

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT BOARD

No. EIB 21-27(R)

IN THE MATTER OF PROPOSED NEW REGULATION,
20.2.50 NMAC - Oil and Gas Sector -
Ozone Precursor Pollutants

TRANSCRIPT OF PROCEEDINGS

BE IT REMEMBERED that on the 30th day of
September, 2021, this matter came on for hearing before
FELICIA ORTH, Hearing Officer, virtually through Cisco
Webex Meetings video conferencing, at the hour of 8:30
a.m.

Volume 9

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E X H I B I T S

ADMITTED

NOTE: No exhibits are attached physically to this transcript. They can be found online at www.env.nm.gov/opf/docketed-matters/

"CLEAN AIR ADVOCATES":

CAA 27. Daniel Orozco PhD curriculum vitae 2972

1 HEARING OFFICER ORTH: Hello.

2 We're on the record a little early this
3 morning, before the nine o'clock public comment period,
4 in order to discuss objections raised by NMOGA and IPANM
5 to -- well, in IPANM's case a number of exhibits offered
6 by Clean Air Advocates, Environmental Defense Fund and
7 the New Mexico Environment Department, New Mexico
8 Environmental Law Center and Center for Civic Policy.

9 My understanding of the objection was that
10 discussion of methane might lead to confusion during an
11 ozone rulemaking -- or ozone precursor rulemaking,
12 and -- but I'd like to hear more. I may have
13 misunderstood, and I want to hear the fullness of the
14 objections.

15 I see Mr. Hiser on screen.

16 Do we also have Mr. Rose?

17 Yes. I see -- change my layout there.

18 All right. Who would like to go first?

19 Mr. Rose, would you like to go first?

20 MR. ROSE: Yes. I don't want to cut Mr. Hiser
21 off if he had something to say.

22 I think -- I don't recall whether they
23 actually objected formally to the admission of evidence,
24 but as to this particular issue, I think -- wanted to
25 clarify, I think, while the Hearing Officer is correct,

1 we're concerned about confusion, that's not the
2 objection.

3 The objection is that testimony related to
4 methane, methane emissions, methane emission reductions,
5 the health effects of methane emissions are not relevant
6 in this proceeding.

7 And, Madam Hearing Officer, I assume we don't
8 have to define relevance, but what we're dealing with
9 here is in this -- the provisions the Department -- or
10 the rules the Department has proposed, including the
11 plan the Department proposed, is -- is submitted
12 pursuant to what's now codified as Section 74-2-5.C of
13 the Air Quality Control Act, and what it says, at least
14 in part, is that if the Board determines that emissions
15 from sources within the Board's jurisdiction, and here's
16 the operable terms, cause or contribute to ozone
17 concentrations in excess of 95 percent of the primary
18 National Ambient Air Quality Standard for ozone,
19 promulgated pursuant to the federal Clean Air Act, the
20 Board, quote, shall adopt a plan, including rules, to
21 control emissions of oxides of nitrogen and volatile
22 organic compounds to provide for attainment and
23 maintenance of the standard.

24 That's -- that's what we're here to do, is
25 look at rules, and the Board's job is to adopt a plan,

1 including rules, to provide for attainment and
2 maintenance of the ozone standard.

3 The same carries out in the -- in the Board's
4 notice. The Board's notice of this action talks
5 about -- talks about the section of the statute which in
6 the -- in the notice says requires the Board adopt a
7 plan, including regulations, to ensure the attainment
8 and maintenance of the National Ambient Air Quality
9 Standard for ozone within areas of the state that have
10 monitored ozone concentrations that exceed 95 percent of
11 the NAAQS.

12 So the hearing is limited to ozone, it's
13 limited to ozone precursors in this case, NOx and VOCs,
14 and it's limited to a plan to attain or maintain the
15 ozone NAAQS. It's not -- we're not here to consider the
16 propriety of emissions of methane, the impacts of
17 methane, control of methane. If the Board wishes to
18 consider those, there's a process by statute to do that.

19 Also, we're concerned that -- that without
20 notice as to the methane and methane emissions being
21 subject to this hearing entities or individuals that are
22 subject to the rule would not have had notice as to the
23 Board's consideration of those rules, and therefore
24 they're being deprived due process as provided by the
25 statute.

1 But our objection as to admissibility goes to
2 how methane emissions and control of methane and the
3 impacts of methane are relevant to attainment and
4 maintenance of the National Ambient Air Quality Standard
5 for ozone. We believe they're not. They're outside --
6 as I read the notice, they're outside the scope of the
7 notice, and therefore are irrelevant in this proceeding,
8 and therefore should not be admitted.

9 That's all, Madam Hearing Officer.

10 I think you're muted still.

11 And you're still muted.

12 HEARING OFFICER ORTH: Okay. Thank you. I
13 need to slam more coffee.

14 So I'll invite Ms. Paranhos to put her
15 argument on the record again.

16 And I'm sorry, Ms. Paranhos, to ask you to
17 repeat that, although the majority of the documents and
18 testimony objected to were EDF's, but --

19 But let me ask, Mr. Rose, while I -- while I
20 have you. Ms. Paranhos yesterday mentioned briefly
21 co-benefits, and I guess I'm wondering if -- if, in
22 fact, EDF, for example, isn't trying to sneak a methane
23 limit into the final rule, what the harm is in
24 discussing co-benefits.

25 MR. ROSE: Madam Hearing Officer, co-benefits

1 are not related to attainment or maintenance of the
2 ozone standard. The ozone standard and the levels at
3 which it's set are not at issue in this proceeding.
4 It's only how you get there. That's the issue and only
5 in those counties that exceed 95 percent of the NAAQS.

6 So the harm is that it's evidence which is
7 outside the scope of the proceeding. Not suggesting the
8 evidence is wrong or there are ways in which to address
9 that, but I think the harm is that this hearing is --
10 you're not just inviting the Board to look at issues,
11 but I fail to see how co-benefits relates to whether the
12 ozone standard is going to be attained or maintained.

13 HEARING OFFICER ORTH: All right. Thank you
14 for that.

15 Ms. Paranhos?

16 MS. PARANHOS: Thank you so much, Madam
17 Hearing Officer.

18 So I think in addition to what I said
19 yesterday, I'm happy to go over that again, just with
20 respect to the Board's authority to consider
21 co-benefits, I think it's quite clear that the Board
22 does have authority to consider co-benefits.

23 So if you look at New Mexico Statutes
24 74-1-9.B.(1), which is part of the Department's cited
25 statutory authority for this rulemaking, that particular

1 provision provides that the Board, quote, shall give the
2 weight it deems appropriate to all relevant facts and
3 circumstances presented at the public hearing, end
4 quote, including but not limited to, quote, the
5 character and degree of injury to or interference with
6 health, welfare, animal and plant life, property and the
7 environment, and, two, public interest, including the
8 social, economic and cultural effects of environmental
9 degradation.

