

Appendix C:
July 21, 2016 Board Hearing Testimonies

Comments received as testimony at the Board Hearing,
July 21, 2016

1 impressive. And so I'm extremely encouraged that we'll be
2 able to tackle the PM2.5 with the same great results.

3 So congratulations, San Joaquin Valley, and
4 congratulations, staff.

5 BOARD MEMBER SHERRIFFS: Second.

6 CHAIR NICHOLS: We have a motion and a second.
7 Any further discussion on this item?

8 BOARD MEMBER RIORDAN: Madam Chair, I just want
9 to make one comment about -- and I certainly support this.

10 The staff or someone must have worked very hard
11 to have our monitor accepted. And I want to acknowledge
12 that, because that was, I remember, a big issue at one
13 time. And so I know it takes time and some lobbying and
14 whatever else, but you are to be congratulated.

15 CHAIR NICHOLS: Thank you. I agree.

16 All right. I think we can probably just do this
17 on a voice vote then based on the comments so far.

18 Would all in favor of the Resolution Number 16-8
19 please say aye.

20 (Unanimous aye vote.)

21 CHAIR NICHOLS: Any opposed?

22 Any abstentions?

23 Okay. Very good.

24 Thank you all.

25 The next item on our agenda is proposed

**OG-Testimony
7-2016 Hearing**

Testimony for this board
item begins on page 58
of the transcript.

1 regulation for greenhouse gas emission standards for crude
2 oil and natural gas facilities.

3 Both the 2008 Climate Change Scoping Plan and the
4 subsequent first update to the Climate Change Scoping Plan
5 identified the oil and gas sector as a large source of
6 greenhouse gas emissions. Both plans include the
7 regulation of oil and gas operations that is covered in
8 the proposed regulation that's before us now as a
9 potential measure to help achieve the goals of SB 32 --
10 sorry -- of AB 32. That was a Freudian slip. It's AB 32.

11 (Laughter.)

12 CHAIR NICHOLS: Methane is particularly effective
13 short-lived climate pollutant and is also the second
14 largest man-made contributor to greenhouse gas emissions
15 globally.

16 The recently proposed short-lived climate
17 pollutant strategy includes a 40 percent reduction of
18 methane by 2030, with a 40 to 45 percent reduction from
19 the oil and gas sector as a whole by 2025. The proposed
20 regulation is expected to achieve a reduction of more than
21 40 percent in methane emissions from all oil and gas
22 upstream sectors such as oil and natural gas production,
23 processing, and storage facilities. It will reduce
24 methane emissions from the sources covered by the proposed
25 regulation by more than 50 percent.

1 Now, I can't resist, particularly as a Southern
2 California resident, pointing out that the recent events
3 in Aliso Canyon remind us that we have an aging
4 infrastructure that's used at quite a number of oil and
5 gas facilities throughout California, and that we have a
6 great need to conduct regular and routine emissions
7 testing at facilities in order to quickly pinpoint the
8 sources of emissions and ensure that leaks are repaired
9 before they have a chance to grow into disasters.

10 Fixing these leaks will also require that we
11 reduce -- it will also have the effect - I'm sorry - of
12 reducing emissions of volatile organic compounds and toxic
13 air contaminants. So there are multiple benefits beyond
14 just climate change from these cleanup activities.

15 Many oil and gas facilities are located in or
16 near disadvantaged communities as well. And this
17 regulation will also reduce over a hundred tons per year
18 of toxic emissions that have an impact on those
19 communities, including non-disadvantaged. But there is
20 a -- unfortunately, a correlation.

21 Okay. Mr. Corey, would you please introduce this
22 item.

23 EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

24 This regulation will substantially reduce methane
25 emissions from upstream oil and gas production equipment;

1 natural gas gathering and boosting stations and processing
2 plants; natural gas transmission compressor stations and
3 underground natural gas storage facilities.

4 In 2009, staff conducted a comprehensive study of
5 the sector which included site visits, field testing, and
6 a detailed survey of the related equipment. In over the
7 past few years, staff conducted multiple public workshops
8 and numerous meetings with individual stakeholders. Staff
9 also consulted with the Environmental Justice Advisory
10 Committee.

11 ARB will be working on agreements with the air
12 districts to finalize the roles and responsibilities.
13 We're also exploring opportunities to assist the air
14 districts with the costs associated with implementing and
15 enforcing the regulations.

16 The federal government has also recently
17 finalized rules controlling methane from sources in this
18 sector and is expected to continue to regulate in this
19 area. Therefore ARB is taking care to ensure that ARB
20 rules can also support compliance with federal rules where
21 applicable, as well as securing further reductions.

22 Comments as to the timing of this particular
23 rulemaking had been raised, with some comments asking that
24 the process be sped up, others that it be extended.
25 Therefore, before I turn the program -- the presentation

1 over to program staff, I've asked Ellen Peter, Chief
2 Counsel, to give an overview of the overall timelines and
3 required elements of California's rulemaking process, as
4 it should provide some useful context.

5 So with that, Ellen.

6 CHIEF COUNSEL PETER: Thank you.

7 In a 1979 statute The Office of Administrative
8 Law, or OAL, was established as the statewide agency to
9 ensure a clearer orderly process for adoption of State
10 regulations.

11 OAL's training course is three days. So what I'm
12 providing here in the next few minutes is a very brief
13 overview of the process.

14 (Laughter.)

15 CHIEF COUNSEL PETER: I should note that before
16 the formal OAL rulemaking process begins, typically ARB
17 staff has been involved in one or more years of work. The
18 work includes workshops, site visits, conducting studies
19 and analysis, and one-on-one meetings with stakeholders.

20 One key element in the rulemaking process is
21 notice to the public. This notice is to ensure an open,
22 transparent process; and the steps include notice of
23 what's to be changed, notice of the proposed regulatory
24 language to be considered, what is the reasoning for the
25 proposed changes - and this reasoning's reflected in the

1 Initial Statement of Reasons, or ISOR - and what are the
2 impacts of the proposed change, both economic and
3 environmental impacts.

4 A second key element is soliciting and
5 considering the input from the public.

6 The OAL process must be completed within one year
7 from the published regulatory notice, and formal comment
8 periods are also required. These comments can be on the
9 proposed regulation and also can be on the possible
10 environmental impacts of any proposal.

11 The first formal OAL comment period is 45 days,
12 and that's triggered by OAL's publication of the notice.

13 At ARB there's at least one public board meeting
14 where the proposal is considered. If further refinements
15 to the proposal are made, OAL requires a subsequent formal
16 notice and a new comment period which is at least 15 days.
17 If there are possible environmental impacts, staff must
18 prepare written responses to comments on these
19 environmental impacts and then give these responses to the
20 Board to consider before it acts on the proposal.

21 Thus, if there's 15-day changes and if
22 environmental comments are anticipated, many of our items
23 require two board hearings. And that's the case with this
24 one today, the proposed oil and gas regulation, and it's
25 to be set to be considered for a vote when it returns to

1 the Board in early 2017.

2 The next key element before the proposed
3 rulemaking package goes to OAL is the documentation of the
4 comments and decisions. This is the final statement of
5 reasons. It's prepared and it lists all the formal
6 comments and the responses.

7 After the entire package is given to OAL, their
8 staff has up to 30 working days to review and approve.
9 Once approved, OAL submits to the Secretary of State and
10 specifies the effective date of the new regulation.

11 After a regulation is final, there's often lead
12 time built in to allow the regulated companies to come
13 into compliance.

14 In this case for proposed oil and gas regulation,
15 there's also lead time for the local air districts to take
16 their implementation steps. For example, if a local air
17 district wants to adopt its own regulations to inspect or
18 enforce, this air district will need to comply with its
19 own rule adoption process.

20 So I hope this brief summary is helpful in
21 clarifying some of the legally required steps to adopt our
22 regulations.

23 And I will turn it back to Richard.

24 CHAIR NICHOLS: Thank you.

25 If there are no questions at this point -- they

1 may come up later. But for now I think that's a good
2 introduction. This process has gotten longer and more
3 complicated over time. But I think that the staff has
4 laid it out in a way that makes it clearer that there is
5 room for new information and for change as information
6 becomes available.

7 Thanks.

8 EXECUTIVE OFFICER COREY: That's correct. Thank
9 you, Chair.

10 So now I'm going to ask Joe Fischer of the
11 Industrial Strategy's Division to give the staff
12 presentation.

13 Joe.

14 (Thereupon an overhead presentation was
15 Presented as follows.)

16 AIR RESOURCES ENGINEER FISCHER: Thank you, Mr.
17 Corey. Good morning, Chair Nichols and members of the
18 Board.

19 Today I'll be presenting the proposed regulation
20 for greenhouse gas emission standards for crude oil and
21 natural gas facilities.

22 --o0o--

23 AIR RESOURCES ENGINEER FISCHER: I'll begin by
24 providing a little background, touch on some closely
25 related oil and gas efforts, and briefly discuss oil and

1 gas operations in California. I will then present the
2 proposed regulation, its impacts, and Staff's recommended
3 15-day changes.

4 --o0o--

5 AIR RESOURCES ENGINEER FISCHER: Now I'll go
6 through a little background.

7 --o0o--

8 AIR RESOURCES ENGINEER FISCHER: Both the
9 original and 2013 update to the AB 32 scoping plan
10 identified the oil and gas sector as a significant source
11 of methane emissions. The proposed regulation covers
12 intentional vented emissions as well as unintentional
13 fugitive emissions or leaks.

14 In addition to AB 32, the proposed short-lived
15 climate pollutant strategy includes a 40 to 45 percent
16 reduction in methane from the oil and gas sector by 2025.

17 Finally, several measures contained in the
18 proposal reduce emissions from well stimulation events and
19 fracking, which are the focus of SB 4.

20 --o0o--

21 AIR RESOURCES ENGINEER FISCHER: This slide shows
22 methane emissions in California. Methane is emitted from
23 a wide range of sources, including agriculture, waste
24 handling, and oil and gas related activities. In 2013,
25 methane emissions from oil and gas extraction, storage,

1 pipelines, and natural gas seeps accounted for
2 approximately 15 percent of the total methane emissions in
3 California.

4 --o0o--

5 AIR RESOURCES ENGINEER FISCHER: It's important
6 to briefly discuss the roles of both ARB and the districts
7 and how they interact when it comes to addressing criteria
8 pollutants and precursors, toxic air contaminants, and
9 greenhouse gases.

10 In general, the local districts are primarily
11 responsible for stationary sources, such as oil and gas
12 production facilities, while the ARB is responsible for
13 mobile sources, fuels, and consumer products.

14 However, because ARB is the primary agency
15 responsible for implementing AB 32, ARB's responsibility
16 includes stationary sources if GHGs are involved, as is
17 the case with today's proposed regulation.

18 --o0o--

19 AIR RESOURCES ENGINEER FISCHER: I'll now briefly
20 discuss other related oil and gas efforts by ARB and other
21 agencies.

22 --o0o--

23 AIR RESOURCES ENGINEER FISCHER: As I mentioned,
24 the local air districts play a major role in reducing
25 emissions from stationary sources. In fact, some

1 districts have been regulating fugitive emissions since
2 the 1980s for the purpose of reducing volatile organic
3 compounds, or VOCs, which are ozone precursors.

4 However, our proposal covers methane, which has
5 been deemed a non-VOC and therefore specifically exempted
6 from air districts' programs.

7 Given district staff's experience and knowledge
8 in the oil and gas sector, ARB worked closely with the
9 districts throughout the course of the regulation
10 development process, and we have worked to harmonize the
11 requirements with existing district rules.

12 --o0o--

13 AIR RESOURCES ENGINEER FISCHER: We've also been
14 reviewing U.S. EPA actions related to oil and gas
15 facilities. In June, EPA finalized their new source
16 performance standards and is also working on guidelines
17 and rules for existing sources.

18 Although the source categories proposed today are
19 the same or very similar, our proposal is for both new and
20 existing sources and is generally equivalent or more
21 stringent than EPA's. It's also broader in coverage,
22 which means it applies to more equipment.

23 We've been working with EPA and the districts to
24 harmonize these requirements as much as possible, in order
25 to prevent confusion, and to streamline the different

1 testing and reporting requirements.

2 --o0o--

3 AIR RESOURCES ENGINEER FISCHER: Located at an
4 underground storage facility in Southern California, the
5 Aliso Canyon gas leak was a significant source of methane
6 emissions. In response to the event, the Governor
7 released an order on Aliso Canyon with specific direction
8 to address the leaking methane. The Division of Oil and
9 Gas and Geothermal Resources, or DOGGR, promulgated
10 emergency regulations and recently published draft
11 permanent regulations for underground storage facilities.

12 In addition, a report is being developed by the
13 California Council on Science and Technology, along with
14 interagency involvement, to address the long-term
15 viability of storage facilities in California.

16 In developing this proposal, staff considered
17 Aliso Canyon and other leakage events occurring at
18 underground storage facilities.

19 --o0o--

20 AIR RESOURCES ENGINEER FISCHER: In addition to
21 other agencies' actions, I want to touch briefly on other
22 oil and gas related efforts here at ARB. As I mentioned,
23 well stimulation, including fracking, is subject to SB 4,
24 which requires DOGGR to permit these events. ARB is
25 reviewing permits and in some cases requesting air

1 monitoring for certain activities to ensure that the state
2 is being protective of public health, particularly for
3 stimulated wells near disadvantaged communities.

4 ARB is also overseeing methane hot spots
5 flyovers, as required by AB 1496. As I will discuss
6 later, these flyovers can aid in tracking progress and
7 compliance.

8 Finally, we are also involved with other types of
9 testing at oil and gas facilities. We are currently
10 planning to perform testing on produced water percolation
11 ponds, as well as undertake air monitoring near oil and
12 gas impacted communities later this year. Both of these
13 efforts are the result of listening to the environmental
14 justice community's concerns.

15 --o0o--

16 AIR RESOURCES ENGINEER FISCHER: I will now take
17 a few minutes describing oil and gas operations in
18 California.

19 --o0o--

20 AIR RESOURCES ENGINEER FISCHER: As you can see
21 in this illustration, oil production primarily occurs in
22 the Central Valley and Southern California, and the gas
23 that is produced with the oil is called associated gas.
24 In fact, the majority of gas produced in California is
25 associated gas.

1 In Northern California, however, natural gas
2 production is not associated with oil production, and
3 called unassociated gas or dry natural gas.

4 --o0o--

5 AIR RESOURCES ENGINEER FISCHER: This slide shows
6 that the proposed standards apply to upstream and
7 midstream facilities, including production, gathering and
8 boosting, underground natural gas storage, and natural gas
9 transmission facilities.

10 The transmission and distribution pipelines and
11 related facilities are covered by a proceeding underway at
12 the California Public Utilities Commission pursuant to
13 Senate Bill 1371. Staff has been working closely with the
14 CPUC and stakeholders on that rulemaking. Overall, these
15 two regulations cover the entire natural gas system.

16 --o0o--

17 AIR RESOURCES ENGINEER FISCHER: Before moving
18 into the specific measures, I'd like to provide some
19 background on what a basic crude oil system looks like. A
20 crude oil and water emulsion is pumped from the subsurface
21 and piped into a separator where the oil and water are
22 separated into two different products. The oil is sent to
23 a storage tank while the water is sent to a tank or sump.
24 This figure depicts what we define as a separator and tank
25 system.

1 If these tanks are opened to the air, they can be
2 a source of air pollutant emissions since they would be
3 the first place the fluid reaches atmospheric pressure and
4 pollutants are released from the emulsion, or "flashed
5 off."

6 --o0o--

7 AIR RESOURCES ENGINEER FISCHER: In a dry natural
8 gas system, the basic concept is similar. But here the
9 separator is pressurized and it's used to separate gas
10 from water. This too is defined as a separator and tank
11 system.

12 --o0o--

13 AIR RESOURCES ENGINEER FISCHER: I'll now go
14 through the proposed regulation standards.

15 --o0o--

16 AIR RESOURCES ENGINEER FISCHER: First, I'll take
17 a moment to talk about the regulation development process
18 to outline some of the work that fed into the regulation
19 proposal.

20 Staff conducted site visits to a number of
21 facilities located throughout California to learn about
22 the different operations and equipment. We also conducted
23 field testing programs to develop the flash analysis test
24 procedure and undertook a comprehensive survey of oil and
25 gas equipment.

1 We also formed working groups and held
2 stakeholder meetings to discuss the different strategies
3 options. We held five separate workshops, including one
4 in Bakersfield, to present and solicit feedback on the
5 proposed controls and regulatory language.

6 --o0o--

7 AIR RESOURCES ENGINEER FISCHER: This slide
8 summarizes the different proposed controls for the major
9 groups of emission sources, which I will outline in more
10 detail in the following slides.

11 We are proposing vapor collection for
12 uncontrolled separator and tank systems and leak detection
13 and repair, or LDAR, for leaking connectors and equipment.
14 For underground storage facilities we are proposing
15 additional monitoring requirements. And for other
16 sources, such as compressors and pneumatic devices, we are
17 proposing specific leak standards in addition to LDAR.

