assume an anticipated takeover of air monitoring costs by CARB on Sep. 1, 2018.

## Appendix B: Economic Impact to Output \*

Cost Driver	2017 Cost	2018 Cost	2019 Cost	2020 Cost	2021 Cost
Noise and Temperature Logs	\$7,678,142	\$7,678,142	\$7,678,142	\$7,678,142	\$7,678,142
Casing Pressure Test	\$81,745,737	\$81,745,737	\$81,745,737	\$81,745,737	\$81,745,737
Electromagnetic Test	\$135,029,395	\$135,029,395	\$135,029,395	\$135,029,395	\$135,029,395
Tubing and Packer	\$56,789,460	\$56,789,460	\$56,789,460	\$56,165,400	\$55,541,340
Subsurface Safety Valves	\$8,667,500	\$8,667,500	\$8,667,500	\$8,667,500	\$8,667,500
Maintenance	\$141,480	\$271,642	\$401,803	\$531,965	\$662,126
New Well Construction	\$31,396,800	\$31,396,800	\$31,396,800	\$31,396,800	\$31,396,800
Plug and Abandonment	\$4,071,118	\$3,053,339	\$2,035,559	\$1,526,669	\$508,890
Production casing to surface equivalence/remediation	\$3,270,500	\$3,270,500	\$3,270,500	\$3,270,500	\$1,962,300
Leak detection equipment	\$5,842,956	\$0	\$0	\$0	\$0
Ambient Air Monitoring Staff*	\$3,316,464	\$3,316,464	\$3,316,464	\$3,316,464	\$3,316,464
Additional Observation wells	\$2,616,400	\$2,616,400	\$2,616,400	\$2,616,400	\$2,616,400
Records management	\$330,672	\$0	\$0	\$0	\$0
Risk Management Plan	\$400,734	\$0	\$0	\$0	\$0
Assessment Fees	\$6,907,163	\$5,412,156	\$5,412,156	\$5,412,156	\$5,412,156
<b>Total</b>	<b>\$348,204,522</b>	<b>\$339,247,535</b>	<b>\$338,359,917</b>	<b>\$337,357,129</b>	<b>\$334,537,251</b>

Note: Entry represents the total change in output that occurs in all industries for each additional dollar of output delivered to final demand by the industry corresponding to the entry (BEA).

\* Revised to account for DOF comments instructing us not to assume an anticipated takeover of air monitoring costs by CARB on Sep. 1, 2018.

## Appendix C: Employment Impact

Cost Driver	2017 Jobs	2018 Jobs	2019 Jobs	2020 Jobs	2021 Jobs
Noise and Temperature Logs	41.8	41.8	41.8	41.8	41.8
Casing Pressure Test	445.1	445.1	445.1	445.1	445.1
Electromagnetic Test	735.2	735.2	735.2	735.2	735.2
Tubing and Packer	291.5	291.5	291.5	288.3	285.1
Subsurface Safety Valves	44.5	44.5	44.5	44.5	44.5
Maintenance	0.5	1.0	1.4	1.9	2.4
New Well Construction	129.3	129.3	129.3	129.3	129.3
Plug and Abandonment	7.9	5.9	3.9	3.0	1.0
Production casing to surface equivalence/remediation	13.5	13.5	13.5	13.5	8.1
Leak detection equipment	31.8	0.0	0.0	0.0	0.0
Ambient Air Monitoring Staff*	21.4	21.4	21.4	21.4	21.4
Additional Observation wells	10.8	10.8	10.8	10.8	10.8
Records management	2.4	0.0	0.0	0.0	0.0
Risk Management Plan	4.0	0.0	0.0	0.0	0.0
Assessment Fees	32.7	25.6	25.6	25.6	25.6
<b>Total</b>	<b>1,812.5</b>	<b>1,765.6</b>	<b>1,764.1</b>	<b>1,760.4</b>	<b>1,750.3</b>

Note: Each entry represents the total number in change of jobs (either part-time or full-time) that occurs in all identified industries for each additional 1 million dollar of output delivered to final demand by the industry NAIC identifier. Because the employment multipliers are based on 2013 data, the output delivered to final demand should be in 2013 dollars (BEA).

\* Revised to account for DOF comments instructing us not to assume an anticipated takeover of air monitoring costs by CARB on Sep. 1, 2018.

## Appendix D: Value Added

Cost Driver	2017 Cost	2018 Cost	2019 Cost	2020 Cost	2021 Cost
Noise and Temperature Logs	\$4,062,956	\$4,062,956	\$4,062,956	\$4,062,956	\$4,062,956
Casing Pressure Test	\$43,256,468	\$43,256,468	\$43,256,468	\$43,256,468	\$43,256,468
Electromagnetic Test	\$71,451,979	\$71,451,979	\$71,451,979	\$71,451,979	\$71,451,979
Tubing and Packer	\$37,244,025	\$37,244,025	\$37,244,025	\$36,834,750	\$36,425,475
Subsurface Safety Valves	\$5,684,375	\$5,684,375	\$5,684,375	\$5,684,375	\$5,684,375
Maintenance	\$74,970	\$143,942	\$212,915	\$281,887	\$350,860
New Well Construction	\$19,874,400	\$19,874,400	\$19,874,400	\$19,874,400	\$19,874,400
Plug and Abandonment	\$2,577,047	\$1,932,785	\$1,288,524	\$966,393	\$322,131
Production casing to surface equivalence/remediation	\$2,073,750	\$2,073,750	\$2,073,750	\$2,073,750	\$1,244,250
Leak detection equipment	\$2,991,303	\$0	\$0	\$0	\$0
Ambient Air Monitoring Staff*	\$1,836,648	\$1,836,648	\$1,836,648	\$1,836,648	\$1,836,648
Additional Observation wells	\$1,656,200	\$1,656,200	\$1,656,200	\$1,656,200	\$1,656,200
Records management	\$226,416	\$0	\$0	\$0	\$0
Risk Management Plan	\$242,352	\$0	\$0	\$0	\$0
Assessment Fees	\$3,515,744	\$2,754,786	\$2,754,786	\$2,754,786	\$2,754,786
<b>Total</b>	<b>\$196,768,633</b>	<b>\$191,972,315</b>	<b>\$191,397,025</b>	<b>\$190,734,592</b>	<b>\$188,920,527</b>

\* Revised to account for DOF comments instructing us not to assume an anticipated takeover of air monitoring costs by CARB on Sep. 1, 2018.