10 So what I would argue is that I think we've
11 heard many members of the public, as well as expert
12 witnesses, testify that there are clearly impacts to
13 health, welfare, animal and plant life, property and the
14 environment due to the emissions of co-pollutants such
15 as methane and also hazardous air pollutants that are
16 co-emitted with volatile organic compounds.

17 If you have natural gas emissions, you have
18 methane, VOCs and those particular types of VOCs that
19 the EPA classifies as hazardous air pollutants which
20 includes benzene.

21 So it really does seem highly relevant and
22 entirely appropriate for this Board to consider the
23 co-benefits that will accrue to the climate and
24 environment and the health of New Mexicans by reducing
25 ozone precursor emissions.

1 And as I said yesterday, I feel like we have
2 been very clear that we are only asking the Board to
3 adopt requirements that directly control VOCs. The
4 basis for the requirements that either we are proposing
5 or that we are supporting that the Department has
6 proposed are primarily intended to reduce volatile
7 organic compounds, and the basis for those requirements
8 are the reductions of VOCs in terms of the relationship
9 between the compliance cost to implement the control
10 technologies and the reductions of VOCs.

11 The additional information we have provided on
12 methane and on hazardous air pollutants is with respect
13 to the co-benefits that would accrue by promulgation of
14 VOC control requirements in order to help attain the
15 ozone National Ambient Air Quality Standards.

16 HEARING OFFICER ORTH: All right. Thank you
17 very much, Ms. Paranhos.

18 Let me go back to Clean Air Advocates.

19 Ms. Fox?

20 MS. FOX: Mr. Baake is doing this argument.

21 HEARING OFFICER ORTH: Thank you.

22 Mr. Baake.

23 MR. BAAKE: Good morning, Madam Hearing
24 Officer.

25 I'm having trouble with my camera again. So

1 I'll just do it -- I'll just speak, if that's all right,
2 and I'll try and figure that out --

3 HEARING OFFICER ORTH: That's fine.

4 MR. BAAKE: -- later.

5 So I -- you know, we certainly agree with
6 Ms. Paranhos. I think the main point is that the
7 statutory language here clearly authorizes the Board, as
8 she noted, to give such weight as deemed appropriate to
9 all the facts and circumstances, which include the
10 character and degree of injury to health, welfare,
11 et cetera.

12 I wanted to make a few additional points.

13 One is that regarding this notice issue, in
14 the statement of reasons that the Department submitted
15 to the Board in May, the third sentence says as a
16 co-benefit of reducing emissions of volatile organic
17 compounds, Part 50 would also reduce emissions of the
18 potent greenhouse gas methane.

19 So I do think that parties have been aware
20 since the petition was filed that that co-benefit was of
21 interest to the Department, and -- and it certainly has
22 been something that has been -- and is relevant to this
23 proceeding.

24 Another point that I think Ms. Paranhos made
25 yesterday that I'd like to -- I didn't hear her make

1 today is that it's really standard practice for
2 environmental agencies to consider harm caused by
3 methane when regulating VOCs and vice versa. And the
4 reason is -- is the simple technical fact that in
5 this -- in this industry methane and VOCs are just two
6 different constituents of natural gas. So the emissions
7 are inextricably connected, and it's sort of impossible
8 to have one without the other.

9 But for example, when EPA adopted VOC
10 regulations in the oil and gas industry in 2012, it
11 included extensive discussion of the methane co-benefit
12 in all of the regulatory documents there, and so it
13 would be -- it would actually be a break from standard
14 environmental practice to just sort of turn a blind eye
15 to those co-benefits, whether those co-benefits are from
16 methane or from hazardous air pollutants like benzene.

17 Let's see.

18 One final point that I would make is that we
19 heard Dr. Thompson testify that methane does contribute
20 to background levels of ozone over a slightly longer
21 period of time than -- than VOCs react, and by
22 contributing to -- to increased temperature and climate
23 change, increased temperatures also increase the rate at
24 which ozone forms. So methane contributes indirectly in
25 that way.

1 So I think the science is also just a little
2 bit -- to suggest that methane is completely irrelevant
3 to the ozone problem, I think, is not scientifically
4 correct either. I think the main point is -- again to
5 go back to the language, under the Air Quality Control
6 Act the Board certainly is entitled to consider all the
7 facts and circumstances which would include co-benefits,
8 and this is certainly an important co-benefit.

9 And that's all I have. Thank you.

10 HEARING OFFICER ORTH: Thank you, Mr. Baake.

11 Let's see. Maybe we could go to Professor
12 Pacyniak before we go to Ms. Katz.

13 Professor?

14 MR. PACYNIK: Thank you.

15 Can you hear me okay?

16 HEARING OFFICER ORTH: Yes.

17 MR. PACYNIK: Great.

18 And I just wanted to add on to what
19 Ms. Paranhos and Mr. Baake have said.

20 And I'll just point out that Mr. Rose has said
21 that the issue in this before the Board is how to get to
22 control -- control of ozone precursors to prevent
23 exceedance of the NAAQS. And we totally agree.
24 However, as Ms. Paranhos pointed out, that question is
25 one where there are a number of different factors that

1 the Board has a statutory duty to consider.

2 And I'll add it's not just in 74-1, but those
3 same factors are noted in 74-2-5.F, which is also
4 included in the statement of reasons and in the proposed
5 regulations that were included in the notice and
6 petitions -- and petition. And those factors that the
7 Board is required to consider include, as Ms. Paranhos
8 has said, character and degree of injury to public
9 health, welfare, also the public interest.

10 And so in considering all of these different
11 factors, the Board is looking at those factors to
12 determine how to get to that control of ozone and what
13 type of regulation to -- to use to prevent ozone
14 precursors.

15 And so in doing that we would argue that the
16 Board has a duty to consider co-benefits along with all
17 of the various costs that they are also required to
18 consider and that no one has objected to, a very broad
19 and large -- many different types of costs that have
20 been discussed, and so the Board has a duty to consider
21 in addition to those costs co-benefits, and I would add
22 to also consider whether the Board -- whether the
23 proposed controls will protect all people equally,
24 especially from ozone, but also if there are other
25 co-benefits that those controls provide to see whether

1 those co-benefits are equally distributed.

2 Finally, I'll just add that I do believe Rhino
3 Environmental Services is applicable here, the New
4 Mexico Supreme Court case that was discussed. The court
5 there said that the Secretary of the Department erred
6 for having too narrow of a focus on technical issues in
7 that Solid Waste Act permitting case and pointed to two
8 factors in the statute that led to that conclusion.

9 The first factor was the statutory purpose to
10 protect public health and welfare. That same statutory
11 purpose is here.

12 And the second factor was that the statute
13 called for robust public engagement procedures and that
14 the public was raising these concerns. That factor is
15 here, as well, and as Ms. Paranhos pointed out, the
16 public has raised many of these concerns, as well.