18 --o0o--

19 AIR RESOURCES ENGINEER FISCHER: The standards we
20 are proposing today apply to separator and tank systems
21 found at all types of oil and gas facilities. Flash
22 analysis testing is required to determine the annual
23 methane emissions, and vapor controls are required for
24 systems with emissions that are above 10 metric tons of
25 methane per year. We have also included an exemption for

1 very low throughput systems, because staff estimates that
2 those systems will not exceed the proposed emission
3 standard.

4 --o0o--

5 AIR RESOURCES ENGINEER FISCHER: Vapor collection
6 systems and control devices are used to handle the
7 collected vapors, and we recognize the importance of
8 reducing NOx emissions whenever possible because NOx is a
9 precursor to ground level ozone. The proposed
10 requirements take a tiered approach to addressing NOx
11 emissions while still controlling the newly collected
12 vapors.

13 First, operators are required to route any vapors
14 collected as part of this regulation to an existing sales
15 gas, fuel gas, or underground injection system. This
16 ensures that the vapors are handled as efficiently as
17 possible without any undue emission impact.

18 In the event that the facility cannot handle the
19 vapor using one of these options, the facility must use a
20 low-NOx device to handle the collected vapor. The
21 proposed low NOx standard allows for the use of
22 microturbines, low-NOx incinerators, and any
23 non-combustion technology.

24 The second part of this proposal requires
25 facilities to replace existing high-NOx emitting flares

1 with low-NOx devices in the event that their facility is
2 required to control additional vapor as specified in the
3 proposal. This will result in reduced NOx emissions from
4 the exist -- from the existing vapor already being
5 controlled, which will more than offset the overall
6 statewide NOx emissions from combusting vapors due to the
7 proposed regulation.

8 However, the San Joaquin Valley Air Pollution
9 Control District is planning a study in their flare
10 minimization plan and may require low-NOx devices in the
11 future. Our proposal will get reductions now, and because
12 of the importance of NOx in the valley, ARB will follow
13 the District's rulemaking and it will work with them to
14 quantify and address any additional NOx that warrants
15 further action.

16 --o0o--

17 AIR RESOURCES ENGINEER FISCHER: Circulation
18 tanks are used in conjunction with well stimulation
19 treatments, and are primarily used to remove excess sand
20 from a well after hydraulic fracturing. These tanks may
21 contain chemicals related to fracking fluids as well as
22 crude oil and gases contained in the well bore. In order
23 to be health protective, staff is proposing that all
24 circulation tanks be controlled for emissions regardless
25 of emission level.

1 Because circulation tanks have never been
2 controlled for emissions, we're proposing a phased-in
3 approach for these sources. First, operators must develop
4 a best management practices plan to mitigate the emissions
5 and then must perform a technology demonstration and
6 report back to the ARB on progress. This provides
7 additional time to design and test equipment such as a
8 vapor storage tank or bladder that does not require
9 supplemental fuel gas to operate prior to the January 1st,
10 2020, deadline when the control requirements take effect.

11 --o0o--

12 AIR RESOURCES ENGINEER FISCHER: Leak detection
13 and repair, or LDAR, is a program designed for finding and
14 repairing leaking components. Under this proposal, LDAR
15 will be used to find and repair leaks of methane at all
16 types of facilities, including natural gas facilities
17 which are not covered by most district rules. The
18 proposal requires daily audio-visual inspections to check
19 for obvious emission sources, and quarterly instrument
20 inspections to locate additional leaks that are not easily
21 seen or heard. We've also included a special category of
22 components called critical components, which is designed
23 to address components that require additional time to make
24 repairs.

25 Under the current proposal, operators could step

1 down to annual testing after five compliant quarters of
2 testing. However, we will discuss a recommended 15-day
3 change at the end of this presentation revising this
4 proposal.

5 --o0o--

6 AIR RESOURCES ENGINEER FISCHER: In addition to
7 LDAR, we are also proposing emissions monitoring
8 requirements for underground gas storage facilities.
9 These requirements are based on the lessons learned from
10 Aliso Canyon and the need for regular monitoring at these
11 high pressure concentrated sites. The proposal includes
12 ambient air monitoring to check for the -- to check the
13 surrounding air for natural gas emissions as well as daily
14 or continuous monitoring at the wellheads for the early
15 detection of leaks.

16 Because each facility is different, we are
17 proposing requirements that will provide some flexibility
18 for choosing various monitoring systems and different
19 types of instruments. The facilities will need to submit
20 a monitoring plan to ARB for approval.

21 In the event that a monitoring system detects a
22 leak which is above the specified leak standards, ARB
23 DOGGR, and local district notification is required.

24 This provision will be taking the place of a
25 similar provision in DOGGR's emergency storage

1 regulations, as this requires shifts from DOGGR to ARB.
2 This shift is acknowledged in DOGGR's proposed permanent
3 regulations, and DOGGR representatives Rob Habel and
4 Justin Turner are seated at the staff table to respond to
5 any related questions.

6 --o0o--

7 AIR RESOURCES ENGINEER FISCHER: Natural gas
8 compressors are used to move gas from production fields
9 through natural gas pipelines, and they can also be found
10 at a number of mid-stream facilities including underground
11 storage facilities.

12 We are proposing testing and emission standards
13 for both reciprocating and centrifugal compressors, and
14 repairs or replacement for compressors that are measured
15 above the specified emission standard. Alternatively,
16 facilities can capture and control the leaking gas. These
17 requirements are specifically for seals and rod packings
18 and are in addition to LDAR.

19 --o0o--

20 AIR RESOURCES ENGINEER FISCHER: Pneumatic
21 devices use natural gas to control when no electricity or
22 compressed air is available. In California, the vast
23 majority of pneumatic devices did not use natural gas.
24 For those that do, the most common types are continuous
25 bleed devices, which vent gas on a continuous basis.

1 This proposal requires the replacement of
2 continuous bleed devices with non-emitting or no-bleed
3 devices, and the same requirement also applies to
4 natural-gas-powered pneumatic pumps. Alternatively,
5 facilities can capture and control the venting gas with
6 the use of a vapor collection system.

7 All intermittent bleed devices are subject to
8 LDAR to ensure that they remain sealed when not actuating.
9 According to our data, these are a small portion of
10 devices and estimated emissions.

11 --o0o--

12 AIR RESOURCES ENGINEER FISCHER: Finally, we are
13 also proposing two different requirements to quantify
14 emissions from liquids unloading and well casing vents
15 that are open to the atmosphere. These will require
16 operators to perform measurements and report results to
17 ARB annually. Both requirements are designed to collect
18 additional data for possible future rulemaking activity.

19 --o0o--

20 AIR RESOURCES ENGINEER FISCHER: The proposed
21 regulation allows both ARB and the districts to enforce
22 the standards. However, both ARB and the districts prefer
23 district implementation because their staffs are local,
24 more familiar with the facilities, and in many cases are
25 already inspecting them.

1 --o0o--

2 AIR RESOURCES ENGINEER FISCHER: Overall, this
3 proposal results in just over 1.5 million metric tons of
4 reductions at an annual cost of just over \$22 million, for
5 a cost effectiveness of about \$15 per metric ton of carbon
6 dioxide equivalent reduced. These results were determined
7 while considering annual natural gas savings and computing
8 the emissions based on a 20-year global warming potential
9 for methane.

10 --o0o--

11 AIR RESOURCES ENGINEER FISCHER: In addition to
12 methane, this proposal also results in statewide emission
13 co-benefits, including 3600 tons per year of VOC
14 reductions and over 100 tons per year of benzene, toluene,
15 ethyl benzene, and xylenes reductions.

16 Due to the design of the proposed low NOx
17 requirement, we expect an essentially neutral statewide
18 NOx impact with approximately a half-ton-per-year
19 reduction occurring in the San Joaquin Valley compared to
20 current year.

21 --o0o--

22 AIR RESOURCES ENGINEER FISCHER: Staff completed
23 a draft environmental analysis, or EA, for the proposed
24 regulation. The draft EA was released for 45-day public
25 comment on June 3rd along with the 45-day package.

1 Staff will prepare written responses to all
2 comments raising significant environmental issues relating
3 to the draft EA which were submitted during the public
4 comment period. And we will present the final EA and
5 written responses to comments on the draft EA to the Board
6 for consideration in early 2017.

7 --o0o--

8 AIR RESOURCES ENGINEER FISCHER: I will now
9 present staff's recommended 15-day changes and next steps.

10 --o0o--

11 AIR RESOURCES ENGINEER FISCHER: We are proposing
12 to remove the annual step-down provision in the LDAR
13 portion of the regulation. This recommendation is based
14 on information we received since the release of the 45-day
15 package, including the EPA's removing of a similar
16 step-down provision in its recently finalized new source
17 performance standard rules.

18 In addition, at our recent methane symposium,
19 more research came to light emphasizing the random nature
20 of super emitter leaks and that more frequent monitoring
21 is indicated. Finally, there have been other leaks at
22 other facilities, not of the magnitude of Aliso Canyon,
23 but which further argue for not stepping down to annual
24 inspections.

25 We are also recommending 15-day changes to

1 clarify the underground natural gas storage requirements
2 in response to questions and comments we received from
3 stakeholders.

4 We are also recommending 15-day changes to
5 perform cost revisions to incorporate idle wells and
6 additional uncontrolled tanks that were not included as
7 part of the original analysis. We also have other minor
8 clarifications and corrections to the regulatory text.

9 As we continue to work with the Environmental
10 Justice Advisory Committee and other stakeholders, we may
11 also develop and propose additional changes.

12 --o0o--

13 AIR RESOURCES ENGINEER FISCHER: Our next steps
14 include continuing working with the districts on
15 resources, NOx, and other implementation concerns. We
16 will also continue to work with the Environmental Justice
17 Advisory Committee and other stakeholders on any remaining
18 issues. We plan to return to the Board in early 2017 to
19 seek final consideration on the adoption of this proposed
20 regulation.

21 In conclusion, staff recommends approval of the
22 resolution with the direction to address the 15-day
23 changes.

24 I will now introduce Alan Abbs, Executive
25 Director of the California Air Pollution Control Officers

1 Association, who would like to say a few words about the
2 ongoing collaboration between ARB and the districts.

3 CHAIR NICHOLS: Thanks. Welcome.

4 CAPCOA EXECUTIVE DIRECTOR ABBS: Thank you, Joe.

5 Good morning, Chairperson Nichols and members of
6 the Board. My name is Alan Abbs and I'm the executive
7 director for the California Air Pollution Control Officers
8 Association, representing the 35 local air districts in
9 California.

10 Thank you for the opportunity to comment on these
11 regulations. Mr. Fischer and staff did a good job of
12 laying out the need for the regulation as well as the way
13 it would be accomplished. And I'd also like to
14 acknowledge the work of Elizabeth Scheehle and Jim Nyarady
15 for the work that they've done in collaborating with the
16 districts on this regulation.

17 As the presentation showed, there are
18 opportunities for large emission reductions in the oil and
19 gas sector from the measures proposed: 1.5 million tons
20 of CO2 equivalents, over 3600 tons of VOCs and over 100
21 tons of toxic air contaminants per year. In addition to
22 the greenhouse gas reductions, the regulation provides
23 local public health benefits, with the reductions in ozone
24 precursors and toxic air contaminants. Overall, we
25 support the regulation and the emission reductions that

1 would be achieved.

2 Also, we support greenhouse gas reductions from
3 these measures that are achieved in ways that also reduce
4 criteria and toxic air contaminants.

5 The implementation of this rule however is going
6 to be challenging, and we look forward to working with
7 staff to translate the regulation into MOUs that define
8 district responsibilities as well as incorporating current
9 district permitting and operational methods and
10 requirements as well as our fiscal requirements.

11 As staff noted, this regulation will add many new
12 stationary sources, particularly in air districts with
13 nonassociated gas production.

14 Some districts will be able to incorporate this
15 regulation into their existing rules and regulations and
16 some will have to make some very big changes to their
17 programs. This will require significant investment of
18 time and money to write permits and modify existing
19 permits, purchase equipment, train staff, and then
20 allocate staff for checking compliance at what is going to
21 be a very widely dispersed stationary source, especially
22 when you include idle wells into the regulation and
23 district requirements.

24 These costs may be difficult for districts to
25 recoup, depending on the number and type of sources and

1 throughput levels of the local operators.

2 But as staff correctly noted, local air districts
3 enforce stationary source regulations and we would be the
4 logical choice to enforce this regulation. And so again
5 we look forward to working with staff to work on the
6 implementation aspects of this regulation.

7 The proposal suggests an effective date of
8 January 1st, 2018, to start. And we think this is
9 reasonable. A regulation isn't any good if it can't be
10 effectively enforced. And ARB and the districts still
11 have some pretty significant work ahead as the proposed
12 regulation moves towards final consideration.

13 January 2018 gives us the time we need to work
14 through how the implementation would work and the
15 programmatic changes that districts would need to make to
16 meet the requirements of the regulation.

17 So thank you for the opportunity to speak on this
18 item; and we'll have representatives from some other air
19 districts with oil and gas production to provide further
20 comments.

21 Thank you.

22 CHAIR NICHOLS: Okay. Further staff comments?

23 OIL & GAS AND GREENHOUSE GAS MITIGATION BRANCH

24 CHIEF SCHEEHLE: We're done with the staff presentation.

25 CHAIR NICHOLS: Oh, okay.

1 OIL & GAS AND GREENHOUSE GAS MITIGATION BRANCH

2 CHIEF SCHEEHLE: We're ready to answer any questions.

3 Sorry for the --

4 CHAIR NICHOLS: All right. That's fine. And I
5 wasn't sure if you had other guests you wanted to
6 introduce or additional comments.

7 Let's just proceed then to take testimony. I was
8 handed page 1 of the list of witnesses who's signed up to
9 speak to us. I believe there's now 32 and counting. So
10 time to get started.

11 And let's -- just a reminder, the three-minute
12 rule. I have been asked, I'll say at the outset, to have
13 a group presentation at the end. Western States Petroleum
14 Association asked for a combination of four of their
15 people to testify together; and they've asked for extra
16 time to do that. And so I've indicated that they could
17 do -- that they could do that. Just so people are
18 forewarned.

19 Yes, Senator Florez.

20 BOARD MEMBER FLOREZ: Thank you, Madam Chair.

21 Maybe before the testimony, a question for staff
22 on flaring and its impact and trade-offs for NOx. I'm
23 trying to figure out how it -- we have a greenhouse issue
24 but at the same time we have a NOx issue. I wanted to see
25 how that -- how staff looked at that and weighed it out.

OIL & GAS AND GREENHOUSE GAS MITIGATION BRANCH

1 CHIEF SCHEEHLE: Yeah, and this has been a very important
2 part of our regulatory development. So we do -- as Joe
3 pointed out, we do have a tiered approach to addressing
4 any vapor that's collected from tanks. And that
5 prioritizes non-combustion routes or routes that may
6 displace natural gas authority used at the facility. And
7 then if that's not available - because it's not available
8 at all oil facilities or natural gas facilities - then you
9 can use a combustion route such as a flare.
10

11 But what we are requiring is for that to meet a
12 low NOx standard. So it would be a low NOx incinerator or
13 some sort of other -- like a microturbine or something
14 like that.

15 And what that requires is -- in most cases they
16 might have an existing flare. Those flares would actually
17 be changed out to meet that low NOx standards or you're
18 having a reduction from the gas that's already going
19 through that. So overall you actually end up with a
20 reduction overall from the tank measure and from the --
21 from any incineration that does happen. But we are trying
22 to move people to the non-combustion routes.

23 Also, as pointed out, there is -- San Joaquin
24 Valley does have a flare minimization plan. And we will
25 be looking at that and following that and determining, if

1 that does go into place and there's a different scenario
2 to look at, what would be the impacts of that rule
3 compared to that scenario. And then we would mitigate
4 that NOx or work with them on ways to mitigate that.

5 BOARD MEMBER FLOREZ: Thanks.

6 CHAIR NICHOLS: Excellent question. Thank you.

7 Okay. Let's --

8 BOARD MEMBER EISENHUT: A follow-up --

9 CHAIR NICHOLS: Yes.

10 BOARD MEMBER EISENHUT: Just a follow-up on
11 the -- on that measurement and mitigation. I would just
12 request that we -- that you give some attention to
13 periodic reports back to the Board so that we're able to
14 follow -- we're able to follow that and the mitigation.

15 OIL & GAS AND GREENHOUSE GAS MITIGATION BRANCH

16 CHIEF SCHEEHLE: Yes, I think that we can do that.

17 CHAIR NICHOLS: Okay. Good.

18 All right. Now, Morgan Lambert again.

19 Welcome back.

OG-T-1-Lambert

20 MR. LAMBERT: Good morning again. Morgan
21 Lambert, Deputy Air Pollution Control Officer with the San
22 Joaquin Valley Air Pollution Control District.

23 Our Executive Director, Seyed Sadredin, asked me
24 to specifically thank Mr. Corey, who has taken the time to
25 understand the unique circumstances in the Valley and has

1 taken seriously the concerns that we have had regarding
2 this proposed regulation.

3 Specifically the potential for NOx from emissions
4 associated with increased oil and gas flaring activity has
5 been a significant concern to us. As you are aware, NOx
6 is a critical pollutant to the District's attainment
7 strategies for both ozone and PM2.5 emissions and, as
8 such, we really have no tolerance for additional NOx
9 emissions in the Valley.

10 And when looking at the potential for increased
11 NOx emissions, we think it's important both to look at it
12 from a perspective of where we are today as well as
13 potential control measures that are included in upcoming
14 or current State Implementation Plans. And we're
15 appreciative of ARB's recognition of that in the
16 presentation and their willingness to work together with
17 the District.

18 In addition, flaring activities at oil and gas
19 operations have been an area of great concern within the
20 Valley's disadvantaged communities, something that needs
21 to be taken into consideration.

T-1-1

22 That being said, I would like to express our
23 thanks and gratitude to ARB staff who have worked
24 diligently with the District to address our concerns and
25 to make changes to the regulation where feasible to

1 address some of those concerns. We are pleased with ARB's
2 commitment in the proposed regulation, which we understand
3 to mean that ARB will work with -- or commit to work with
4 the District to quantify and mitigate any increased NOx
5 emissions which may occur as a result of this regulation
6 in the future. And we at the District are committed to
7 working collaboratively with ARB staff to do so.

8 Furthermore, the District is committed to working
9 with ARB to ensure the most efficient and effective
10 implementation of this regulation. Towards that end, we
11 are already working with affected stakeholders throughout
12 the Valley to develop a program to implement the
13 regulation locally given the permitting and enforcement
14 infrastructure we already have in place and the expertise
15 that we have in permitting and inspecting oil and gas
16 operations.

17 Although we are sensitive to some of the issues
18 that stakeholders have raised regarding this proposed
19 regulation, I have come here to express our District's
20 support for the regulation given ARB's commitment in the
21 resolution to quantify and mitigate any NOx impacts in the
22 Valley.

23 And thank you for the opportunity to address your
24 board today on this item.

25 CHAIR NICHOLS: Thank you very much. As I think

T-1-2

1 what you're commenting and others have indicated, you
2 know, this is a landmark in terms of the Board's evolution
3 of trying to integrate our ongoing and -- and
4 increasingly, I think, focused air quality efforts into
5 the new greenhouse gas program and making sure that we're
6 really trying to optimize for both of these things. And
7 it's a challenge, but I think it's not impossible. And it
8 looks to me as though things are coming together quite
9 well from an implementation perspective.

10 Dr. Sherriffs, you wanted to comment?

11 BOARD MEMBER SHERRIFFS: Well, and I just would
12 want to -- my understanding of how these discussions have
13 gone. In fact, the gap between what the Valley was
14 concerned would be produced in NOx through this, in fact,
15 the staff have worked very hard to figure out ways to
16 close that gap. And we still don't know what the gap will
17 be. But I appreciate very much, and it is absolutely
18 important, that we're committed to measure that, to track
19 it, and think about how we're going to mitigate it if
20 there does come to be an increase in the NOx emissions.

21 Because again, very timely that we talked about
22 the SIP just before this, the District worked very hard
23 and we're talking 12 tons per day in terms of stationary
24 sources that the District was able to squeeze out. So
25 indeed every ton of NOx is very important. So thank you

1 for the hard work on that and the ability to adjust this
2 to close that gap and maybe eliminate that gap, but
3 certainly to think about how we're going to mitigate it if
4 it still exists.

5 BOARD MEMBER SPERLING: Could I ask a clarifying
6 question on something?

7 CHAIR NICHOLS: Yes, please do.

8 BOARD MEMBER SPERLING: So this is supposed to be
9 a greenhouse gas regulation, essentially a methane. So
10 I'm unclear why there's so much discussion of NOx
11 emissions. I mean, I understand partly some of the
12 actions might result in NOx. But is that the only reason
13 we're talking about NOx here? Because otherwise there
14 should be a whole separate proceeding and rules dealing
15 with NOx emissions.

16 OIL & GAS AND GREENHOUSE GAS MITIGATION BRANCH
17 CHIEF SCHEEHLE: Well, we are trying to ensure that any of
18 the greenhouse gas reductions we're getting don't have any
19 impact on criteria pollutants. So that's why we're -- we
20 have this tiered approach. And we've looked at this as
21 just -- if there is any impact from the regulation, we
22 want to make sure we understand that.

23 BOARD MEMBER SPERLING: But any efforts to reduce
24 NOx -- so it doesn't have anything to do with reducing NOx
25 from venting or whatever other way, right? Am I correct?

OIL & GAS AND GREENHOUSE GAS MITIGATION BRANCH

1 CHIEF SCHEEHLE: Correct.

2 BOARD MEMBER SPERLING: Okay.

3 BOARD MEMBER BALMES: I would just say though,
4 one of the things I like about our whole approach to
5 greenhouse gas emissions over the last few years has been
6 to make sure that we also achieve co-benefits with regard
7 to other pollutants. And, again, it's one of the things I
8 like about our work. And so having a separate regulation
9 for air quality issues other than greenhouse gas
10 emissions, I don't even like that idea. I like doing
11 things an integrated way.
12

13 (Laughter.)

14 CHAIR NICHOLS: Well, we are in a Clean Air Act
15 world and we do have to do SIPs for criteria air
16 pollutants.

17 BOARD MEMBER BALMES: I understand that. But
18 we've been very -- I think this Board should be -- and
19 staff should be lauded for the fact that we've always
20 tried to integrate -- especially when it comes to advanced
21 cars, which Dr. Sperling knows well, we tried -- we try to
22 integrate climate change benefits with public health
23 benefits related to air quality.

24 CHAIR NICHOLS: It does require that you be able
25 to think in two different time frames and two different

1 dimensions at the same time, and that is a challenge. But
2 I think we're at least making a good effort at it, yeah.

3 All right. Thank you.

4 Ms. Roggenkamp.

**OG-T-2-
Roggenkamp**

5 MS. ROGGENKAMP: Good morning, Chair Nichols and
6 members of the Air Resources Board. I am Jean Roggenkamp.
7 I'm the deputy executive officer at the Bay Area Air
8 Quality Management District.

9 I appreciate the opportunity to come before you
10 this morning to testify on behalf of the Bay Area Air
11 District on this important rule this morning.

12 First off I'd like to express our appreciation
13 for working with Richard Corey and his staff on this
14 important regulation. It has been a very productive
15 process and we appreciate it very much.

16 We support ARB's proposed rule. The staff has
17 articulated the benefits that would occur in terms of
18 reducing CO₂e, VOCs, and toxic air pollutants. And these T-2-1
19 reductions are really a very important step towards our
20 joint goals of improving public health and protecting the
21 earth.

22 So it will be complementary to the local air
23 district's regulations to reduce VOCs from these kinds of
24 facilities and benefit the communities that are near them.

25 The robust process that ARB has undertaken for

1 developing this rule over many years has really been a
2 very productive process. We appreciate all the workshops,
3 the communications, the working groups that they've had
4 with us and other stakeholders.

5 The Bay Area Air District does intend to
6 incorporate this rule into our local rules, and plans to
7 work cooperatively with ARB on implementation and
8 enforcement. We will work with ARB and other stakeholders
9 and other air districts on the implementation issues that
10 have been articulated.

11 The rule does provide flexibility for air
12 districts to be more stringent, and this is something that
13 we at the Bay Area Air District will explore. Many of the
14 facilities in our area are smaller than the facilities
15 that would be regulated under the Air Resources Board
16 rule, and we will explore whether to include them in our
17 rule.

18 We look forward to working with ARB on this rule
19 and other important climate protection and air quality
20 benefit rules.

21 Thank you so much.

22 CHAIR NICHOLS: Thank you.

23 Mr. Greene.

OG-T-3-Greene

24 MR. GREENE: Chair Nichols, members of the Air
25 Resources Board. I'm Larry Greene, the Director of the

1 Sacramento Metropolitan Air Quality Management District.
2 We too would like to commend the ARB staff, Richard. And
3 all the work that we've done on this, it's been a long
4 effort - and we're not finished - but we've made a huge
5 amount of progress and I think it's been a very
6 cooperative effort amongst all of us.

7 We support this regulation and we think the
8 timeline that's been laid out by the staff is a reasonable T-3-1
9 timeline. We anticipate, like Bay Area, incorporating
10 this regulation within our regulations and permitted
11 sources, so we think we will be able to implement this.

12 We do recognize that some of the smaller
13 districts and some districts that won't be able to do that
14 as easily have some issues regarding fees and support --
15 and paying for the regulatory effort, and we appreciate
16 ARB's willingness to go ahead and continue discussing that
17 particular issue.

18 Also, idle wells remain -- continues to be an T-3-2
19 issue that we're interested in. There's a lot of them,
20 and finding them out on -- up in Northern California is
21 not the easiest thing and it requires a lot of work.
22 So -- but we both know that and we're going to continue to
23 work.

24 We support CAPCOA's comments, and we again
25 appreciate this collaborative effort moving forward and

1 we'll be participating fully in that.

2 Thank you.

3 CHAIR NICHOLS: Thank you.

OG-T-4-Tobias

4 MR. TOBIAS: Good morning, ladies and gentlemen.
5 My name is Elias Tobias. I'm here on behalf of EDF. And
6 I'm the founder, CEO, and lead engineer for Safety Scan
7 U.S.A.

8 We are the specialist invited here. We do
9 optical gas imaging leak detection, or infrared as it was
10 called on the suggested technology after Aliso Canyon by
11 the Emergency Proclamation. So we do just that. We
12 detect leaks using that technology, we quantify the leaks,
13 and we help emissions management for LDAR and the
14 greenhouse gases.

15 I found that recently Colorado University and
16 Carnegie Mellon University done a study on the ground
17 5,000 locations -- gas locations throughout the U.S. and
18 numbers of data last year. They found that the facilities
19 lose around 100 billion cubic feet a year of gas. That's
20 serious stuff. And 30 percent of that hundred billion are
21 vented, are intentional vented gas. The rest is like
22 fugitive emissions. Being the big leakers, compressor
23 stations, transmission and storage, and underground
24 pipelines.

25 The optical gas imaging technology is very

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1)

1 accessible. I have the equipment here if somebody wants
2 to see it on the break. It detects leaks at a very early
3 stage. A good example I give is -- I always bring a
4 cigarette lighter with a camera. When I press the button
5 of the -- just the gas part, the camera's able to pick up
6 that small of a leak. Its 3 grams per hour or 0.1 ounces
7 per hour. So it picks up at the very early stage. So the
8 earlier we pick the leak, it's easier to mitigate or to
9 fix and avoid shutdowns and things like that.

10 So it's very important that the technology was a
11 suggested technology on the Emergency Proclamation after
12 Aliso Canyon.

13 I was here in January and I took -- from a
14 three-mile distance I took a few videos from the leak
15 while it was happening. And the first time I turned the
16 camera on and I look at the image, I thought something was
17 wrong with the setup, so serious it was, so big it was.
18 So it was a serious unfortunate event that obviously is
19 teaching us how to prevent it. And from my studies, it's
20 probably one of the most serious events of that nature in
21 the history of our planet.

22 So, yeah, I feel honored to be here to help a
23 little bit and how we can help, you know, move forward to
24 a better future on that respect.

25 Being a gas industry, or natural gas, leaks is

T-4-1
cont.
(B-12-
1)

1 going to occur. You know, nature is unpredictable. So
2 it's kind of a utopia to think we're going to have zero.
3 But we can -- we can actually work towards finding it at
4 the early stages.

5 And places --

6 CHAIR NICHOLS: That's the buzzer for your three
7 minutes. I'm sorry.

8 MR. TOBIAS: Well, all right. Well, I appreciate
9 very much the opportunity, and have a good day.

10 CHAIR NICHOLS: And we do have your written
11 comments also. So thank you.

12 Elizabeth Paranhus.

13 Hi.

**OG-T-5-
Paranhus**

14 MS. PARANHUS: Thank you. My name is Elizabeth
15 Paranhus. I'm an attorney for EDF. I wish to thank the
16 Board for providing us an opportunity to comment on this
17 landmark rule and urge the Board to adopt it.

18 EDF has participated in the development of clean
19 air measures to reduce methane and other natural gas
20 emissions from oil and gas facilities at both the federal
21 and the state level.

22 We participated in the development of the first
23 ever rules to regulate methane from oil and gas facilities
24 in Colorado in 2014. The proposal before the Board today
25 surpasses that rule in terms of the scope and the

1 comprehensiveness and the rigor of the requirements.

2 We commend staff on working with a broad range of
3 stakeholders to propose cost-effective and feasible
4 requirements. These requirements are critical to ensuring
5 that ARB meets legislative and gubernatorial objectives
6 aimed at reducing statewide methane emissions and
7 achieving other co-benefits as discussed.

8 ARB should not delay in adopting these
9 requirements and it should not weaken in any way to
10 proposed requirements. In particular, we strongly urge
11 the Board to retain the quarterly monitoring provisions
12 for well sites, compressor stations, and gas processing
13 facilities; and the daily and continuous monitoring
14 provisions for underground natural gas storage facilities,
15 with no provision that allows for a reduction in
16 inspection frequency to annual.

T-5-1

17 We commend the staff on proposing the removal of
18 the, quote, step-down provision and urge ARB to approve of
19 this removal. As the catastrophic leak at Aliso Canyon
20 and recent leak at McDonald island demonstrate, leaks can
21 and do pop up unexpectedly, and if not detected and
22 remediated immediately, can cause significant harm to
23 public health and the environment.

T-5-2

24 Moreover, as ARB has demonstrated, quarterly
25 monitoring is highly cost effective. Indeed, per our

T-5-3

1 comments, we believe ARB's cost estimates are conservative
2 and quarterly instrument-based monitoring can be achieved
3 at a lower cost than ARB suggests.

T-5-3
cont.

4 While we strongly support the rule before today,
5 there is room for improvement. In particular, we urge ARB
6 to phase out or prohibit venting from intermittent bleed
7 controllers. We believe the data demonstrates there are a
8 significant number of these devices in the state, and if
9 the emissions are left unaddressed other than by just the
10 LDAR provision, it -- the significant methane emissions
11 from those will undercut some of the other reductions
12 achieved by the rule.

T-5-4

13 Lastly, going forward, new information or
14 emissions identify -- or identified regulatory gaps may
15 surface, necessitating further analysis or review. For
16 example, in 2014 a near-surface waste gas line at an oil
17 and gas line at an Oil and gas facility in Arvin,
18 California, leaked for nearly eight months. And reports
19 indicate that little, if any, requirements existed for
20 inspection and maintenance of those kinds of gas lines.

T-5-5

21 As ARB moves forward with this oil and gas rule,
22 pollution instances should be thoroughly reviewed and
23 revised.

24 Thank you very much. Really appreciate the time.
25 CHAIR NICHOLS: Thanks.

1 MS. BENSON: Hi. My is Elly Benson and I'm an
2 attorney for the Sierra Club, which have over 145,000
3 members in California. And in recent weeks over 7,000 of
4 our members and supporters have signed on in support of
5 the proposed rule, and urging the Board to improve this -
6 certain provisions and implement the rule as soon as
7 possible.

T-6-1

8 First I'd like to submit a disc which contains
9 the exhibits contained in the joint comment letter that we
10 submitted with other groups on Monday, and an updated
11 version of our letter that has those exhibit numbers in
12 it.

13 I'd like to start by thanking the Board for
14 proposing a rule that contains cost-effective, technically
15 feasible mechanisms that will reduce the release of
16 harmful methane emissions from a broad suite of new and
17 existing oil and gas facilities.

18 Methane is 87 times more powerful than carbon
19 dioxide over a 25-year frame. And as the Board is aware,
20 significant methane directions are necessary for
21 California to reach its greenhouse gas emission reduction
22 goals.

23 The draft regulation will also achieve co-benefit
24 reductions in volatile organic compounds and air toxics
25 that threaten human health, as has been discussed.

1 My timer doesn't look like it's going up here,
2 just FYI.

3 We commend the Board for proposing this rule and
4 urge the Board to adopt it.

5 There are several provisions that we urge the
6 Board to strengthen before finalizing the rule. These
7 provisions and suggestions for making them more robust are
8 explained in detail in the comment letter that I mentioned
9 earlier. Today I'd like to briefly touch upon three of
10 them.

11 First, leak detection and repair. Given the
12 geographic and temporal unpredictability of leaking
13 equipment, one of the most important aspects of an LDAR
14 program is the frequency of inspections. Studies strongly
15 support at least quarterly inspections using modern leak
16 detection technology to identify leaking equipment.

17 We strongly support the staff's suggested
18 modification to remove this step-down provision, because
19 neither the percent nor number of leaking components is an
20 accurate predictor of a facility's emissions performance.
21 We thus urge the Board to finalize a quarterly inspection
22 requirement and to remove the provisions that allow for
23 operators to reduce inspection frequency to an annual
24 basis.

25 We further urge the Board to lower the leak --

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-4)

1 initial leak threshold to 500 parts per million.