17 Thank you.

18 HEARING OFFICER ORTH: Thank you very much,
19 Professor.

20 Mr. de Saillan?

21 MR. DE SAILLAN: Thank you, Madam Hearing
22 Officer.

23 Can you hear me okay?

24 HEARING OFFICER ORTH: I'm sorry. It sounds
25 like you're coming through water.

1 MR. DE SAILLAN: All right. I will turn off
2 my video.

3 Is that working any better?

4 HEARING OFFICER ORTH: Yes, it is.

5 MR. DE SAILLAN: Okay. Thank you, Madam
6 Hearing Officer.

7 I agree with everybody -- everything that's
8 been said so far by Ms. Paranhos and Mr. Baake and
9 Professor Pacyniak.

10 I just want to make one point that I made the
11 other day, and Professor Pacyniak hit on it a little
12 bit, and that is in particular the testimony of
13 Mr. Dunham, who testified on behalf of NMOGA,
14 testified -- he testified about the negative
15 consequences in his view of this rule, and he talked
16 about things like lost jobs and lost revenue for the
17 state, which are equally if not more tangential to the
18 issue of reducing ozone in certain counties in the
19 state.

20 And nobody objected to that testimony or to
21 his report, and again without commenting on the quality
22 of the evidence, I think it's generally the sort of
23 thing that the Commission -- or this Board is entitled
24 to hear and should consider.

25 But the flip side of that is that the Board

1 should also have the opportunity to hear and to consider
2 the co-benefits of this rule, such as reduction in
3 emissions of methane, which is a potent greenhouse gas
4 and something that we very much need to be dealing with.

5 So that's -- that's all I have to say.

6 Thank you very much, Madam Hearing Officer.

7 HEARING OFFICER ORTH: Thank you.

8 Ms. Katz, anything to add?

9 MS. KATZ: Thank you, Madam Hearing Officer.
10 Just briefly.

11 The Department agrees with many of the
12 arguments that have been made by the counsel for the
13 environmental NGOs. I think it's -- the co-benefits are
14 clearly important and worthy of considering by the Board
15 and -- and that these -- it's very clear that these
16 exhibits are not irrelevant and shouldn't be entirely
17 excluded. And Mr. Rose's reading of this -- the notice
18 and just focusing on that is far too restrictive.

19 So we think that the Board absolutely can
20 consider all of that information.

21 HEARING OFFICER ORTH: All right. Thank you,
22 Ms. Katz.

23 Mr. Hiser.

24 MR. HISER: Madam Hearing Officer, I think one
25 thing which we do need to be careful of is that the

1 current New Mexico law and the regulations of the
2 Department do not classify methane as precursor for
3 ozone, and that until such time as there is a change in
4 that law, representations to the Board that it is are
5 probably not appropriate, given that there's been no
6 proposal to change that aspect of the regulation.

7 So that would need to be included only in the
8 area of co-benefit and not, I think, put under the side
9 of a direct benefit because it's not consistent with
10 current New Mexico law.

11 HEARING OFFICER ORTH: Thank you, Mr. Hiser.

12 Mr. Rose, I'll give you the last word.

13 MR. ROSE: Thank you, Madam Hearing Officer.

14 Again reminding the Hearing Officer that
15 we're -- we're operating under a provision of the
16 statute which obligates the Board to adopt rules to
17 attain and maintain the ozone primary ambient air
18 quality standard.

19 To the extent to which the parties think that
20 the Board should consider methane emissions, limit
21 methane emissions, be concerned about the impacts from
22 methane, we read the statute is that the Board has
23 authority to consider those, but only if a rule is
24 proposed under 74-2-5.D, which authorizes the Board to
25 adopt standards of performance for sources and emissions

1 standards for hazardous air pollutants.

2 And so if that's what the parties wish to do,
3 there's a process to do it. They should go to the
4 Board, ask for a rulemaking and ask for the Board to
5 schedule a rulemaking to consider that.

6 As to the notice provisions, the concern isn't
7 whether my client had notice, but whether there are
8 parties that would be subject to these provisions that
9 would not by the Board's notice know that they are the
10 subject of this hearing, and therefore had no
11 opportunity to decide whether to be included or excluded
12 from the hearing. So I think you're disenfranchising a
13 number of potential entities, people who would be
14 subject to these rules without necessarily knowing that
15 methane would be considered.

16 I'd also point out, and I alluded to this in
17 my opening statement, that early on in clean air -- in
18 administering the Air Quality Control Act, the Court of
19 Appeals had the -- looked at the question of whether
20 this Board had the authority to adopt rules more
21 stringent than necessary to attain ambient air quality
22 standards.

23 And in 1976 in the PNM case, that's at 89 New
24 Mexico 223, the court said no, that the standard defined
25 the levels at which injury to health and the environment

1 occurred and that the Board's job was to adopt rules to
2 assure that the standard was met, but no more stringent
3 than what the standards are met.

4 And it seems to me that what the parties are
5 asking this Board to do, in essence, would be to ignore
6 the PNM case and adopt rules that are more stringent
7 than necessary or relate to impacts that are not
8 addressed by or covered by the standard.

9 The remedy the court said is either the
10 standard should be amended or another standard adopted,
11 but that the Board doesn't have the authority without
12 going through those processes to adopt rules more
13 stringent than necessary to attain the standard.

14 I believe that's what the parties are asking
15 this Board to do, and that to the extent to which those
16 parties think it's appropriate for the Board to
17 consider, the proper way to go about it is to propose a
18 rule under 74-2-5.D, let the Board decide whether it's
19 appropriate to go to hearing, and then give proper
20 notice so that all of those persons who might be
21 impacted by the rule can participate.

22 Thank you, Madam Hearing Officer.

23 That concludes my presentation.

24 HEARING OFFICER ORTH: All right. Thank you.

25 I see Ms. Paranhos on the screen and Ms. Katz.

1 We do need to wrap this up, unless you have something
2 you just must say here.

3 No. Okay.

4 So thank you.

5 I think, Mr. Rose -- I believe this evidence
6 and testimony is admissible for all of the reasons that
7 have been given by the Department and the environmental
8 advocates. I think -- I guess my -- my immediate
9 reaction to your statement that this -- what may go
10 beyond the exact rule crafted is that a lot of what's
11 being discussed as a co-benefit is inextricable. I'm
12 not sure how you extricate some of what we've been
13 talking about from the rule that's been crafted.

14 So I'm going to say that they are admissible
15 and admitted. And I understand you're going to be
16 making your arguments to the Board otherwise in your
17 posthearing submittal, and we'll let the Board and
18 Ms. Soloria make their considerations at the beginning
19 of deliberations, as I understand it.

20 So thank you very much for being on early this
21 morning. I did want to have this discussion because I
22 didn't want to underestimate the entirety of your -- of
23 your objections.

24 MR. ROSE: Madam Hearing Officer, if you
25 would, just to make sure that the record is complete,

1 we -- if you would make these objections as continuing
2 objections to that evidence so I don't have to object on
3 each introduction, I would appreciate it.