T-6-3
(OP-19)

2 Our second, compressor emissions. We support the-4)
3 Board's approach to control emissions from compressors,
4 both in the production and non-production segments,
5 through either vapor collection systems or through
6 requirements to measure emissions of the vent point, and
7 to repair when those emissions exceed thresholds.

8 We urge the Board to reduce the flow-rate
9 threshold that triggers repair or replacement of rod
10 packing or seals. Currently the threshold for repair is
11 much too high, as detailed in our written comment. A
12 standard set in the 0.4 to 0.5 standard cubic feet per
13 minute range would be cost effective and would more
14 appropriately balance the need to reduce some of those
15 emissions and the social costs of those emissions while
16 keeping costs reasonable.

T-6-4
(OP-19
-4)

17 Lastly, pneumatic equipment, which Elizabeth from
18 EDF just covered pretty well and I'm running out of time.
19 So I think instead I will just say thank you for your
20 propose and for the opportunity to comment today.

21 Thanks.

OG-T-7-Mann

22 CHAIR NICHOLS: Thanks.

23 MR. MANN: Chairperson Nichols, Board members,
24 staff of ARB, concerned citizens. My name's John Mann.
25 I'm with the 360-International M². And this is Charles

1 Mann with Charles Mann Company, a distributor of mine on
2 the West Coast.

3 We're here -- or we support your regulations. We
4 agree with your reductions. We think it's a great --
5 great address. And we've worked there for the last three
6 years with the EPA making several petitions for
7 reconsideration with reduction, trying to address their
8 reductions for emissions and VOCs. And after those three
9 years they directed us to the California Air Board
10 regulations, said that they're more progressive, they're
11 aggressive, and they actually direct them and they monitor
12 them. And so that they're the people who actually help
13 them. They monitor them. They help them to direct -- the
14 direction that they're going to go and the way they move
15 the country. And they set -- they actually set -- help
16 them set the regulations.

17 So that's why we're here today. Joe Fischer's
18 been very helpful to help us do that.

19 We actually came today to show you a product that
20 we're actually using and we've had for last five years.
21 That is a packing leak detector. It actually -- is the
22 device that actually monitors 24 hours a day. Very cost
23 effective, very inexpensive for the operators to use. And
24 it actually measures and actually detects the leakage of
25 the packing on compressors. Any reciprocating compressor,

T-7-1

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1 no matter how large, no matter how big, for gathering
2 midstream or upstream.

3 And it can be monitored 24 hours a day. Not just
4 one time. And you don't have to worry about whether the
5 packing starts failing at that point.

6 So we have the material here. We also have
7 brochures and we are on line.

8 While I do understand the operators' concern and
9 the cost, and I do understand their frustration. What
10 they're trying to do is focus on what they really have to
11 do. What we're trying to do is help focus that direction
12 and get direct from California Board to see if we can help
13 them focus that direction and make all those things come
14 together so we can help them focus their costs, so we can
15 help lower the reduction of the methanes, the VOCs, and
16 make it all one package.

17 So we thank you for your time. We thank for your
18 efforts. And we hope that we can move forward and help
19 you to achieve your goals.

20 Thank you.

21 CHAIR NICHOLS: Thank you.

**OG-T-8-
Derohanian**

22 MS. DEROHANIAN: Good morning. My name is Cheri
23 Derohanian. I happen to work at Auto Club. But that was
24 just my business card where I work full time. I'm
25 actually a member of the Porter Ranch Neighborhood

1 Council. But I speak to you today as a parent and a
2 resident of Porter Ranch.

3 I have a personal story that how it affected my
4 family and my community. I have two daughters that attend
5 Porter Ranch Community School. During the first week
6 after a gas blowout, they were running the mile and nobody
7 even knew about this gas leak. So notification systems
8 from the gas company or any other companies where there's
9 a leak detected is first and foremost.

10 Then it took about two months for the school
11 district to decide, "Oh, we'll close the schools." So the
12 school my daughters attend, there's 1100 students and
13 Castlebay, an elementary school, there were 800 students.
14 So 1900 students had to relocate, and the schools were
15 moved and it was very, very inconvenient.

16 In addition, out of the 30,000 residents reside
17 in Porter Ranch, approximately 15,000 relocated their
18 households. That's not only stressful, it's awful, it's
19 an inconvenience. Loss of personal liberty and happiness
20 and our way of life was taken away for four months over
21 the holidays, Thanksgiving, Christmas, my kids' birthday.
22 They couldn't even have a decent party because all the
23 kids were dropping out of school like flies.

24 So the stress of the uncertainty of a four-month
25 gas blowout catastrophe is unacceptable. This is bad for

1 public health. This is bad for our air, our climate,
2 everything.

3 And what we seek is that you strengthen the rule
4 and do not allow that step-down that could possibly go to
5 a year. Three months of rigorous testing is necessary and
6 it must be implemented. Any kind of lax rules, lax T-8-1
7 testing, lax any of the above is unacceptable. This is
8 not only true for the Aliso Canyon, for Porter Ranch and
9 surrounding communities, but for our state and our
10 country. We must maintain public health. We must allow
11 residents of all these areas to enjoy their clean air and
12 their way of life. Again the four months of stress and
13 uncertainty was unacceptable and this silent catastrophe
14 is just horrific.

15 So I again thank the Chair and the entire Board
16 for considering this and for listening to my story.

17 CHAIR NICHOLS: Thank you. We will make sure
18 that you're not listed as representing the Auto Club of
19 Southern California.

20 MS. DEROHANIAN: Just resident.

21 CHAIR NICHOLS: Okay. Thank you.

**OG-T-9-
Carmichael**

22 MR. CARMICHAEL: Good morning, Chair Nichols,
23 members of the Board. Tim Carmichael with Southern
24 California Gas Company.

25 First of all, let me say we have been working

1 with the staff for more than a year on this proposal. We
2 support the objectives laid out by the staff. And we've
3 submitted extensive comments on details, identifying
4 several concerns with the details, and we're going to
5 highlight four of those.

6 I'm joined today by one of my colleagues, she's a
7 technical expert in this area, Karen McInnis, and she'll
8 speak next.

9 But we want to highlight four areas of concern
10 and request that the Board direct the staff to spend more
11 time on each of these with the affected industries to work
12 through some of these details.

13 Those areas are:

14 The storage monitoring proposal, which, as we
15 identified in our comments, was only really fleshed out in
16 the most recent version of the proposal. And there has
17 not been adequate time to engage the staff on the details,
18 and we request more time on that.

T-9-1
(OP-17
-6)

19 Technical and process feasibility concerns, cost
20 estimates. The -- karen will provide more details on
21 this. But our cost analysis actually found costs three
22 and a half to four times what you see in the staff
23 proposal. So not a small difference but a very
24 significant difference. And that's fleshed out in our
25 comments, but Karen will speak to that a little bit more.

T-9-2
(OP-17
-7)

1 And then I think the staff did a good job of
 2 noting the multiple layers of regulation, the number of
 3 agencies engaged in this area, either today or in the
 4 process of developing regulations, from the local air
 5 districts to the PUC, the Department of Oil and Gas. And
 6 our request is a direction from the Board to the staff to
 7 take the time to ensure that there's strong coordination
 8 between all of those agencies so we're not having multiple
 9 regulations that don't add additional benefit but may add
 10 significant cost without additional benefit.

T-9-3
 (OP-17
 -10)

11 I think -- oh, the staff 15-day changes noted
 12 that they were going to take time to work on
 13 clarifications on the storage monitoring provisions. We
 14 respectfully believe that it's more than clarifications
 15 that are needed. And we would like Board to direct the
 16 staff to work with our industry on that segment in
 17 particular.

T-9-4

18 Thank you very much.

**OG-T-10-
 McInnis**

19 MS. McINNIS: Good morning. My name is Karen
 20 McInnis, and I'm here representing Southern California Gas
 21 Company, as Tim, my colleague, stated.

22 So the first item I wanted to speak to you on is
 23 regarding the economic analysis that was published with
 24 this last draft on May 31st. And we performed an
 25 extensive comparison between that analysis and did our

1 own, and what we found is, first of all, there were some
 2 calculation errors, just simple mathematical calculation
 3 errors in the published analysis. And then we found, just
 4 to read some numbers, that 9 million versus \$36 million
 5 for the economic analysis CARB prepared for the LDAR
 6 portion of the rule - this is only for the leak detection
 7 and repair portion, one segment of the rule. So it's
 8 almost four times what CARB stated versus what we believe
 9 the costs truly would be.

T-10-1
(OP-17
-19)

T-10-2
(OP-17
-27)

10 So we recommend that staff is directed to go back
 11 and prepare a more complete analysis, more comprehensive,
 12 especially because as a public utility, we have to go
 13 towards the CPUC for our rate case authority, and this
 14 would be a reference document.

15 The second item is regarding process feasibility.
 16 And as a utility, we are required to provide service. And
 17 so system availability and reliability are a major
 18 concern. And we believe that the way that the language is
 19 currently proposed, that even though there is a critical
 20 component definition and a repair delay provision, it does
 21 not accurately or adequately meet our needs to ensure that
 22 our system will not be impacted by the repair timelines as
 23 represented in the rule.

T-10-3
(OP-17
-59)

24 We want to ensure that we can serve our customers
 25 reliably safely, and so we once again direct -- or ask

1 that you can provide direction to staff to work with us.
2 We definitely would be pleased to work with modifying the
3 language to meet both of our needs.

T-10-3
cont.
(OP-17
-59)

4 There are other rules in existence which have
5 repair delays that can be referenced. EPA's Quad O(a),
6 Colorado's regulation has some repair delays, as well as
7 some local air districts.

8 So we believe a successful solution can be
9 reached.

10 And my final comment is regarding the technical
11 aspects of the rule. There are several monitoring and
12 screening detection devices that are referenced within the
13 rule, and we believe that in the storage monitoring area
14 that the technology as represented is not -- has not been
15 proven to meet and address what's been requested. So we
16 ask that that be looked at as well.

T-10-4
cont.
(OP-17
-3)

17 And I'm out of time, so thank you.

18 CHAIR NICHOLS: Thanks.

**OG-T-11-
Begtsson**

19 MR. BEGTSSON: Good morning, Chair Nichols and
20 members of the Board. I'm Nathan Begtsson here to
21 represent Pacific Gas and Electric Company today.

22 PG&E is strongly committed to providing safe,
23 affordable, and reliable natural gas to our 15 million
24 customers. And on that note, I just want to say that we
25 agree with SCG's economic analysis. Anytime that an

T-11-1

1 analysis like that is performed, we worry about the cost
2 impacts to our customers.

T-11-1
cont.

3 The second note I have today is a process note
4 also related to the storage requirements. As Director
5 Corey noted earlier, the other requirements in this rule
6 have been under consideration for two years, if not more.
7 And the new storage requirements were added in on the May
8 31st version of this document, and I think they're
9 important enough to warrant a little more time and
10 discussion with staff. So we ask you to direct staff to
11 do that.

T-11-2
(B-10
-2)

12 And my final point today regards the concept of
13 the regulation itself. As you just heard from Karen,
14 there are critical component exemptions in the current
15 regulation, and PG&E strongly supports those because it's
16 critical to the safe and reliable operation of the natural
17 gas system. However, not every component that's going to
18 leak will be a critical component. And the way the rule
19 is structured with the aggressive repair timelines, there
20 may be cases where blowdowns are required; and that would
21 result in greater emissions even than leaving the leak be
22 for even a fairly long period of time.

T-11-3
(B-10
-5)

23 And so what this is really about is PG&E does
24 support the goals of this regulation and believes that the
25 natural gas system can perform in a more

1 environmentally -- have higher environmental performance
2 and lower emission. It's about structuring enough
3 flexibility in the rule to allow an operator to bundle
4 repairs, to delay repairs when it makes sense in order to
5 avoid the kinds of emissions that would be associated with
6 blowdowns.

7 So as it stands, the repair requirements are very
8 thorough, they're very fast. What we're asking for is the
9 kind of delay provisions that would provide the kind of
10 flexibility to make sure this regulation can reach its
11 ultimate goal, which is emissions reductions.

T-11-4
(B-10
-4)

12 And I want to thank staff for their openness to
13 working with us so far. It's just sort of a challenging
14 question because there are so many different kinds of
15 components, it's a complex system, and that
16 one-size-fits-all sort of -- this amount of time for this
17 kind of leak is not necessarily the right answer.

18 So we look forward to and hope to continue
19 working with them on this, and we're working very hard to
20 come up with language that would make sense.

21 The final thing is: The Method 21 U.S. EPA
22 reference measurement system, which is
23 concentration-based, which is the sort of baseline for
24 this rule because it's the measurements upon which the
25 repair timelines are driven, there has been demonstrated

T-11-5
(B-10
-4)

1 that there is a fairly low correlation between the
2 concentration measurements and actual leak rates, and this
3 is something we'd like the Board to direct staff to take
4 into account going forward in the future. We realize it's
5 important for now and cannot be changed, but volume-based
6 measurement probably is the right way to go about this in
7 the future.

8 Thank you.

9 CHAIR NICHOLS: Okay.

OG-T-12-Rivera

10 MR. RIVERA: Good morning, Board members and
11 staff. My name is Willie Rivera. I'm here on behalf of
12 the California Independent Petroleum Association, CIPA.
13 CIPA represents nearly 500 independent crude oil and
14 natural gas companies as well as service and supply
15 companies operating throughout California. So I'm here in
16 the Sacramento area.

17 Our association's goals include highlighting the
18 economic contributions of our members, fostering the
19 efficient utilization of California's petroleum resources,
20 and striking a balanced approach between environmental
21 protection and resource development.

22 You should have received a letter earlier today.
23 I just wanted to highlight a few items from that letter.
24 I have some of my members here in the audience as well who
25 will speak more specifically on some items of concern to

1 our members.

2 Our letter focused on four main sections, four
3 categories related to the implementation and enforcement
4 of the rule before you, mandatory reporting
5 inconsistencies, the need for reasonable standards. And
6 there are some specific technical concerns related to
7 vapor control and flaring that you'll hear about as well
8 from some of our members.

9 You know, I think this part is clear, and we get
10 it and I understand it. The ARB's wish to have this
11 implemented at the local level I think is the best thing.
12 It's the most efficient use of resources, and they know
13 their areas better than anyone else. However, you know,
14 we believe there's little clarity issues on that front how
15 that will work, how it will be enforced. You know, we
16 believe it's critical that it be made clear who that lead
17 regulatory body is going to be. You know, right now I
18 think there's a possibility for double jeopardy; there's a
19 possibility for two agencies to be enforcing the same
20 rule, which I think adds undue burdens to our industry,
21 and certainly deviates from regulations you folks have
22 considered and passed in the past.

23 I think there's a lot of work that can be done to
24 better incorporate local priorities and incorporate local
25 control. I think in the process of developing MO --

1 memorandums with the local air districts, I think that
2 process needs to be public. I think stakeholders should
3 be a part of that process. We should be at the table.
4 And that has happened. Your staff has done a great job.
5 We appreciated the fact they came down to Bakersfield and
6 joined stakeholders for a day to answer our questions and
7 learn from our industry and hear our concerns. And we
8 hope that that continues in this 15-day package you folks
9 will consider. We look forward to working with you
10 through that process.

11 And thank you for your efforts up and to this
12 point.

OG-T-13-Lovley

13 MR. LOVLEY: Good morning. My name's Tim Lovley.
14 I'm with MacPherson Oil. And I was really happy to hear
15 that we're at harmonization today, because I think that's
16 important for us when we're looking at the different
17 agencies, the different people that are engaged in this
18 process, the different shareholders. When we get to this
19 regulation when it actually hits the ground, that
20 harmonization is going to be important to us for lack of
21 reducing duplication, the issue of having multiple or
22 different types of testing requirements to be done such as
23 a flash analysis.

24 Additionally, I've got a couple other items here
25 that I wanted to talk about real quick.

1 The gauge tanks were recently added. These are
2 tanks that are hundred barrels, they're portable. Some
3 are stationary. These are used for measuring one well at T-13-2
4 a time. These are very low emission especially in the
5 heavy oil fields. And I think there's more opportunities
6 to discuss this with the staff when the outgoing
7 discussions we've had.

8 Additionally, the timeline, the 180 days, seems
9 unrealistic. If you go through the permitting process,
10 you have the engineering process, the study process,
11 before you even get to a permitting process. Then T-13-3
12 somewhere along the line you actually get to spec out and
13 order your materials. That timeline is very short.
14 You're looking at -- what we try to do is plan out a year
15 ahead. If we have an issue that we've got to make a quick
16 response to, we need more than 180 days to respond.

17 Additionally, the downtime issue. We run like
18 most businesses, try to keep our inventory spares to
19 critical parts. If we have compressors in our facilities
20 that go down, 30 days is sometimes too short. Some of T-13-4
21 these equipment require specialized parts, especially when
22 you start talking about mechanical seals that takes
23 significant amount of time to put together especially if
24 they're designed for a specific compressor. These are
25 something that manufacturers don't even have on the shelf.

1 Additionally when you talk about compressors, I
2 think there's a difference in the opportunity to harmonize
3 the regulation for the specific portion of the industry
4 for this. To understand the difference between production
5 where our compressors may run at different rates, low
6 flow, high flow, the gas use for the filtration is much
7 different than it is in the PUC gas system. And it has a
8 much higher failure rate when you look at dry seals in the
9 compressors.

10 Finally, the casing vapor was a recent addition.
11 I think there's more opportunities there to discuss with
12 staff how the casing vapor actually works; where you see
13 casing vapor; when it's not there; how it's affected by
14 the difference within the reservoir, the pump, the pump
15 stroke - a lot of activities there - the pressure, so that
16 they can understand that.

17 Again, I think there's a lot of opportunities to
18 harmonize a regulation for the specific industry along
19 with the different regulatory bodies.

20 Thank you.

21 MR. HORNE: Good morning, Chair Nichols and the
22 Board. Man, is this imposing or what. I'm just first
23 time doing this, so I appreciate the opportunity to speak
24 with you.

25 My name is Randy Horne, and I represent NAFTEX

T-13-5

OG-T-14-Horne

1 Operating Company. We're a small producer for oil and gas
2 in the Bakersfield area.

3 Thanks to staff for what they've done so far,
4 working with us as industry.

5 What I'd like to talk about is that I agree with
6 many of the comments that have been made previously with
7 the speakers with LDAR. We're a small operator. We were
8 24-people strong last year. We're now down to eight
9 people. And we're trying to operate and, trust me, we are
10 environmentalists as we operate. But this LDAR
11 requirement, particularly with the step-down provision
12 proposed, could impact us on the heavy oil side. That
13 would almost be 300 percent increase in cost to us. So we
14 ask that staff continue working with us with regards to
15 reviewing that step-down provision, as well as looking at
16 some of the other requirements noted earlier in the
17 presentation.

T-14-1

18 And, Joe, thank you very much. That was really a
19 nice presentation.

20 As we continue through this effort, our industry
21 as Willie has indicated, looks forward to working with
22 you, continuing to improve it, and try to minimize the
23 duplicative regulations that we are working through at
24 these points.

T-14-2

25 So I appreciate again for the opportunity.

1 Apologize for the nervousness. But we look forward to
2 working with you again, staff.

3 CHAIR NICHOLS: It wasn't so bad, was it, really.
4 (Laughter.)

OG-T-15-Baizel

5 CHAIR NICHOLS: You did fine. Thank you.

6 MR. BAIZEL: Chair Nichols, Board. My name is
7 Bruce Baizel. I'm the energy program director for
8 Earthworks. We're a national nonprofit that works with
9 communities to mitigate the impacts of energy development
10 and mineral development. And we've submitted written
11 comments, which you'll see.

12 What I'd like to do is focus a little bit on the
13 unique niche that we occupy. In the NGO world we're one
14 of the few that actually has the gas imaging technology.
15 And so for a number of years now we've been working with
16 communities, including some here in California, to look at
17 oil and gas sites, looking for emissions using that
18 technology.

19 I would say that in addition to California we
20 worked in 12 other states, looked at several hundred
21 sites; and regardless of the state of the operator or, in
22 general, the type of facility, we find that at
23 three-quarters of the sites we look at there are unplanned
24 methane emission leaks.

25 So it's not that any particular operator or any

1 particular state is different. We find it's pretty
2 consistent across those states.

3 Specific to California we've looked at well
4 sites; we've looked at gas processing plants; we've looked
5 at your operation waste pits; we've looked at storage
6 fields, including some of the images on Aliso Canyon are
7 from our thermographers. We don't -- we don't see a
8 difference between those facilities really. It's pretty
9 consistent.

10 We're very pleased that you in fact are stepping
11 out -- we were a party in the Colorado 2014 methane
12 rulemaking on oil and gas. We're pleased that you're
13 stepping out with both existing and new sources. We think
14 that's very significant. For the people that we work
15 with, it's the sources that are there right now that are
16 the problem, and your rule would address that.

T-15-1
(B-2-1)

17 I think the other comment I would make in terms
18 of our experience, we've done work down in the L.A. Basin
19 as well and urban settings. And a couple of the images
20 that we submitted, we did one from Kern County, the Lost
21 Hills Oil Field, and then one from the Murphy oil field;
22 and in both cases, whether it's a large site or a small
23 site, you can still see those emissions coming off. One's
24 from a vent, the other was from storage tanks. So we
25 really encourage you to continue on.

1 We saw on the 15-day change the removal of the
2 step-down provision. In our experience, over time, we
3 would encourage you to take that out. It doesn't
4 really -- we don't see that it will provide the incentive
5 to actually find leaks. We, in fact, think it will
6 provide a perverse incentive to not find leaks. So we
7 encourage staff -- you to take that recommendation.

T-15-1
(B-2
-14)

8 Thank you.

9 CHAIR NICHOLS: I'm going to prolong time for
10 just a second. Because I did read your written testimony,
11 and I wasn't sure what you were proposing when you talked
12 about citizen science, in addition to your comments about
13 transparency and making information available and so
14 forth.

15 Did you have some additional idea about how that
16 would work?

17 MR. BAIZEL: Well, there's suggestion in the
18 regulation that there would be a web portal for reporting
19 information. And as part of that, we presume there would
20 be submission by operators when they do -- when they bring
21 in a paid contractor, which many of them do in other
22 places, to the leak detection reports. We think you
23 should also allow for certified operators with OGI to
24 actually submit directly in. And we've done that with
25 partner community groups with some of the air districts

1 here in California. But as long as you meet the
 2 requirements for certification and recordkeeping and so
 3 on, we think you could tweak the rule to allow for
 4 submission of that when you have a certified operator.

5 CHAIR NICHOLS: I see. Okay.

6 MR. BAIZEL: That would be our suggestion.

7 CHAIR NICHOLS: Yeah. I appreciate that. Thank
 8 you.

9 MS. HERRERA: Gloria Herrera. I'm here today to
 10 support the developing proposed regulation.

11 CHAIR NICHOLS: Could you move the microphone
 12 closer.

13 Thank you.

**OG-T-16-
Herrera**

14 MS. HERRERA: I'm Gloria Herrera. I'm here today
 15 to support the developing proposed regulations. As
 16 resident of Kern County, our health and well-being has to
 17 be over any industry. There is so many respiratory
 18 problems, asthma problems, cancer problems due to all
 19 these contaminants. T-16-1

20 I will appreciate that you listen to our
 21 petitions. Thank you. Have a nice day.

OG-T-17-Trujillo

22 MS. TRUJILLO (through interpreter): Good
 23 morning, everyone. My name is Felipa Trujillo, and I
 24 would like to -- I'm part -- I'm a member of the community
 25 of Shafter where I feel that the air is most contaminated. T-17-1

1 I am petitioning to stop fracking, please, because we do
2 have some cancer and asthma issues.

T-17-1
cont.

3 And I also support solar energy.

4 Thank you very much to all.

5 CHAIR NICHOLS: Thank you. I wish we had
6 simultaneous translation, but we don't. So please ask if
7 people can pause.

8 Thank you.

OG-T-18-Flores

9 MR. FLORES: Good morning to all the Board
10 members. My name is Juan Flores. I'm a resident of deny
11 Kern County, Delano as a matter of fact. And today will
12 be a landmark date once you guys approve these new
13 regulations.

14 For many decades, residents of Kern County have
15 stand in front of this Board and many other boards asking
16 to protect their well-being and their health. What the
17 residents prior to me just mentioned, it's completely
18 truth. It's so sad to go to these communities and that
19 your children say, "I already know the steps that I have
20 to take when I have an asthma attack. I know that I need
21 to relax first and then I need to wait for an ambulance
22 and go to the emergency room." And this is all because of
23 the poor air quality that we have.

24 And it is also a landmark today that the oil
25 industry will accept that they have responsibility -- and

T-18-1

1 the gas industry as well -- that they have responsibility
2 over these burdens that are affecting the health of our
3 community members. It was about time.

T-18-1
cont.

4 In Kern County at least we have been doing oil
5 drilling for 117 years. And today would be the first day
6 that we're going to regulate and maintain emissions coming
7 from this industry. Long overdue. Long overdue.

8 Today I'll be happy to go back to my community
9 and to finally speak to community members and say, "We
10 don't have excuses anymore. Now we have a clear plan to
11 come and help and protect your health."

12 Thank you so much.

OG-T-19-Stano

13 MS. STANO: Good morning and thank you. My name
14 is Madeline Stano and I'm an attorney with the Center on
15 Race, Poverty, and the Environment in Delano, California.

16 I'm offering public comment on behalf of our
17 clients, some of whom you just heard from; in addition,
18 residents from Bakersfield, Arvin, Delano, Shafter, Wasco,
19 and Lamont in Kern County.

20 We offer our support for this essential rule to
21 protect some of our state's most overburdened residents
22 from life-threatening pollution, overwhelmingly residents
23 where low income and residents of color; as the Chair
24 stated earlier, in disadvantaged communities.

T-19-1
(OP-11
-1, OP-
15-1)

25 We support the removal of the step-down provision

T-19-2
(OP-11-
2, OP-15

9 T-19-2
(OP-11-
2, OP-15
-7)

1 as stated in the proposed 15-day changes.

2 Additionally, we respectfully request that CARB
3 release an annual report to the legislature with aggregate
4 emissions data from owners and operators collected under
5 this rule and data from CalEnviroScreen for the purposes
6 of prioritizing inspection and enforcement of this rule in
7 the areas most overburdened by pollution in the state.

T-19-3
(OP-15
-13)

8 Thank you very much.

**OG-T-20-
Decena**

9 MS. DECENA: Good morning, members of the Board.

10 My name is Vinai Decena. I'm a registered nurse and a
11 public health nurse, and I'm representing the Alliance of
12 Nurses for Healthy Environment, any of the national
13 organization comprised of nurses who are concerned about
14 health issues that are related to environmental exposures.

15 We are engaged in nursing education, practice,
16 research, and advocacy. Our members include
17 hospital-based nurses, school nurses, public health
18 nurses, occupational nurses and academic nurses.

19 California already experiences the worst air
20 quality in the nation, with more than 95 percent living in
21 areas with unhealthy air, according to the California Air
22 Resources Board. Currently approximately one out of every
23 three days is considered unhealthy for ozone population.
24 This is based on California's own health-based air quality
25 standards in areas such as the South Coast Air Basin and

1 the San Joaquin Valley.

2 Also according to the California Air Resources
3 Board, the annual health impacts of exceeding state
4 health-based standards for ozone and particulate matter
5 already includes 6,500 premature deaths, 4,000 hospital
6 admissions for respiratory disease, 3,000 hospital
7 admissions for cardiovascular disease, 350,000 asthma
8 attacks, 2,000 asthma-related emergency room visits,
9 elevated school absences due to respiratory conditions
10 including asthma, reduced lung functions growth rates in
11 children.

12 Leaking methane gas is yet another contributor to
13 our already challenging air quality. In combination with
14 other pollutants, methane causes ground-level ozone, which
15 is associated with the inflammation of the lungs and
16 exacerbation of asthma conditions in children and adults.

17 Patients exposed to methanes have reported
18 incidents of dizziness, fainting, headaches, fatigue,
19 numbness in the limbs, muscle tremors, memory loss, and
20 irritability. Some other generalized symptoms are hearing
21 loss, sleep disturbance, nose bleeds, increased blood
22 pressure and decreased mental performances.

23 As nurses, we see panicking parents as they bring
24 their children to the emergency room in asthma crisis. We
25 see frail elderly people whose lungs have been ravaged by

1 years of breathing bad air.

2 We must take all the precautions possible to
3 reduce the conditions that causes ground-level ozone that
4 contribute to these lung conditions.

5 Methane is also an extremely powerful greenhouse
6 gas that contributes to global warming and climate change.
7 We are already seeing many of the health impacts of
8 climate change, and it is critical that we mitigate any
9 and all contributors to public health crisis.

T-20-1
(OP-11
-2, OP-
15-7)

10 In California, we must have the strongest methane
11 standard possible. It must include tight schedules for
12 regular inspections. Given the aging gas and oil
13 infrastructure in California, we urge the Board to remove
14 the step-down.

15 We need -- thank you.

**OG-T-21-
Schroeder**

16 CHAIR NICHOLS: We do have your written testimony
17 also. It's quite extensive. So thank you.

18 Okay. We're on to page 2.

19 MS. SCHROEDER: Hi. Good morning. My name is
20 Jaclyn Schroeder and I'm here with Moms Clean Air Force.
21 I'm here just as a concerned parent.

22 When I was first invited to come today, I almost
23 quickly declined because I have three young children at
24 home. But that's exactly the reason I decided to come,
25 because I am their mother first.

1 So being a mother first to me is being that voice
2 for my children. Being a mother first is making sure I
3 provide a healthy environment for them. I am a mother
4 first today by speaking up for my children's health.

5 So thank you for taking this important step in
6 addressing the methane pollution from oil and gas
7 operations. And I urge you to move forward with your
8 proposal while considering two important changes.

9 One, remove the step-down provision which would
10 allow operators to shift to less rigorous monitoring
11 requirements. This would create a perverse incentive to
12 avoid finding and reporting leaks and less of a reason to
13 avoid fixing them quickly.

T-21-1
(B-5
-1)

14 Second, the current proposal pushes
15 implementation timeline by a year, from January 2017 to
16 January 2018. Our families can't afford to wait till
17 2018.

T-21-2
(B-5
-2)

18 I currently own a home in Porter Ranch, where the
19 Aliso Canyon gas blowout was. I have again three kids, a
20 son who's five-years old and twin daughters that are two
21 and a half. My family, community, and I understand the
22 direct impacts of methane pollution, especially the
23 exposure to co-pollutants that leak alongside methane
24 pollution from oil and gas development.

25 I grew up in the San Fernando Valley in Porter

1 Ranch and decided to raise my family there as well.
2 However, never did I realize that we lived on top of one
3 of the largest gas storage reserves in the United States
4 that was not regulated properly, and what that could mean
5 for the health of my family.

6 October 23rd in Porter Ranch the largest methane
7 gas blowout in U.S. history was reported. Ironically a
8 month earlier my daughter Emma, 22 months at the time, was
9 sent home from Kaiser with a nebulizer with -- that's an
10 at-home breathing treatment. She began showing signs of
11 asthma and continued to show these signs over the next few
12 months.

13 October 31st, Halloween, unbeknownst to us the
14 leak had been reported a week earlier. My children that
15 evening were sniffing, complaining of headaches and
16 fatigue. There was an odd odor in the air, and my kids
17 barely lasted 30 minutes trick-or-treating.

18 November 5th we took our daughters to Kaiser
19 again because they were having trouble breathing. Just
20 days later, my daughter Grace developed really bad eczema
21 on her cheeks.

22 December 10th, my girls were back at Kaiser and
23 diagnosed with asthma with acute exacerbation. These are
24 real impacts of oil and gas development and the hazards
25 that can come from the co-pollutants leaked alongside

1 methane pollution. Our most vulnerable chil -- are little
2 lungs and bodies.

3 I just encourage you to strengthen the proposed
4 rule.

5 Thank you very much.

6 CHAIR NICHOLS: Thank you.

OG-T-22-Russell

7 MS. RUSSELL: Good morning. I'm Loni Russell.

8 I'm here today as a concerned citizen, a daughter, and an
9 aunt. I'm a member and community organizer for Moms Clean
10 Air Force, California, a community of over 80,000
11 California parents fighting for clean air. And on behalf
12 of our members, I want to thank you for the opportunity to
13 testify today.

14 I thank you for taking this important step and
15 addressing methane pollution from oil and gas, and
16 respectfully urge you to move forward with your proposal,
17 while considering two important changes:

18 One, the current proposal includes a step-down
19 provision which would allow operators to shift to less
20 rigorous monitoring requirements, which would create a
21 perverse incentive to avoid finding and reporting leaks
22 and a reason to avoid fixing them quickly.

23 And, two, the current proposal pushes the
24 implementation timeline by a year, from 2017 to 2018. Our
25 communities cannot afford to wait.

T-22-1
(B-6
-1)

T-22-2
(B-6
-2)

1 The scientific record and public health
2 co-benefits demonstrate that cutting methane pollution
3 would provide strong public health protections for
4 Californians and, most importantly, for our children. I'm
5 no stranger to poor air quality, growing up in the San
6 Fernando Valley, where my family still resides and many of
7 my relatives still suffer from asthma.

T-22-3
(B-6
-3)

8 Nearly one in every 10 school children in the
9 U.S. has asthma, asthma being the number one health issue
10 that causes kids to miss school.

11 Co-pollutants that leak along with methane lead
12 to ozone formation or smog. Numerous studies have found
13 elevated smog in regions with oil and gas development
14 largely due to emissions of VOCs and the nitrogen oxides
15 from these activities.

T-22-4
(B-6
-4)

16 Standards that reduce methane emissions from oil
17 and gas development will simultaneously reduce emissions
18 and formation of health-damaging air pollutants, including
19 VOCs, hazardous air pollutants, particulate matter and
20 ozone.