4 HEARING OFFICER ORTH: Thank you for asking,
5 and absolutely. I think that's a good way not to
6 clutter the record. So you definitely have a continuing
7 objection. Thank you very much.

8 All right. We have three minutes before we
9 ask for public comment. I'll just go off the record
10 briefly here.

11 (Proceedings in recess from 8:57 a.m. to
12 9:01 a.m.)

13 HEARING OFFICER ORTH: Let's prepare to begin,
14 please.

15 We have reached day nine of the hearing in --

16 MR. HISER: You're muted, Madam Hearing
17 Officer.

18 HEARING OFFICER ORTH: It doesn't say that I'm
19 muted.

20 (Simultaneous discussion.)

21 MS. KATZ: I hear you, Madam Hearing Officer.

22 HEARING OFFICER ORTH: All righty.

23 We have reached day nine of the Environmental
24 Improvement Board hearing in EIB 21-27. It's a
25 rulemaking relating to ozone precursors.

1 We take public comment every day at 9:00, 1:00
2 and 5:00. This morning the speakers I have who reached
3 out to the Board administrator are Donna Crawford, Karen
4 Smith, Vicki Gottlieb, Duane Chili Yazzie, Celerah
5 Hewes, Andrea Romero and John Gorman.

6 If you are on the platform and did not have an
7 e-mail exchange with Pam, please reach out through chat,
8 and I will call on you after I've called on these other
9 folks.

10 Public comment is taken under oath, is taken
11 by audio, not video, and is limited to five minutes.

12 Let me start with Ms. Crawford.

13 Ms. Crawford, I've unmuted you.

14 Can you hear me?

15 MS. CRAWFORD: Yes.

16 Can you hear me?

17 HEARING OFFICER ORTH: Yes. Thank you.

18 If you would please spell your name.

19 MS. CRAWFORD: Donna, D-O-N-N-A, Crawford,
20 C-R-A-W-F-O-R-D.

21 HEARING OFFICER ORTH: Thank you.

22 And raise your right hand.

23 Do you swear or affirm to tell the truth?

24 MS. CRAWFORD: Yes.

25

1 DONNA CRAWFORD

2 having been first duly sworn or affirmed, gave
3 public comment as follows:

4 PUBLIC COMMENT

5 HEARING OFFICER ORTH: I'm going to start your
6 five minutes now.

7 MS. CRAWFORD: Okay. Thank you.

8 I'm from Los Lunas, and I would like to make
9 public comments.

10 I was just wondering when anybody is going to
11 say thank you to the oil and gas industry that has
12 provided us all with our flourishing lifestyles. If it
13 wasn't for the oil and gas industry, it would be like
14 living in a third world country.

15 Nobody wants the oil and gas industry to spew
16 venting and flaring into the air, including -- including
17 the oil and gas industry. But using top-down costly
18 regulations will result in many operators being put out
19 of business and hurt our state's economy.

20 The industry itself is sharing best practices
21 to reduce leakage and waste and has been successful in
22 recapturing methane. Between 1990 and 2017, methane
23 emissions from natural gas dropped 14 percent thanks to
24 the industry-led efforts even with production increasing
25 by 50 percent.

1 A big part of the problem for the industry is
2 limited pipeline access and infrastructure. The federal
3 policy of shuttering existing pipelines and banning new
4 ones is not helping. Instead of punishing the oil and
5 gas industry, the state and federal government should be
6 helping the industry that keeps our power and lights on
7 and everything else in our lives.

8 California has discovered that they cannot
9 keep the lights on without natural gas and are in the
10 process of building five new gas plants. But here we
11 have New Mexico Environmental Department under the
12 direction of Lujan Grisham trying their best to shut
13 down our natural gas plants. It makes no sense
14 whatsoever.

15 The underlying theme of the crackdown on
16 flaring and venting is just another nudge to kill the
17 oil and gas industry as per Lujan Grisham's Energy
18 Transition Act and the Green New Deal.

19 I guess that's about all I have to say.

20 And thank you very much for allowing public
21 comment.

22 HEARING OFFICER ORTH: Thank you,
23 Ms. Crawford.

24 Go now to Karen Smith. Let's see here.

25 Ms. Smith, I've unmuted you.

1 Can you hear me?

2 MS. SMITH: I can.

3 Can you hear me?

4 HEARING OFFICER ORTH: Yes.

5 If you would spell your name for the record,
6 please.

7 MS. SMITH: K-A-R-E-N, last name Smith,
8 S-M-I-T-H.

9 HEARING OFFICER ORTH: Thank you.

10 And raise your right hand.

11 Do you swear or affirm to tell the truth?

12 MS. SMITH: I do.

13 HEARING OFFICER ORTH: Thank you.

14 KAREN SMITH

15 having been first duly sworn or affirmed, gave
16 public comment as follows:

17 PUBLIC COMMENT

18 HEARING OFFICER ORTH: I'm going to start your
19 five minutes now.

20 MS. SMITH: First I'd like to thank the
21 Members of the Environmental Improvement Board for
22 holding this hearing and allowing public comment.

23 I'm Karen Smith, and I'm a member of First
24 Congregational Church in Albuquerque, which is a Green
25 Justice church that believes we have a moral

1 responsibility to care for sacred creation. I live in
2 Rio Rancho.

3 Since moving to New Mexico in 2019, I have
4 been dismayed to learn that our state has some of the
5 worst methane pollution in the country, released through
6 venting, flaring and leaks. Methane is a powerful
7 greenhouse gas that is 84 times more potent than carbon
8 dioxide in the short-term, and this leads to both air
9 pollution and climate change.

10 As a person of faith, I believe we have a
11 responsibility to care for our neighbors, especially the
12 most vulnerable, like children and those in rural and
13 tribal communities. A disproportionate member of our
14 energy-producing regions are in regions that are
15 populated by these vulnerable communities. This leads
16 to many health problems, such as asthma, emphysema and
17 heart disease.

18 I support the proposal put forward by the
19 Environmental Department to cut VOCs and methane
20 released by the oil and gas industry, and this seems
21 like a strong and common sense proposal to protect our
22 air and climate, and I believe most New Mexicans support
23 it, as well.

24 I would also suggest these improvements to
25 strengthen the proposal.

1 One, require more frequent inspections to find
2 and fix leaks.

3 Two, require that operators control pollution
4 during the completion or redevelopment of an oil well or
5 gas well.

6 Three, require inspection and retrofitting of
7 pneumatic controllers, the second largest source of oil
8 and gas methane emissions in New Mexico.

9 I recognize that some oil and gas companies
10 have made commitments to reduce methane emissions, but
11 they represent only a fraction of the industry. We need
12 uniform standards and technologies. We should be
13 leaders in taking strong action to protect our citizens
14 and to meet our climate goals.