T-22-5
(B-6
-5)

21 So reducing all these would reduce exposure of
22 nearby communities to these pollutants and the subsequent
23 risk of health effects, including respiratory morbidity
24 and premature death.

25 A large body of scientific research indicates

T-22-6
(B-6
-6)

1 that oil and gas development associated with health
2 impacts, empirical studies have found evidence of the
3 following:

4 1) Higher reported health symptoms per person
5 among residents who live close to gas wells.

6 2) Greater prevalence of adverse birth outcomes,
7 including congenial heart defects, neural tube defects,
8 and low birth weight for infants born to mothers who live
9 in high densities of natural gas development.

10 Children, pregnant women, and the elderly are the
11 most susceptible to these negative health impacts from oil
12 and gas pollution. Let's keep our most vulnerable safe
13 with a strong standard.

14 Thank you for this opportunity to testify.

15 MS. MOELLER: Good morning to the Board. My name
16 is Jennifer Avila Moeller, and I come before you today as
17 a mother, a concerned citizen of Porter Ranch, and a
18 Southern California resident. Thank you in advance for
19 allowing me a few brief moments to tell my story.

20 I am the mother of three beautiful children five
21 and under. My son Mason is five and a half; Madison, two
22 and a half, and Miles, nine months old.

23 I can remember October 2015 like it was
24 yesterday. It was two weeks after I had given birth to
25 our third child, Miles. I returned home from a

T-22-6
cont.
(B-6
-6)

**OG-T-23-
Moeller**

1 much-needed outdoor walk when I noticed a letter taped to
2 my front door on Southern California Gas Company
3 letterhead notifying me of the biggest Aliso Canyon
4 blowout known to date. Naturally I panicked. I was
5 horrified and stricken with more questions than I could
6 fathom.

7 Baffled and looking for answers, I immediately
8 relocated our family to a distant city away from our
9 current dangerous and hazardous living environment.
10 Prioritizing my family's health was of utmost importance,
11 and this mamma bear was not taking any chances of
12 jeopardizing my children's health or potential exposure to
13 developing future illnesses.

14 Because of this catastrophe I urge you to address
15 high levels of methane pollution in efforts to controlling
16 oil and gas operations by considering the following
17 options:

18 Fixed frequency inspections remove incentives to
19 shift to loose annual inspections. A substantial portion
20 of methane emissions across the supply chain come from
21 leaks. That's why a leak detection and repair, LDAR,
22 program that requires operators to regularly find and fix
23 leaks is a straightforward cost-effective way to reduce
24 oil and gas methane emissions. CARB's proposed rule
25 initially requires quarterly monitoring of facilities but

T-23-1
(B-7
-1)

1 allows for a step down to annual depending on whether
2 operators find leaks.

cont.
(B-7
-1)

3 Also, the implementation timetable needs to be
4 faster. Recent amendments push back to the implementation
5 of the rule by a year. California communities need
6 reductions sooner than that.

T-23-1
(B-7
-2)

7 Did you know that children's lungs continue to
8 develop after birth. Children breathe faster and spend
9 more time outside than adults. That children are
10 especially more vulnerable to air pollution in organs,
11 much like a child's brain and reproductive system will
12 continue to develop post birth. You can see why my sense
13 of urgency to immediately relocate my family to safer and
14 cleaner grounds was nothing less but my main priority when
15 high levels of methane along with other cancer-causing
16 chemicals such as benzene were being emitted into the air
17 due to a lack of regularly regulated aging infrastructure
18 in an oil-gas storage facility.

19 Living in a dense and overly populated city such
20 as Los Angeles where driving vehicles is a commonality,
21 smog and air pollution is already a heavy and weighted
22 ongoing issue, let alone allowing for the release of high
23 levels of methane into the air.

24 As parents and grandparents, I leave you with
25 this question: What would you have done?

1 Thank you for your time.

2 MR. PAKUCKO: Hi. My name is Matt Pakucko. I'm
3 the president and co-founder of the group called Save
4 Porter Ranch, a nonprofit citizens education and action
5 group; and I live right next to the blownout Aliso Canyon
6 well.

7 So I know firsthand the effects that methane and
8 its components have on people. And I'm saddened and real
9 tired of hearing and seeing daily, still, after the
10 blowout was supposedly stopped, of nosebleeds, rashes,
11 headaches, asthma, and other respiratory and breathing
12 problems from people that live near that facility.

13 So what I'm concerned about, as much as we rely
14 under the new regulations, there's much reliance on local
15 agencies to enforce the regulations. What's missing is
16 clear enforcement and penalties for noncompliance.

17 In the case of Aliso Canyon, our local AQMD
18 failed to do anything substantial even in the biggest
19 blowout in, what, U.S. history. They gave a slap on the
20 wrist, saying they have little authority over the
21 operation of the facility, and issued that a temporary
22 abatement order, which did little more than to monitor the
23 problem, didn't actually stop anything.

24 So who has the authority to do something, to
25 actually stop emissions? To actually shut down a repeat

T-24-1

1 or major offender that keeps on violating?

2 Apparently nobody, as we found out in the Aliso
3 Canyon situation. Every agency claimed that it's not
4 their jurisdiction to actually stop the emissions. It
5 took, you know, a State of Emergency declaration by the
6 Governor. Is that what it's going to take when there's an
7 ongoing offender? Fines and more fines by our local
8 agencies doesn't stop emissions from going into our lungs.

T-24-1
cont.

9 So what has worked and subsequently uncovered
10 more massive failures by SoCalGas, including finding that
11 many, many, a huge number of their wells failed basic
12 integrity inspection, is shutting down the facility. The
13 penalty of a facility shutdown must be included and
14 enforceable by the State. This is the one thing that has
15 been proven effective in getting the industry to do the
16 right thing and actually stop the emissions.

T-24-2

17 And regarding the step-down thing, a step-down --
18 I'm glad you guys are trying to make it quarterly, because
19 at our facility alone continuously leaking after all the
20 scrutiny that's going on there.

T-24-3

21 March 18th, Termo, another operator, was busted
22 by DOGGR illegally venting methane.

23 April 13th, another mysterious gas release. 43
24 complaints to the AQMD.

25 April 16th, Crimson Resources, another operator,

1 oil spill and gas release.

2 July 2nd, another pipeline leaking by SoCalGas.
3 Our own real-time monitoring system shows spikes in
4 methane every day.

5 So, yeah, we need quarterly, at least, if not a
6 real-time monitoring fence line around all these
7 facilities, because this is just -- this is just one. We
8 got 13 of those in the State. And this place is already
9 under tremendous scrutiny and it's still spewing. So we
10 need to get a little more stringent on that one.

T-24-4

11 Thank you very much.

12 CHAIR NICHOLS: Came right under the buzzer too.
13 That's great.

OG-T-25-
McGavern

14 MR. MAGAVERN: Good morning. Bill Magavern with
15 the Coalition for Clean Air. And this is a rule that, as
16 you know, has been in the works for a long time. I think
17 your staff have done an excellent job of holding public
18 workshops and listening to the input of a number of
19 parties. And now I think it's time for you to take this
20 first step and hope that the second step will happen early
21 next year so that we can get this rule into effect.

22 It's important I think nationally and
23 internationally. As you know, methane is a very important
24 short-lived climate pollutant. And it's also important
25 for the health of our communities. As you've heard from

1 people who live in Porter Ranch, who live in the San
2 Joaquin Valley, these oil and gas facilities have a lot of
3 impacts on people who live near them. And this rule will
4 help to reduce some of the volatile organic compounds,
5 some of the air toxics that are coming out of these
6 facilities.

7 As you've heard, the proposal does very well in
8 terms of cost effectiveness and also does provide benefits
9 in addition to just reducing the emissions of methane.

10 And on the methane, I think it's very important
11 that this rule does use the 20-year time frame for
12 estimating global warming potential. And given the
13 urgency of the climate crisis, it's very important that
14 this Board continue to look in terms of 20 years or fewer
15 rather than the extenuated 100-year lifetime.

T-25-1

16 We're glad to see that there are other
17 requirements for vapor collection and for NOx reduction.

18 And what's particularly important in the staff
19 proposal is the removal of the step-down for the leak
20 inspection. As you've heard, it's important to be
21 consistent with U.S. EPA, and to recognize that annual or
22 even semiannual inspections are not frequent enough. We
23 do need to have the quarterly inspections.

T-25-2
(OP-11
-2)

24 Given the urgency that we've talked about, we do
25 hope that this rule will be implemented as soon as

T-25-3
(OP-11
-3)

1 possible. I know they still have some steps to go through
 2 with your final approval and also with OAL, but we're
 3 hopeful that some of it could be implemented before
 4 January 1st of 2018, which is a year and a half away.

T-25-3
 cont.
 (OP-11
 -3)

5 And also, we're supportive of any efforts to try
 6 to get additional resources to the air districts to help
 7 them to enforce this important rule.

T-25-4

8 Thank you.

9 CHAIR NICHOLS: Thanks.

10 MR. HECTOR: Hello. My name is Jason Hector.
 11 You can put me down as a Porter Ranch resident. And --

12 CHAIR NICHOLS: I think you stepped ahead of your
 13 turn. Keith Nakatani was next.

14 MR. HECTOR: Sorry about that.

**OG-T-26-
 Nakatani**

15 MR. NAKATANI: Thank you.

16 Good morning. Keith Nakatani. I'm with Clean
 17 Water Action. Our mission is to protect the environment,
 18 health, and economic well-being of communities. We're a
 19 national organization with over a million members.

20 First we'd like to thank the Air Resources Board
 21 for the methane regulations. But given the magnitude of
 22 the problem, we urge you to strengthen the regs, as you've
 23 heard from several speakers.

24 I think it's also important to highlight that the
 25 methane emissions are not only a huge environmental

T-26-1

1 problem, but they're also a huge public health issue. I
2 was really glad to see my colleagues from the Central
3 Valley and also the Porter Ranch residents highlighting
4 the public health impacts.

5 So Aliso Canyon of course is something that
6 everyone knows about. But what is less well known is that
7 almost five and a half million people in California live
8 within one mile of an oil or gas facility. That's almost
9 14 percent of the State's population. So the nausea, nose
10 bleeds, dizziness, asthma, skin rashes, and other
11 afflictions that people near Aliso Canyon experienced are
12 experienced by residents of other communities on a regular
13 basis.

14 For example, the town of Lost Hills, which is
15 about 40 miles from Bakersfield, northwest of Bakersfield,
16 is situated immediately adjacent to the Lost Hills Oil
17 Field, which is the sixth largest oil field in California.
18 So it's a huge facility.

19 If the Board members have not taken a tour down
20 to Kern County - I'm sure some of you have - I would urge
21 you to do so. To say that it looks other-worldly is a
22 major understatement.

23 As Lost Hills is immediately adjacent -- is
24 immediately east of the oil fields and the prevailing
25 winds blow from the west, the noxious odors blow through

1 town on a regular basis. And so the residents, who are
2 predominantly low income and Latino, regularly suffer from
3 those afflictions that I mentioned before. Again, almost
4 five and half million Californians live within a mile of
5 an oil or gas facility.

6 Reducing methane emissions is an environmental
7 issue, but it's also an issue of fairness and justice.
8 Please keep this foremost in mind as these proceedings go
9 forward.

10 Again the proposed regulations are a good start.
11 But you need to do more to strengthen them.

12 Thank you.

13 CHAIR NICHOLS: Thank you.

OG-T-27-Hector

14 Okay. It's your turn now, Mr. Hector.

15 MR. HECTOR: Thank you. My name is Jason Hector,
16 Porter Ranch of residents. I was asked to speak on behalf
17 of our community by Moms Clean Air Force. I want to thank
18 them. I want to also thank -- it's an honor and pleasure
19 to speak in front of the Board here.

20 And I want to tell you I'm a long-time resident
21 of Porter Ranch. I'm a husband, a father of an amazing
22 three and a half year little girl. I'd taken care of my
23 elderly grandmother for over a decade. She was 98 years
24 old and went through this gas leak with us together.

25 Or I -- number one, I want to say that the

T-27-1
(B-8
-1)

1 step-down provision, I agree with staff, that should be
2 removed so they can get leaks fixed quickly. Number two,
3 the time frame should be as quick as possible. I know
4 some industry folks that are complaining about that. But
5 if they would have been doing the preventative maintenance
6 that they knew about, you know, they're aware all of these
7 facilities were in shambles and they could have been doing
8 this a long, long, long time ago. So stop bellyaching
9 about it.

T-27-1
cont.
(B-8
-1)

T-27-2
(B-8
-2)

10 During the massive gas blowout I personally
11 experienced severe headaches, nose bleeds, blood in my
12 phlegm, lethargy, sick feeling, extreme allergy-like
13 symptoms. My daughter had difficulty breathing and other
14 sickness symptoms for a long time, even after we
15 relocated. My first severe symptoms started after being
16 outside and exposed to the methane blowout for several
17 hours. I suffered from a severe headache and my wife felt
18 very dizzy. After speaking with public health officials,
19 we left our home, checked into a hotel. My 98-year-old
20 grandmother was relocated as well. Unfortunately when we
21 returned to our home to pick up clothes and mail and
22 things like that, we'd get sick.

23 I'm very concerned about the health effects of
24 children who live and go to school near oil and gas
25 facilities.

1 We still don't know the chemicals they may have
2 been exposed to since they haven't been -- they've been
3 deemed confidential and proprietary. Once moving back
4 oily residue was found in the parks; and since, we haven't
5 returned to those areas.

T-27-3
(B-8
-3)

6 I'm concerned about the concept of storing gas
7 underground. It's a flawed concept in my eyes. There's
8 not a steel scuba tank underground to ensure containment
9 of this very high pressure reservoir. Also, how can we
10 confirm there are not leaks coming up from this reservoir?
11 We're talking about geologic formations here. And I
12 submitted for the record the fault lines that run through
13 Aliso Canyon. How can we be sure that the gas is not
14 moving up through the reservoir, through the ground and
15 through the water as it reaches the surface?

T-27-4
(B-8
-4)

16 And I submitted a lot of data for you to review
17 because I'm making testimony to the South Coast AQMD
18 regarding the leak detection programs. Just a few quick
19 suggestions. NASA and JPL have drones that they're
20 working on, they're mobile, for monitoring methane. I
21 think this needs to be incorporated, along with the LI-COR
22 vehicle which you are probably all familiar with, the
23 mobile methane monitoring vehicle. We need that vehicle
24 on site daily at Aliso Canyon and other facilities too
25 that have nearby communities.

T-27-5

1 Thirdly, I think they should develop an "I smell
2 it" application where people in communities once they
3 smell it they can hit the app and send it right to where
4 it needs to go.

T-27-6

5 Thank you very much.

6 CHAIR NICHOLS: Thank you.

7 Les Clark.

8 Take your time. It's okay.

9 Good morning.

OG-T-28-Clark

10 MR. CLARK: Madam Chairman, good to see you;
11 Board members. My name's Les Clark. I'm with the
12 Independent Oil Producers Agency. Represent a lot of the
13 mom-and-pop operators in the Kern County area.

14 I have some concerns with the reg. But we've
15 been working with your staff to address a lot of those
16 concerns, and I'm appreciative of that, and we'll continue
17 to do so. A lot of work to be done.

18 I think one of my biggest concerns is -- now,
19 you've addressed it, but I still want to make a point and
20 that's the registration as far as who's going to be
21 running this program. Is it going to be the Air Resources
22 Board or is it going to be the local air district?

T-28-1

23 I went through this about -- about 12 -- 10, 12
24 years ago on registration. And I'll tell you at that
25 time, it was confusing. No one knew who was on first

1 base. So no matter what happens, it needs to be clearly
2 defined as far as I'm concerned.

T-28-1
cont.

3 And we don't want to be, like you said earlier,
4 double jeopardy as far as who's actually enforcing the
5 rule.

T-28-2

6 I'd also like to mention some of the words that
7 most people ignoring, and that's technically feasible and
8 cost effective. And I think as we go through this
9 regulation, those two -- or that phrase needs to be
10 considered.

T-28-3

11 As you know, in Kern County we're over the last
12 month -- or year and a half, we're probably around 3,000
13 jobs lost in the oil industry.

14 And what this regulation will do will add to that
15 cost of producing a barrel of oil. So that means --
16 that's called lifting cost. So that means there are
17 probably more jobs lost for that. So I want to make sure
18 everybody knows that. Everybody talks about health. I'm
19 with it. But I live in an area too right next to an oil
20 field in Taft, California. In fact, I think I'd probably
21 be considered an EJAC recipient myself, I've lived there
22 so long. But there was a gas-like coast right by my
23 place, so -- but I would just caution and let's use some
24 common sense as we develop this regulation.

25 I appreciate the time to be here. Thank you.

1 CHAIR NICHOLS: Thank you.

2 Okay. I think we have now arrived at the group
3 presentation. Is this -- okay, we have four more and then
4 we are finished with the witness list.

5 MS. PITCHER: Good morning, Chair Nichols. The
6 three speakers behind me do acquiesce their three minutes
7 to me. So there'll just be one speaker.