15 Thank you.

16 HEARING OFFICER ORTH: Thank you, Ms. Smith.

17 Move to Vicki Gottlieb.

18 Ms. Gottlieb, I've unmuted you.

19 Can you hear me?

20 MS. GOTTLIEB: I can hear you.

21 Can you hear me?

22 HEARING OFFICER ORTH: Yes, very clearly.

23 Thank you.

24 If you would spell your name, please, for the
25 transcript.

1 MS. GOTTLIEB: Vicki, V-I-C-K-I, Gottlieb,
2 G-O-T-T-L-I-E-as-in-every-B-as-in-boy.

3 HEARING OFFICER ORTH: Thank you.

4 And raise your right hand.

5 Do you swear or affirm to tell the truth?

6 MS. GOTTLIEB: I do.

7 HEARING OFFICER ORTH: Thank you.

8 VICKI GOTTLIEB

9 having been first duly sworn or affirmed, gave
10 public comment as follows:

11 PUBLIC COMMENT

12 HEARING OFFICER ORTH: I'll start your five
13 minutes now.

14 MS. GOTTLIEB: My name is Vicki Gottlieb. I'm
15 72 and have lived in Placitas since 2007 and New Mexico
16 since 1970, including Rio Arriba, Santa Fe, Chaves and
17 Bernalillo Counties. Over that time I've witnessed the
18 lamentable and more often preventible degradation of our
19 air quality.

20 Thank you for accepting my testimony on the
21 ozone precursor rule.

22 I support Governor Michelle Lujan Grisham's
23 call to lead the nation with more stringent oil and gas
24 pollution rules. To achieve that goal, the
25 Environmental Improvement Board must strengthen the New

1 Mexico Environmental Department's proposed ozone
2 precursor rule to protect those living closest to
3 development.

4 I've lived in two of the five counties where
5 our two energy-producing regions are among the nation's
6 most polluted, Eddy, Lea, San Juan, Rio Arriba and
7 Chaves Counties are home to 97 percent of the state's
8 oil and gas wells, which are all at risk of violating
9 federal ozone standards of 70 parts per billion.

10 Oil and gas pollution impacts all New Mexicans
11 and possibly beyond, as we now know that smoke from
12 California fires has negatively affected air quality
13 here and even reached the East Coast. The jet stream
14 and local winds know no mercy.

15 As we all become increasingly vulnerable, the
16 air, water and health of rural communities, tribal
17 communities, children, the elderly and those with severe
18 allergies, like me, are especially at risk. More than
19 130,000 New Mexicans live within a half mile of oil and
20 gas development, the majority of whom are Native
21 Americans who face disproportionate impacts from climate
22 change and air pollution.

23 Leaks due to equipment malfunctions and lack
24 of maintenance account for 70 percent of the oil and gas
25 industry's emissions statewide. Placitas has two

1 significant older vulnerable pipelines which may put us
2 at risk for other methane and VOC incidents.

3 I have three requests today.

4 One, it is critically important that the leak
5 inspection program proposed by NMED in July be adopted
6 and that the final rule is strengthened to protect
7 frontline communities by requiring more frequent
8 inspections to find and fix leaks.

9 Two, the final rule must be strengthened to
10 ensure New Mexico incorporates leading approaches to
11 address pollution during well completions. It should
12 require operators to capture or combust emissions during
13 completions, including the initial flowback stage, as
14 the State of Colorado now requires.

15 Three, the final rules should strengthen
16 pollution-cutting measures on pneumatic controllers, the
17 second largest source of oil and gas methane pollution
18 in New Mexico. NMED should require companies to inspect
19 gas-powered pneumatics for malfunctions and leaks, as
20 Colorado has done, as well as accelerate the timeline
21 for operators to retrofit equipment with zero bleed or
22 zero emission pneumatic controllers.

23 Thank you for your time.

24 HEARING OFFICER ORTH: Thank you very much,
25 Ms. Gottlieb.

1 Go, then, to Duane Chili Yazzie.

2 Hello, this is Felicia.

3 Can you hear me?

4 Mr. Yazzie?

5 MR. YAZZIE: Good morning.

6 HEARING OFFICER ORTH: Good morning.

7 If you would please spell your name for the
8 record.

9 MR. YAZZIE: C-H-I-L-I Y-A-Z-Z-I-E.

10 HEARING OFFICER ORTH: Thank you very much.

11 If you -- hold on one second. If you would
12 raise your right hand.

13 Do you swear or affirm to tell the truth?

14 MR. YAZZIE: Of course.

15 HEARING OFFICER ORTH: Thank you.

16 DUANE CHILE YAZZIE

17 having been first duly sworn or affirmed, gave
18 public comment as follows:

19 PUBLIC COMMENT

20 HEARING OFFICER ORTH: And just keep your
21 voice up for the transcript.

22 I'll start your five minutes.

23 MR. YAZZIE: Thank you.

24 I am here in Shiprock, in the northwest corner
25 of the state. And I have lived here all of my life.

1 I, first of all, appreciate the opportunity to
2 give my comment here this morning.

3 I want to make a -- a brief personal
4 reflection in that I am a grandpa 10 times over and a
5 great grandpa two times. I remember in my childhood
6 here in Shiprock the vast open areas out to our famous
7 Shiprock rock was covered with flowers, all manner of
8 flowers, all colors, purple, green, orange. And today
9 it's just brown. It's just brown with -- with no -- no
10 flower, flowery vegetation. It's only tumbleweeds.

11 And the -- the prolonged drought that we are
12 in began perhaps 20 years ago. So in my lifetime in the
13 space of 30 years, we have come from a time when we
14 could see flowers across our open areas, when we had
15 times of dependable and -- and plentiful moisture, rains
16 and snows. We don't have that today. And it's -- it's
17 a very simple conclusion, that the extractive industry
18 is the culprit in making this drastic change in our
19 environment.

20 As a grandpa, as a grandfather, I am so
21 desperately concerned for the future of my grandchildren
22 into the future. What kind of world, what kind of
23 environment do we leave them?

24 I appreciate Governor Lujan Grisham and her
25 administration to take these initiatives to change the

1 rules with the ozone, the ozone rules, the methane
2 rules. Yes, it is clear that -- that the -- that this
3 industry provides a great measure of revenue, and -- and
4 we see that the gas -- oil and gas industry, the
5 politicians, the bureaucrats who support this type of
6 development have their eye only on the bottom line at
7 the bank. But is that worth jeopardizing the future of
8 our grandchildren?

9 The only thing that I can say to you, all
10 those within hearing distance, is what will your
11 grandchildren say about you and their future, 50 years
12 from now, hundred years from now, as they reflect back
13 on you as their great grandparents, what did you do to
14 preserve or either destroy their environment.