8 Good morning, Chair Nichols and members of the
9 Board. My name's Jenifer Pitcher, and I'm a life-long
10 resident of Bakersfield, and I represent the Western
11 States Petroleum Association. WSPA is a nonprofit trade
12 association representing companies that explore for,
13 produce, refine, transport, and market petroleum and
14 petroleum products in California and four other western
15 states.

16 WSPA and WSPA member companies as key
17 stakeholders have worked extensively with ARB staff for
18 well over a year in the development of the methane
19 regulation. Staff has accompanied us in the field to
20 observe voluntary testing that WSPA members conducted on
21 circulation tanks in the rule development process.

22 From the beginning of the rule development
23 process we have emphasized the importance of ensuring that
24 the methane regulation recognizes existing control
25 requirements and does not unnecessarily impose duplicative

T-29-1
(OP-10
-93)

1 requirements on operations. In that regard, it is
2 important that the final regulation be consistent with
3 current, successful local, state, and federal air quality
4 regulations.

T-29-1
cont.
(OP-10
-93)

5 On Monday, July 18th, we provided extensive
6 comments to your Board and staff. WSPA's concerns with
7 the rule as currently written are centered around:

8 ARB's focus on insignificant emission sources;
9 questionable emissions estimates; proposal of nonexistent
10 control technologies; duplicative requirements with other
11 regulations; and the increasingly compressed timeline for
12 implementation.

13 So my comments today will summarize the following
14 key issues that need to be resolved:

15 The first, significant source of methane
16 emissions; secondly, circulation tanks; third, gauge
17 tanks; fourth, leak detection and repair, or LDAR; and,
18 five, the compliance schedule.

19 So first, for insignificant sources of methane
20 emissions. As WSPA has previously stated in our previous
21 written comments, we believe that this rule unnecessarily
22 focuses on insignificant emission sources, like
23 circulation tanks and gauge tanks.

T-29-2
(OP-10
-41)

24 For example, circulation tanks have an average
25 methane emission of 26 pounds per tank per event. To put

1 that into context, 26 pounds of methane is about 10
2 percent of the annual emissions of natural gas consumption
3 used in a two-person household, and there's more than 12
4 and a half million households in California.

5 WSPA does not believe the ARB's focus on small
6 sources of methane emissions, such as circulation tanks
7 that are a total of 72 metric tons of methane statewide,
8 is efficient or necessary to achieve the statewide 40 to
9 45 percent methane reduction goals.

10 Secondly, circulation tanks. ARB is proposing
11 control requirements for circulation tanks beginning in
12 2020. As noted in our comments, we remain concerned that
13 there are no feasible control technologies currently
14 available that can achieve the requirements to be able to
15 meet 95 percent control efficiency, including disposal -
16 and I want to emphasize the disposal - of the methane
17 without the use of supplemental fuel and/or that can be
18 disposed of in a safe manner.

19 So for -- to point out to Senator Florez's
20 question earlier about the NOx, we cannot have flares
21 without supplemental fuel because it's a low quality of
22 gas and it's noncombustible -- expected to be
23 noncombustible according to our studies. So essentially
24 we have no compliance mechanism, and we addressed this in
25 our comment letter. So I urge you to read that section.

T-29-2
cont.
(OP-10
-41)

T-29-3
(OP-10
-3)

1 And, Dr. Sperling, this also addresses your
2 concern from earlier.

3 While there are ideas and concepts that ARB staff
4 presented to you today, right now they are just that; they
5 are ideas and concepts which have not been proven that
6 they will work without compromising worker safety, which
7 is always our number one concern.

8 We would also point out that these concerns were
9 not addressed in the Environmental Assessment. And that
10 is in the event that no technology meets the proposed
11 requirements by January 1, 2020, operators would
12 essentially have no viable compliance options to comply
13 with the 95 percent control requirements and would have no
14 choice but to shut down.

15 ARB must consider all potential scenarios and
16 allow operators alternative compliance mechanisms for all
17 potential sources beyond 2020. Therefore, we recommend
18 ARB revise the section on circulation tanks to allow the
19 continued use of best management practices beyond 2020 if
20 no control technology is developed.

21 Without such clarifying language in the
22 regulation, the language as written would prohibit
23 hydraulic fracturing after 20 -- after January 1, 2020.
24 We do not believe the NOx gap is closed.

25 So, Chair Nichols, we were just basically asking

T-29-3
cont.
(OP-10
-3)

1 to be -- for this to be clarified in the rule that if such
2 technology is not developed by 2020, that we would
3 continue to use best management practices until that
4 technology is developed.

T-29-3
cont.
(OP-10
-3)

5 Gauge tanks are another small source of methane
6 emissions, representing less than half a percent of ARB's
7 estimates for separator and tank systems. These tanks
8 were not mentioned or discussed in any of the previous
9 versions of the rule, in ARB's economic impact analysis,
10 the standardized regulatory impact analysis -- or
11 assessment, or the SRIA, or the draft environmental
12 assessment.

T-29-4
(OP-10
-2)

13 We are concerned with the last-minute addition of
14 this source category without conducting any feasibility
15 studies or economic impact analysis associated with
16 requiring vapor recovery systems on these tanks.

17 We have included in our comments technical data
18 and information about our concerns on this issue.

19 In addition, we also urge you to review our
20 comments in regards to the separator and tank section of
21 the regulation and request ARB consider and incorporate
22 our proposed recommendations.

T-29-5
(OP-10
-5)

23 The fourth, the leak detection and repair. While
24 we appreciate staff's efforts working with us on the LDAR
25 requirements and the goal of ensuring that implementation

T-29-6
(OP-10
-4)

1 of the LDAR program is as efficient as possible; i.e.,
2 having one inspection program, we remain concerned with
3 this section. As written, it still will result in two
4 sets of inspections; two programs; and two record-keeping
5 requirements, one for the local APCD, one for the ARB, as
6 the programs differ so much in details.

7 It appears that a staff objective of recognizing
8 existing district programs will not be achieved. Also, as
9 currently written an LDAR program will be required for
10 equipment that in practical use or practical application
11 does not have the potential to emit methane.

12 The LDAR requirements in the proposed regulation
13 will present significant difficulty for owners and
14 operators to find enough competent contractors to perform
15 and correctly document inspections; not to mention the
16 additional staff time it will take from both the operators
17 and ARB staff or APCD staff should you defer
18 implementation to the districts.

19 In addition to these concerns, we noted staff's
20 recommendation to remove the step-down. We do not support
21 this. APCDs in California have a long history of LDAR
22 programs and we look forward to working with staff on that
23 and on this proposed recommendation.

24 Lastly, the Board approved -- the final Board
25 approval of the rule appears to be scheduled for early

T-29-6
cont.
(OP-10
-4)

T-29-7

T-29-8
(OP-10
-36, OP
10-63)

1 2017, which was pushed back significantly from the
2 original intended adoption date. Well compliance
3 deadlines of January 2018, this leaves 35 air districts in
4 California less than nine months to develop, refine,
5 receive, and consider comments and finalize their own
6 rules in order to implement this regulation the ARB will
7 have been working on for over two years. As you know, the
8 districts are bound by certain statutory processes that
9 will most likely not be able to be completed in the time
10 frame allotted in this rule. The compliance deadlines in
11 the rule should be extended to allow time for APCDs to
12 develop rules to implement the new regulation and for
13 operators time to comply.

14 We do support most of staff's recommendations as
15 listed in Attachment A. We also urge the Board to include
16 certain clarifications as discussed and our recommendation
17 on the circulation tanks.

18 WSPA and our members thank you for the
19 opportunity to comment. I urge you to review our comments
20 we've submitted on this last go-round or any of the
21 comments on the technical justification for arguments, and
22 we look forward to continue to work with staff and
23 management prior to the next hearing. Thank you for your
24 time today. I am available for questions, as are our
25 technical experts.

T-29-8
cont.
(OP-10-
-36, OP-
10-63)

1 Thank you.

2 CHAIR NICHOLS: Okay. And you now have spoken
3 then for all of the group?

4 MS. PITCHER: That's all of it, yes.

5 CHAIR NICHOLS: Great.

6 MS. PITCHER: Thank you.

**OG-T-30-
Pistey-Lyhne**

7 CHAIR NICHOLS: Thanks, and appreciate your
8 detailed comments.

9 We do actually have one additional late sign-up
10 here. So a representative from PSE Healthy Energy.

11 And this is the last witness.

12 MS. PISTEY-LYHNE: Good afternoon, Chair Nichols,
13 commissioners. My name is Daisy Pistey-Lyhne, and I'm
14 with PSE Healthy Energy.

15 We're here today to submit comments on this
16 regulation. And, first of all, we are submitting these
17 comments on behalf of PCE Healthy Energy, a national
18 energy, science, and policy institute that supports the
19 adoption of responsible evidence-based energy policies
20 that aim to protect the climate, public health, and the
21 environment.

22 We are very pleased that these regulations are
23 moving forward, both in light of the Aliso Canyon gas leak
24 disaster, the recommendations of the California Council on
25 Science and Technology's independent scientific study of

1 well stimulation completed last year, and the national
2 commitment made by the Obama administration to reduce
3 methane leakage from the oil and gas sector by 40 to 45
4 percent by 2025.

5 We strongly support CARB's proposed standards for
6 crude oil and natural gas facilities and especially
7 appreciate your leadership in proposing these standards
8 simultaneously for both new and existing sources. These
9 will be strong regulations and will be leading the nation.
10 And we encourage swift implementation of these standards
11 to mitigate climate change and protect the health of
12 Californians.

13 We would like to see some improvements to these
14 proposals to ease public participation in the regulatory
15 process, especially with respect to the LDAR program as
16 described below. First of all, we would like to see CARB
17 not take a step-down approach, as staff has recommended,
18 to enforcement. CARB should maintain a consistent
19 standard for inspection frequency. Under this proposal,
20 failing to discover leaks can lead to ease requirements
21 and less frequent inspections. And this is flawed,
22 because the absence of a leak reveals nothing about the
23 probability of a future leak.

24 If failing to detect leaks can result in reduced
25 requirements for inspections, companies are incentivized

T-30-1
(B-11
-1)

T-30-2
(B-11
-2)

1 to encourage less rigorous inspections. Operators may
2 find it in their best interests to not find leaks rather
3 than repair them. This reproach may set a poor
4 regulatory precedent as methane leakage is regulated in
5 other states and at the federal level and for regulations
6 of other pollutants.

T-30-2
cont.
(B-11
-2)

7 If addition to these regulations, we also urge
8 CARB to engage in community scale air quality monitoring
9 to ensure that communities exposures to air toxics
10 attributable to oil and gas development are not elevated
11 beyond thresholds for health.

T-30-3
cont.
(B-11
-3)

12 We also recommend that CARB consider the
13 implementation of minimum surface setbacks, as recommended
14 in the CCST independent scientific study of well
15 stimulation completed last year.

T-30-4
cont.
(B-11
-4)

16 We applaud your attention to underground storage
17 with special monitoring requirements. And we are
18 conducting a nationwide study of best practices on gas
19 storage facilities currently. The proposal to have the
20 ability to remotely access readings from the continuous
21 monitoring of ambient air from underground natural gas
22 storage facilities by 2018 will be important.

23 Sorry.

24 CHAIR NICHOLS: Thank you. Your time's up.

25 MS. PISTEY-LYHNE: Okay. Thank you.

1 CHAIR NICHOLS: Thank you.

2 Okay. That concludes our witness list, so we can
3 close the formal record at this point and proceed to some
4 Board discussion here. Maybe we can just start off if
5 anybody has any specific questions that they want to ask
6 of the staff at this point or ask staff to respond to any
7 of the comments.

8 Ms. Berg.

9 VICE CHAIR BERG: Just to get us started, could
10 staff go over the process once again from this time going
11 forward, what you're going to be looking at, kind of what
12 direction you're taking. That might be helpful in
13 formulating some of our questions up here.

14 SENIOR ATTORNEY SEGALL: Sure. I'll started,
15 Vice Chair.

16 Our plan going forward is to continue many of the
17 collaborative processes we've already been undertaking
18 with stakeholders and members of the public in the air
19 districts. So we'll be exploring with CAPCOA and air
20 district staff appropriate memoranda of understanding to
21 help clarify implementation and enforcement, as you heard
22 from today. And we'll also be working with many of the
23 technical stakeholders, environmental justice groups, and
24 members of the public on many of the technical issues
25 you've heard about. So you'll see that reflected in a

1 15-day package when it comes back to you.

2 CHAIR NICHOLS: Yes, Supervisor Serna.

3 BOARD MEMBER SERNA: Thank you, Chair Nichols.

4 There's a question of the economic analysis as it
5 related to the LDAR that was mentioned by one of the
6 speakers; and it sounded to me like there was a pretty
7 distinct noticeable difference of opinion there in terms
8 of the actual impact. I'm wondering if Emily can maybe
9 chime in and maybe give us an idea of where you think
10 maybe that difference of opinion -- what the genesis of
11 that is.

12 CHIEF ECONOMIST WIMBERGER: Yes. No, I think
13 it's really important to get the numbers right to the
14 extent that we can. So we will be taking a careful look
15 at the analysis that was done.

16 There were a few different pieces that were done
17 on the economic side. As you've heard, this has been sort
18 of a lengthy process to get the regulation through. So
19 there was an addition -- an initial SRIA. There was an
20 original macro-economic analysis that was submitted to DOF
21 I think in April of last year. And then that was recently
22 revised to reflect all the changes that this regulation
23 has undergone.

24 So we do want to make sure that the numbers are
25 right and that we are looking at all of the right pieces.

1 We were -- we're happy to work with the different
2 stakeholders to make sure that what they're seeing -- if
3 they have better data, we want to use that better data.
4 We do want to get these numbers right.

5 BOARD MEMBER SERNA: Thank you.

6 CHAIR NICHOLS: Yes, Professor Sperling.

7 BOARD MEMBER SPERLING: You know, like many, I'm
8 very alarmed by what's happening with climate change, and
9 I'm a strong advocate of many policies and regulations.
10 But I have to say, kind of looking at it big picture, I am
11 somewhat apprehensive about this whole set of regulations.

12 We are talking about really a small source --
13 relatively small source. We're talking about four percent
14 of the methane, which is about 20 percent of the total.
15 So we're talking about less than 1 percent of the problem.
16 And then we're talking about a huge number of small
17 sources. So that 1 percent is really thousands of smaller
18 sources.

19 And then I hear from CAPCOA about the difficulty
20 of adopting and enforcing all of these regulations. So
21 I -- I'm a little queasy about this overall thing.

22 But to give it a positive twist, you know, given
23 that we've gotten this far, I would suggest -- I would
24 kind of urge that we really think really deeply about what
25 are the really big problems, the big sources, and stay

1 focused on that and try to do things that really are cost
2 effective and are going to have a big impact. And there
3 are failures. There's the Aliso Canyon example. But
4 that's not -- as I understand it, would not have been
5 prevented by anything that we're proposing here.

6 And so -- you know, so that's one principle
7 that -- if we can use.

8 The other principle is -- it's more of a
9 question -- is, do we need to be really leading on this so
10 much? I mean, this is not -- this is a greenhouse gas
11 regulation. It's a global problem. It's not a health
12 problem. Yes, I understand there can be small amounts of
13 co-pollutants, but it's essentially a greenhouse gas
14 regulation, and EPA -- as I understand - so I'm not an
15 expert in this - EPA is moving in the same -- is going to
16 be adopting rules for these same sources at least in a
17 general sense.

18 So I don't know that there's -- so I think it's
19 more that we should think about this going forward with,
20 you know, the kind of regulations we do and the policies
21 we do. We have limited staff, limited resources; you
22 know, we can be imposing a lot of costs. So a note of
23 caution.

24 CHAIR NICHOLS: You know, your comments, I
25 probably give you the factual background, but come to kind

1 of a different conclusion.

2 I have lived through the experience of the whole
3 leak detection problem and early days of working on VOC
4 regulations where we were worrying about valves and
5 flanges and floating roof tanks and things. There's a few
6 of us around who still remember all of that.

7 By focusing on that issue, we did really move the
8 whole state of the art and the state of technology around
9 these facilities. And, yeah, at the time, it wasn't --
10 the leaking wasn't worth it to the companies to fix it.
11 This was a product there for them to really, you know,
12 care about recapturing. And in the end, they began to
13 realize that this was something that they were going to
14 have to pay attention to, and the state of housekeeping
15 improved enormously as a result of it. And to a big
16 extent, this a housekeeping issue that we're dealing with.

17 I mean it's expensive and annoying to have to
18 look all the time for leaks. But what we see is that
19 there's a huge amount of leaking going on relative to the
20 total amount of the product.

21 So, you know, the alternative -- and there have
22 been people who have suggested that this is the correct
23 alternative -- if you really want to look at the big
24 picture and the biggest cost effectiveness, get rid of the
25 product, switch to something else that doesn't leak. I

1 mean, that's the answer - just use less of it. And then,
2 lo and behold, there's a lot less leaking.

3 Because whatever is out there is going to leak to
4 some extent, and we're not going to be able to prevent a
5 hundred percent of it. So you're right on that point.

6 I just -- I think that obviously there's
7 a -- there's a question here about, you know, how perfect
8 we can be. But I do really like the new emphasis on the
9 public side of this information, because living in Los
10 Angeles where we have old wells -- I'm not talking about
11 the current storage facilities. There's only a couple of
12 those. I'm talking about abandoned facilities out there
13 in communities as well as all kinds of still small
14 mom-and-pop type operations going on, the public when they
15 find out about these things oftentime become fixated on
16 them and, you know, to the level of really having health
17 issues just associated with the anxiety of living near
18 some of these facilities.

19 And people need to know what's going on. They
20 need to be able to assess what's happening and to know
21 that there is at least somebody looking at the problem,
22 and making sure that they have access to that information
23 and to know that the standards are being maintained.

24 So unfortunately, I don't think we have any
25 option of just not doing it at all. And the question is,

1 if we're going to do something, you know, how do we do it
2 as -- in as pointed a way as possible.

3 And Supervisor Roberts has something to say on
4 that point, I know.

5 BOARD MEMBER ROBERTS: Thank you, Madam
6 Chairwoman.

7 You know, as somebody who has trouble
8 understanding the plumbing in my own house, to look at the
9 complexity of all these valves and all of that stuff is --
10 I have to admit is a little bit beyond me. But I do know,
11 when you have a leak, you fix it. So in that sense, it
12 seems to me that there's some good reason to move ahead on
13 this.

14 I was concerned and I think with a point that was
15 already made in terms of the -- seems a wide discrepancy
16 on the economic analysis; and I understand staff's going
17 to address that.

18 There was one other point that was made, and I
19 think it might have been made a couple times, and I think
20 it might have been Tim Carmichael that made it, and he
21 referred to an effectiveness because of coordination
22 between efforts of agencies. And I hope staff will dig
23 into that and find what's being referred to and -- we
24 don't need inefficiencies that drive the cost without any
25 benefits. We -- you know, that's not been part of our MO.

1 So I hope we'll understand fully. It wasn't clear to me
2 exactly what's happening, but it sounded like there may be
3 duplication of efforts and an overlap of responsibilities
4 that could be driving some of that cost without a
5 commensurate benefit.

6 So I'd like to make sure that staff looks into
7 that also, and lets us know what they would find.

8 CHAIR NICHOLS: Yeah, I see head nodding at the
9 staff table. But maybe we could just be explicit and say
10 that, you know, before we go final with this, that we'd
11 like to see a plan for implementation that includes some
12 understanding of the roles of the various entities that
13 have authority here.

14 I'm going to turn to Mr. De La Torre since he
15 hasn't spoken yet.

16 BOARD MEMBER DE LA TORRE: Thank you.

17 I want to congratulate staff. I think -- and I
18 don't do this often. It's just I think I take it for
19 granted that you know that we appreciate you.

20 (Laughter.)

21 BOARD MEMBER DE LA TORRE: But for a
22 first-time-ever regulation, in an issue area that it's
23 fraught, I didn't hear a whole lot of disagreement. I
24 mean, obviously, you know, the folks on the industry sides
25 have some concerns and then folks on the advocacy side had

1 a couple of concerns. But there isn't a whole lot. For
2 something like this, it is really impressive that the
3 areas of disagreement are relatively narrow. And so I
4 wanted to thank you for all of the work that you put into
5 it to get us to that point.

6 And obviously we'll hash those things out, as we
7 always do, and well have to make decisions on those tough
8 few things.

9 And then the other point I wanted to make is,
10 unlike the federal, this is for new and existing. And
11 again, for the people of California, for us to be looking
12 at all of this -- I mean, we are an agency that regulates
13 gallon gasoline cans. We regulate antiperspirant spray.
14 So, I think this on the scale of things is a little more
15 important. And so I'm very, very proud that we're here
16 today and we're going to be moving this along.

17 Thank you.

18 CHAIR NICHOLS: Thank you.

19 Yes, Mr. Serna.

20 BOARD MEMBER SERNA: Thank you, Chair.

21 So I think that this is one of those issues that
22 really -- an opportunity that really requires us to
23 reflect back on our mission as an agency and, that is, to
24 first and foremost protect and promote public health,
25 obviously with consideration for our economy. That's

1 clearly stated in our mission as well.

2 But, you know, I guess I'd respectfully disagree
3 with my colleague, Dr. Sperling, in terms of viewing this
4 as such a small element of what we're charged to do. I
5 actually, you know, think it's very much a part of what
6 we're expected to do in principle, regardless of the order
7 of magnitude here.

8 And as was mentioned before we heard from the
9 speakers today, this particular pollutant, this particular
10 air contaminant does have a bearing on climate change and
11 our charge to address that and greenhouse gas emissions,
12 but it also has a very important health aspect; and I'm
13 very glad to see that the folks from Aliso Canyon, near
14 Aliso Canyon showed up today to give us a very I think
15 relevant -- some very relevant testimony about their
16 personal experience, having gone through the largest gas
17 leak in the history of this country.

18 So I -- you know, I'm very prepared to support
19 what's in front of us today. I think it -- the alignment
20 of what we're being asked to consider with our mission as
21 an agency is crystal clear for me. So I'm prepared to
22 move the item at the right time, Madam Chair.

23 CHAIR NICHOLS: Okay. Thank you.

24 Yes, Ms. Takvorian.

25 BOARD MEMBER TAKVORIAN: Thank you. And I have a

1 couple of comments and then a question for the staff.

2 I wanted to add my congratulations to the staff
3 and thanks for a really job well done. I think this is a
4 major, major issue. And certainly I want to thank
5 everyone who came from the public, but especially to the
6 community members who -- for whom I know it's very
7 difficult to come to Sacramento. This isn't something
8 that's easy for you to do. You have to make adjustments
9 in your daily life to take care of your kids, to take time
10 off work. And so I think all of us here really appreciate
11 that you're here and that you represent some of the
12 communities that are the most impacted by these pollutants
13 and that have gone for so long with lax regulation or
14 nonexistent regulation. So many of you are the ones who
15 have both suffered the acuteness of the Aliso Canyon leak
16 but also the chronic conditions that many of you,
17 particularly like in Kern County, have expressed -- have
18 endured over many decades

19 So I would say that to the degree that we can
20 expedite the timeline and get this rule back in front of
21 the Board in early 2017, that I think would be something
22 that would be important to do because I think we need to
23 be more responsive to the community members who are
24 enduring this.

25 And with all due respect, I don't think that this

1 is something that anybody thought wasn't going to happen
2 over the last several years. And I know you've been
3 working hard on it. So I have confidence that all of the
4 industries that need to are gearing up for this.

5 And I really do appreciate the removal of the
6 inspection step-down. I think that's appropriate to do.
7 It's clear that monitoring and disclosure works,
8 transparency works, so let's inject more of that.

9 And I would agree with our Chair, that there are
10 those that might join them to say there's a way to solve
11 this problem, pollution prevention is a good way to solve
12 it, and we switch to another source of energy and then we
13 won't be doing -- we won't be arguing about whether it's
14 too fast or too expensive. We'll be talking about how we
15 can have a sustainable, renewable health-promoting source
16 of energy.

17 So I think we are talking about that in other of
18 our rules and others of our programs. So I appreciate
19 that and I think it's appropriate.

20 My question is: I understand that - and I want
21 to make sure I'm understanding this correctly - that Bay
22 Area Air Quality Management District does have similar
23 rules in place now; and I wanted to understand what the
24 relationship is and comparison is between the standards
25 that are being promoted or proposed in this rule and

1 those -- and how you see those integrating.

2 Thank you.

3 OIL & GAS SECTION MANAGER NYARADY: Sure. This
4 is Jim Nyarady.

5 The Bay Area has -- currently has rules for
6 refineries and they also have a rule for marine vessels
7 and they have a rule for oil and gas fields, all of which
8 have an LDAR leak detection component, but they do have
9 different standards. Some go down to as far as a hundred
10 ppm and some are as high 10 thousand ppm.

11 So what we've done in ours is to set a standard
12 of a thousand ppm as the trigger. And the idea being
13 mostly because we're, you know, looking at some sources
14 that haven't been regulated before like the -- you know,
15 the natural gas storage and so on.

16 So that's kind of the range that they have in the
17 various rules.

18 BOARD MEMBER TAKVORIAN: But aren't the
19 mechanisms similar in terms of the leak detection in terms
20 of the equipment itself? And if those are working well at
21 the lower levels, can you talk about why the lower levels
22 weren't incorporated or what your thinking was about that?

23 OIL & GAS SECTION MANAGER NYARADY: Well, yeah,
24 we were really looking at the other oil and gas rules that
25 are out there, and the field rules so a lot of those have

1 2,000 ppm or a thousand ppm. So we were looking to be
2 consistent in this effort of what the local air districts
3 are doing with oil and gas inspection.

4 But, you know, clearly there's the, you know,
5 looking forward to -- the idea of being that when these
6 first get implemented, they usually start at a high number
7 and then they lower down over time. So in the Bay Area's
8 refinery rule, for example, it started higher; but as they
9 controlled other parts of the refineries, the fugitive
10 portion became a larger and larger portion, so they kept
11 coming down in concentration for those. But we're going
12 to be starting with some of these that haven't been
13 regulated before and some are starting at the thousand ppm
14 limit.

15 OIL & GAS AND GREENHOUSE GAS MITIGATION BRANCH
16 CHIEF SCHEEHLE: I also just wanted to add on one point,
17 that when you're moving from something like 10,000 to
18 1,000, you got a significant percentage increase in the
19 leaks that you find; going from a thousand to 500 we found
20 was in the like 1 percent -- a couple percent range. So
21 we felt like this was a good place where we could get the
22 majority of reductions.

23 BOARD MEMBER TAKVORIAN: Thank you.

24 CHAIR NICHOLS: Thanks. That's helpful.

25 I wanted to ask a question about the step-down,

1 because it's -- was raised by a number of the speakers.
2 And I understand there's sort of an intuitive idea that if
3 somebody's doing a good job, we want them to be able to
4 inspect less, and that that could -- not having to do so
5 many inspections would seem to be an incentive for people
6 to do a really good job on leak detection and repair.

7 But, conversely, if we really believe that
8 everything is going to leak eventually, I'm not sure that
9 that's actually the right way to go about addressing the
10 problem. And I'm -- I'd like to ask you sort of to
11 justify your thinking a little bit more, especially with
12 relationship to other safety situations that we know
13 about, because it is safety as well as air quality that
14 we're -- one way or another is implicated, and whether
15 there are other alternatives that might be out there as
16 incentives to people to do a really good job on the repair
17 side of things as opposed to just doing less inspecting.

18 OIL & GAS AND GREENHOUSE GAS MITIGATION BRANCH
19 CHIEF SCHEEHLE: Well, we -- there's several reasons why
20 we decided to propose to remove the step-down, which
21 was -- as you were saying, just because you find leaks, it
22 doesn't mean that -- you know, just because you do that
23 and you do that in a good manner for five quarters, it
24 doesn't mean that you won't have a leak after that. So
25 looking at the analysis that was out there, the scientific

1 papers about how leaks can occur at any time and any
2 place, we decided that this -- you know, keeping the
3 quarterly inspections was the appropriate way to do that,
4 and to make sure that we're on the ground in a regular
5 fashion to -- in order to address things like leaks that
6 have happened at the storage facilities as well as --
7 because there were some that even happened after Aliso
8 Canyon, I think somebody mentioned -- smaller -- but
9 McDonald island, and there was another --

10 CHAIR NICHOLS: So your current position, just to
11 be clear, is that you're not going to reduce the frequency
12 of inspections?

13 OIL & GAS AND GREENHOUSE GAS MITIGATION BRANCH
14 CHIEF SCHEEHLE: Yes, yes.

15 CHAIR NICHOLS: Okay. Great. I had gotten that
16 backwards then. Thanks.

17 Other -- yes, Dr. Sherriffs.

18 BOARD MEMBER SHERRIFFS: Thank you.

19 I'd also like to congratulate staff. You know,
20 you've clearly hit the sweet spot when we have angry
21 mothers on one side and oil and gas on the other. So
22 great job.

23 (Laughter.)

24 BOARD MEMBER SHERRIFFS: You know the co-benefits
25 I think are worth emphasizing, because we're focusing on

1 methane, but part of the this regulation -- methane is not
2 traveling alone. There are other chemicals we have to be
3 aware of. And I am haunted by an early death in my
4 practice related to a brain tumor, somebody working in oil
5 and gas. And I worry about benzene and toluene and those
6 other chemicals that we do know are associated with those
7 kinds of problems. And I can't be sure -- I don't know if
8 that death was associated with that, but certainly there's
9 a strong literature that we need to be concerned about
10 those kinds of things.

11 So the health co-benefits beyond methane alone
12 are certainly very important.

13 You know, the districts know this is coming, and
14 the San Joaquin District, we've talked about this at a
15 couple of Board meetings. So the staff are gearing up.
16 Clearly, not -- no details because the details are not out
17 yet, but it's expected. And then in fact the district is
18 looking forward to accepting this responsibility and
19 working with the local stakeholders on it.

20 The other issue -- yeah, we want to focus on big
21 resources. But again it's preventive medicine because
22 it's the potential big sources. And so a lot of this is
23 preventive medicine. And nobody should expect to be
24 thanked for preventing something that didn't happen
25 because nobody knows it didn't happen, unless they believe

1 in statistics.

2 (Laughter.)

3 BOARD MEMBER SHERRIFFS: But it is so important,
4 it is such important work.

5 I guess I would want to be sure that staff
6 rethinks, you know, 26 pounds per tank per event doesn't
7 sound like a very big number. I'm not sure how many
8 events per year we're talking about. So doing the math.

9 But I would also want to be sure that our
10 friends, colleagues, collaborators, and the industry are
11 looking at that and saying, "Well, if we think it's too
12 hard to get it here, where is another place we could get
13 that," kind of equivalency. So I think that's a fair
14 question to ask too.

15 Thank you.

16 CHAIR NICHOLS: Yes, Mr. Gioia.

17 BOARD MEMBER GIOIA: Let me first start by saying
18 I wouldn't call them angry mothers. I'd call them
19 passionate mothers.

20 (Laughter.)

21 BOARD MEMBER GIOIA: So we appreciate you being
22 here and being great advocates.

23 And I don't want to add much more to those who've
24 already spoken, that I think that the staff has struck a
25 balance on this. I think this is an important role for us

1 to have. And as we heard from the staff representative
2 from the air district, there will be some additional
3 regulations on top of what already exist at the Bay Area
4 and intending to sort of look at these standards even
5 further.

6 So I will be supporting this.

7 CHAIR NICHOLS: Any other comments here?

8 Well, Ms. Berg hasn't spoken on this issue,
9 somewhat to my surprise.

10 So I'm going to say something about it. And it
11 has to do with implementation in areas where you've got a
12 lot of small operators working. I'm hoping -- I don't
13 like to see exemptions or, you know, easier regulations
14 when you've got a multiple city of small people, because
15 you're still going to have a lot of emissions out there.
16 But I would like to see if there's a way that we could
17 facilitate some kind of reporting and monitoring
18 requirements that could be effective across a group rather
19 than having to be necessarily implemented separately by
20 each and every one of these folks. And I think maybe the
21 industry association might be helpful in that regard in
22 terms of developing some sort of a methodology whereby a
23 whole region could perhaps get together to make the
24 process more cost effective. I just think that's
25 something that's worth trying to figure out. If you can

1 facilitate that happening, it would be a good thing.

2 VICE CHAIR BERG: Thank you, Chair Nichols. I am
3 working with several of the smaller groups and had a great
4 briefing with staff, and have also had a couple of
5 meetings with staff through this process. I'm very
6 encouraged and really looking forward to continuing to
7 facilitate between the groups that I'm working with and
8 with staff. I'm getting very positive responses on both
9 sides. There's several technical areas that I am pursuing
10 for them.

11 CHAIR NICHOLS: Good. I'm glad to hear it.

12 VICE CHAIR BERG: And thank you for bringing it
13 up.

14 CHAIR NICHOLS: Okay. All right.

15 So do we have a motion to approve the resolution?

16 BOARD MEMBER SERNA: So moved.

17 CHAIR NICHOLS: I'm sorry. You did it.

18 All right. Do we have a second?

19 BOARD MEMBER ROBERTS: Second.

20 CHAIR NICHOLS: All right. A second from
21 Supervisor Roberts.

22 I think we can do this again by voice vote.

23 So all in favor please say aye.

24 (Ayes.)

25 CHAIR NICHOLS: Opposed?

1 And nobody is abstaining.

2 Okay. Terrific.

3 Thank you. Thank you, all. Thanks, everybody.

4 This is obviously not the end. It's a point in the
5 process and there's a lot of work left to be done, but
6 we're all committed to seeing it come to a successful
7 conclusion.

8 So, this is probably a very good time to break
9 for lunch.

10 And give the court reporter a break too.

11 Okay. Let us adjourn and be back at 1:30 then.

12 Thank you.

13 (Off record: 12:23 p.m.)

14 (Thereupon a lunch break was taken.)

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