15 I leave that with you, and I appreciate this
16 opportunity. Thank you.

17 HEARING OFFICER ORTH: Thank you, Mr. Chili
18 Yazzie.

19 I go now to Ms. Celerah Hewes.

20 Ms. Hewes, can you hear me?

21 MS. HEWES: Yes, I can.

22 Can you hear me?

23 HEARING OFFICER ORTH: Yes, I can, very
24 clearly.

25 Would you spell your name, please.

1 MS. HEWES: First name Celerah, C-E-L-E-R-A-H,
2 last name H-E-W-E-S.

3 HEARING OFFICER ORTH: Thank you very much.
4 If you would raise your right hand.
5 Do you swear or affirm to tell the truth?

6 MS. HEWES: Yes, I do.

7 HEARING OFFICER ORTH: Thank you.

8 CELERAH HEWES
9 having been first duly sworn or affirmed, gave
10 public comment as follows:

11 PUBLIC COMMENT

12 HEARING OFFICER ORTH: I'll start your five
13 minutes now.

14 MS. HEWES: Thank you so much. And thank you
15 for the opportunity to speak today and to listen to so
16 many people from around the community.

17 My name is Celerah Hewes, and I live in
18 Albuquerque, New Mexico.

19 I am one of the over 17,000 Moms Clean Air
20 Force members in the state who are concerned about the
21 health impacts of climate change on our children and who
22 support Governor Michelle Lujan Grisham's call for
23 nation-leading oil and gas pollution rules. To achieve
24 that goal, the environment improvement Board must
25 strengthen the NMED proposed ozone precursor rules and

1 support firm regulations that cut pollution and methane
2 to protect our communities.

3 I was born and raised in New Mexico, and I've
4 lived around the state from Corrales to Roswell, and
5 when I decided to have a family, New Mexico was where I
6 wanted to raise a child. But today I'm deeply concerned
7 that the home that my daughter grew up in will be very
8 different than the one I did due to the public health
9 and climate impacts we are experiencing.

10 These climate impacts are made worse by
11 methane, a powerful greenhouse gas pollutant responsible
12 for a quarter of man-made global warming pollution that
13 we are experiencing. We all know that climate change is
14 greatly impacting New Mexico and the Southwest with
15 drought and longer, more intense wildfire seasons, and
16 increased heat waves that threaten health of New Mexico
17 families.

18 Rising heat and climate impacts are now a way
19 of life for our children. Just this past summer there
20 were days my daughter's summer camp could not go outside
21 because the air was dirty from smoke and particulate
22 matter caused by wildfires. On other days just playing
23 outside would result in heat stroke.

24 Seeing my healthy eight-year-old in pain from
25 playing outdoors breaks my heart. While summer used to

1 be a time to be active and be outside, our children now
2 have to spend large portions of the time inside because
3 the air outside is just too dangerous to breathe. We
4 have to make a change now before this becomes a new
5 normal.

6 When climate impacts like heat and drought are
7 of concern to residents in our most populated areas like
8 Albuquerque, they're also greatly affecting communities
9 in oil and gas regions. San Juan County, home to our
10 infamous methane hot spot, is a perfect example.
11 According to analysis by the Environmental Defense Fund,
12 nearly 9,000 children under the age of five and over
13 78 percent of young kids in San Juan County live within
14 a mile of an active oil or gas well.

15 Leaks due to equipment malfunction and lack of
16 maintenance account for 70 percent of the oil and gas
17 industry's methane emissions statewide. Without strong
18 action, the state could see twice as many dangerous heat
19 days and a 70 percent increase in drought severity.
20 That will take an increasing toll on the health of our
21 communities around the state.

22 I would like to thank NMED for putting forward
23 a strong proposal, including the recent support of the
24 proximity proposal. But we ask EIB to adopt the
25 following changes to protect our communities and address

1 major sources of pollution.

2 Prioritizing environmental justice and
3 frontline communities is imperative as they have
4 historically shouldered an outside burden from impacts
5 of air pollution and the climate crisis. So we should
6 first protect those living closest to development by
7 requiring more frequent inspections to find and fix
8 leaks.

9 Second, we can ensure strong requirements for
10 operators to control pollution during the completion of
11 an oil and gas well, as well as when they redevelop
12 existing wells. This is a common sense requirement we
13 have seen our neighbors in Colorado require.

14 Finally, we should strengthen requirements to
15 cut pollution from pneumatic controllers that are used
16 in oil and gas production. These devices are the second
17 largest source of oil and gas methane emissions in New
18 Mexico.

19 Right now New Mexico, my home, has an
20 opportunity to lead on ozone rules that protect our
21 children, our communities and help combat climate
22 change. We owe it to our children to take that
23 opportunity.

24 Thank you so much for your time today.

25 HEARING OFFICER ORTH: Thank you very much,

1 Ms. Hewes.

2 We'll go now to Andrea Romero.

3 Adam, Angela, Anthony, Antoinette, Armando.

4 Let me see. Caller Number 4, I'm unmuting
5 you.

6 Who is this, please?

7 Caller 4?

8 No.

9 All right. Let me go to John Gorman.

10 Let's see. John -- I don't see John Gorman.

11 And let me go to April Perkins.

12 I don't see April Perkins.

13 I'll try Caller Number 4 one more time.

14 Caller 4, can you hear me?

15 CALL-IN USER 4: (Unintelligible and/or
16 inaudible).

17 HEARING OFFICER ORTH: Hello?

18 Hello, is this Ms. Perkins?

19 Or Ms. Romero?

20 Oh, gosh. All right.

21 If anyone who signed up wasn't able to
22 communicate this morning, I'm happy to accept their
23 public comment at any other public comment session today
24 at 1:00 and 5:00, tomorrow at 9:00, 1:00 and 5:00. You
25 can also put any comment you have in writing and send it

1 to Pam Jones, the Board administrator. We will accept
2 written public comment through tomorrow. So thank you,
3 all, for that.

4 It's 9:24. We will return to the technical
5 case.

6 Board Members, this morning we did have a
7 discussion about the admissibility of the
8 Department's -- some of the Department's exhibits and
9 exhibits offered by a number of the environmental
10 groups. I believed they were admissible. As I
11 understand it, IPANM and perhaps NMOGA will take this up
12 with you in their posthearing submittals. But I
13 believed they were admissible and have either admitted
14 them or will admit them on proffer.

15 So I believe this morning we were going to
16 start with one of the witnesses, actually, whose
17 testimony was subject to that objection, Ms. Hill.

18 Ms. Fox and Ms. Hill? Is this where we're
19 starting?

20 MS. FOX: Yes, Madam Hearing Officer. Thank
21 you.

22 And just preliminary to that, I had just sent
23 an e-mail around to counsel about the availability of
24 one of our surrebuttal witnesses, Daniel Orozco, and I
25 wanted to alert you to that, that he is available -- his

1 testimony is surrebuttal on engines. It will be very
2 short. And he is available after the lunch hour if he
3 can be squeezed in.

4 HEARING OFFICER ORTH: All righty. Thank you.
5 We can plan that.

6 MS. FOX: Okay.

7 And then one --

8 HEARING OFFICER ORTH: I'm sorry?

9 MS. FOX: I'm sorry.

10 Then one other point, and that is that Mr. --
11 Dr. McCabe is coming back to testify on storage vessels,
12 and he's available today and tomorrow before 2:15.

13 HEARING OFFICER ORTH: All right. Thank you.

14 MS. FOX: So I only mention this because the
15 time is getting short and I just want to make sure we
16 can get our witnesses in.

17 HEARING OFFICER ORTH: And you may have to
18 remind us of that, and I saw some other e-mails about
19 witness availability. Please -- please keep reminding
20 us.

21 Thank you.

22 MS. FOX: Good morning -- oh, Members of the
23 Board, Ms. -- what we're going to be talking about today
24 with Ms. Lee Ann Hill is public health impacts, and her
25 resume -- of VOCs primarily, and her resume is

1 Exhibit -- Clean Air Advocates Exhibit 24, and her full
2 direct testimony is Clean Air Advocates Exhibit 25.

3 Please state your name.

4 MS. HILL: Lee Ann Hill.

5 MS. FOX: And where are you employed?

6 HEARING OFFICER ORTH: Hold on.

7 Ms. Hill, if you would please raise your right
8 hand.

9 MS. FOX: Sorry.

10 HEARING OFFICER ORTH: Do you swear or affirm
11 to tell the truth?

12 MS. HILL: I do.

13 HEARING OFFICER ORTH: Thank you.

14 Go ahead, Ms. Fox.

15 MS. FOX: Thank you.

16 LEE ANN HILL

17 (Relating to Topic Order 27)

18 having been first duly sworn or affirmed, was
19 examined and testified as follows:

20 DIRECT EXAMINATION

21 BY MS. FOX:

22 Q. Where are you employed?

23 A. I'm a senior scientist at Physicians,
24 Scientists and Engineers for Healthy Energy, or PSE for
25 short. PSE is a nonprofit research institute dedicated

1 to supplying evidence-based information on the public
2 health, environmental equity and climate dimensions of
3 energy production and use.

4 Q. What's your educational background?

5 A. I hold a master of public health in
6 environmental health sciences from University of
7 California Berkeley and a bachelor of science in
8 environmental science from Ithaca College.

9 Q. Describe your work experience briefly.

10 A. I lead PSE's work on the environmental health
11 dimensions of oil and gas development. Much of my work
12 has focused on examining the peer-reviewed literature on
13 oil and gas development and human health, air quality,
14 water quality, and waste management. My publications
15 include studies on chemical use associated with oil and
16 gas development and the air quality and human health
17 implications of oil and gas development.

18 Q. Is Clean Air Advocates Exhibit 24 an accurate
19 copy of your CV?

20 A. Yes.

21 Q. And you provided rebuttal testimony on behalf
22 of Clean Air Advocates which is Exhibit 25.

23 Is that testimony accurate, to the best of
24 your knowledge?

25 A. Yes.

1 Q. Please summarize the opinions that you've
2 provided in your written testimony.

3 A. Yes, of course.

4 First, air pollutants hazardous to human
5 health, the environment and the climate, including
6 greenhouse gases, hazardous air pollutants and criteria
7 air pollutants are emitted from upstream oil and gas
8 facilities.

9 Second, air pollutants emitted from oil and
10 gas facilities may contribute to the secondary formation
11 of air pollutants that pose risk to human health and the
12 environment, including ground-level ozone.

13 Third, there is a reasonable degree of
14 scientific certainty that living in close proximity to
15 oil and gas facilities results in increased health risks
16 from elevated air pollution levels and that these health
17 risks are increasingly attenuated further from these
18 operations. The public health risks and impacts
19 associated with air pollutant emissions from oil and gas
20 facilities that go unaddressed would be
21 disproportionately experienced by people who live, work
22 and go to school near oil and gas facilities.

23 And fourth and finally, emissions reductions
24 strategies should focus on sites close to human
25 populations. The increased frequency of LDAR

1 inspections within 1,000 feet of occupied areas such as
2 homes, schools and businesses as proposed by Clean Air
3 Advocates is a targeted strategy to increase public
4 health protections, which I strongly support.

5 Q. Which air pollutants are emitted from oil and
6 gas facilities?

7 A. Multiple air pollutants are emitted from oil
8 and gas facilities and are associated with adverse
9 impacts on human health and the environment. Broadly,
10 these pollutants include greenhouse gases such as
11 methane, VOCs and criteria air pollutants. Methane, the
12 primary component of natural gas, is a potent greenhouse
13 gas that captures 86 times more heat than carbon dioxide
14 over the 20-year time horizon.

15 Many VOCs are hazardous air pollutants, or
16 HAPs, and a recent review found that 61 HAPs were
17 measured near upstream oil and gas sites or investigated
18 from secondary data sources of upstream oil and gas
19 sites. The five HAPs most frequently detected near
20 upstream oil and gas sites in that study were benzene,
21 toluene, ethylbenzene, xylenes and n-hexane.

22 Criteria air pollutants are six federally
23 designated pollutants that cause adverse impacts to
24 human health and the environment, and the primary
25 criteria air pollutants directly emitted from oil and

1 gas facilities are particulate matter and nitrogen
2 oxides, or NOx.

3 Q. Would you please describe the risks and
4 impacts to public health from exposure to VOCs.

5 A. Emissions of health-damaging VOCs associated
6 with oil and gas facilities present well understood
7 health hazards. I'll briefly discuss five common VOCs
8 from oil and gas operations and their associated
9 effects.

10 Benzene is a known human carcinogen for which
11 there is no safe level of exposure. Acute or short-term
12 inhalation exposure to benzene is associated with
13 neurological effects and eye, skin and respiratory tract
14 irritation. Chronic or long-term inhalation exposure to
15 benzene is associated with noncancer blood effects, such
16 as aplastic anemia where the body does not produce
17 enough new blood cells.

18 Toluene primarily impacts the central nervous
19 system as a result of acute and chronic exposures.
20 Chronic exposure to toluene is also associated with
21 dizziness and irritation of the upper respiratory tract
22 and eyes.

23 Acute inhalation exposure to ethylbenzene can
24 result in adverse respiratory effects, eye irritation
25 and neurological effects. Chronic exposure to

1 ethylbenzene has been noted for adverse effects on the
2 liver, kidney and endocrine system.

3 Acute inhalation to exposure to xylenes can
4 result in irritation of the eyes, nose, throat and
5 neurological effects. Chronic inhalation exposure to
6 xylenes results primarily in adverse central nervous
7 system effects.

8 And finally, acute inhalation exposure to
9 hexane results in adverse impacts to the central nervous
10 system. Chronic inhalation exposure to hexane results
11 in more severe neurological effects, including numbness
12 in the extremities, muscular weakness and blurred
13 vision.

14 Q. What are the public health risks of
15 ground-level ozone?

16 A. Ground-level ozone is a respiratory irritant.
17 It can cause the muscles and airways to constrict. And
18 exposure to ozone can result in coughing and sore throat
19 and can inflame and damage the airways. As such,
20 ground-level ozone can exacerbate existing respiratory
21 conditions, increase susceptibility to infection and
22 increase the frequency of asthma attacks. Adverse
23 respiratory health effects from exposure to ground-level
24 ozone have been observed in healthy adults, but are more
25 severe among sensitive subgroups, including those with

1 preexisting respiratory problems.

2 Q. Do the impacts to public health from VOCs, NOx
3 and ground-level ozone increase the more a person is
4 exposed to these pollutants?

5 A. Yes. Chronic or long-term exposure may result
6 in longer lasting or more severe public health impacts.

7 Q. Are people who live, work or go to school near
8 oil and gas operations at greater risk from exposure to
9 air pollutants associated with oil and gas activities?

10 A. Yes. Populations in close proximity to oil
11 and gas development may be disproportionately exposed to
12 associated health-damaging air pollutant emissions, and
13 therefore populations in close proximity to oil and gas
14 facilities may also experience increased health risks
15 associated with exposure to air pollutants emitted from
16 these facilities.

17 Q. What are those increased risks and impacts?

18 A. I detail many studies in my written testimony.
19 Here I'll note three peer-reviewed studies that estimate
20 health risk associated with hazardous air pollutant
21 concentrations by various distances from upstream oil
22 and gas sites.

23 A 2012 study found that noncancer health risks
24 associated with subchronic exposures and cancer risks
25 were greater for residents living within a half mile, or

1 2,640 feet, from oil and gas wells for respiratory,
2 neurological and blood target organ system effects as
3 compared to residents that live further away.

4 A 2018 study found that lifetime excess cancer
5 risks exceeded the EPA de minimus threshold, or one case
6 per million individuals, out to 5,249 feet, almost one
7 mile, and that lifetime excess cancer risk clearly
8 increases with proximity to oil and gas development.
9 Within 500 feet the study found potential for noncancer
10 adverse health effects associated with acute exposures
11 to benzene and alkanes for neurological, blood and
12 developmental target organ systems.

13 A 2019 study clearly demonstrates that cancer
14 risks and noncancer health risks associated with acute,
15 subchronic and chronic exposures are reduced as distance
16 from oil and gas sites increases. The study found
17 potential for noncancer adverse health effects
18 associated with acute exposures to certain VOCs,
19 including benzene, for respiratory, nervous and
20 hematologic target organ systems. These results applied
21 to the highest exposed hypothetical individuals and were
22 found to persist out to 2,000 feet for benzene exposure
23 and for neurological and hematological effects.

24 And in addition to these air quality health
25 risk assessment studies, the body of epidemiological

1 literature strongly supports that geographic proximity
2 to active oil and gas development is an important risk
3 factor for a variety of adverse health outcomes,
4 including respiratory and cardiovascular outcomes,
5 cardiovascular disease indicators, childhood cancer,
6 hospitalizations and adverse birth outcomes.

7 Q. Ms. Hill, yesterday NMOGA modified its LDAR
8 proposal, and it's now proposing to conduct quarterly
9 LDAR inspections and weekly AVO inspections at oil and
10 gas facilities located within 1,000 feet of occupied
11 areas. Putting that new proposal aside, NMOGA continues
12 to propose less frequent LDAR at other oil and gas
13 facilities.

14 What is your response to NMOGA's proposals to
15 reduce their frequency of LDAR inspections from what
16 NMED has proposed?

17 A. I do not support the reduction in frequency of
18 LDAR inspections. Increased frequency of LDAR
19 inspections can reduce air pollutant emissions from
20 fugitive leaks and loss of containment incidents at oil
21 and gas facilities, and therefore increased frequency of
22 LDAR inspections can decrease health risks and adverse
23 health impacts associated with the release of
24 health-damaging air pollutants from these facilities.

25 Q. You're familiar with Clean Air Advocates' LDAR

1 proximity proposal that would require oil and gas
2 facilities located within 1,000 feet of occupied areas
3 to conduct more frequent LDAR inspections?

4 A. Yes.

5 Q. And you've reviewed EDF's testimony from
6 Hillary Hull, estimating the number of people who would
7 be impacted by this proposal?

8 A. Yes. EDF's analysis found that the proposal
9 would impact 3,365, or 7.7 percent, of the well sites
10 covered by NMED's proposed rule and would increase
11 emissions reductions at those sites by 73 percent.

12 Additionally, EDF also estimated that over
13 35,000 New Mexicans live within 1,000 feet of a well
14 site regulated under NMED's proposed rule, and these
15 35,000 New Mexicans include young children, seniors,
16 low-income households and persons of color. They also
17 include persons with medical conditions that could be
18 exacerbated by additional air pollution.

19 Ms. Hull provided these statistics yesterday
20 afternoon in her testimony.

21 Q. What is your opinion of the impact the LDAR
22 proximity proposal would have on those living, working
23 and going to school near oil and gas facilities?

24 A. So based on the estimated emissions
25 reductions, I support the increased frequency in LDAR

1 inspections for oil and gas facilities within 1,000 feet
2 of occupied areas. Targeted emissions reduction
3 strategies should focus on sites close to human
4 populations, and the increased frequency of LDAR
5 inspections within 1,000 feet of occupied areas is
6 absolutely a targeted strategy to increase public health
7 protections.

8 It's also clear from EDF's analysis that
9 impacts including localized air pollution are
10 experienced by subpopulations that face compounding
11 vulnerabilities and socioeconomic burdens, and every
12 effort should be made to reduce air pollution exposures
13 and associated health impacts.

14 Q. And finally, Ms. Hill, what impact would
15 proposed industry proposals that would result in a
16 reduction in frequency of LDAR inspections than what
17 Clean Air Advocates have proposed have on people who
18 live, work and go to school close to oil and gas
19 facilities?

20 A. A decrease in the frequency of LDAR
21 inspections would allow fugitive leaks to go undetected
22 and would result in emissions of health-damaging air
23 pollutants that go unmeasured, unprevented and
24 unmitigated. These public health risks and impacts
25 would be disproportionately experienced by people who

1 live, work and go to school near oil and gas facilities.

2 MS. FOX: Thank you very much, Ms. Hill, for
3 your testimony.

4 Madam Hearing Officer, I believe all Clean Air
5 Advocates' exhibits have already been admitted into
6 evidence, and Ms. Hill stands for cross-examination and
7 questions from the Board.

8 HEARING OFFICER ORTH: Thank you very much,
9 Ms. Fox and Ms. Hill.

10 If you're a party counsel, please turn on your
11 camera if you have questions of Ms. Hill.

12 Not seeing anything.

13 Ms. Fox.

14 Oops. Mr. Hiser.

15 MR. HISER: Madam Hearing Officer, I do have
16 just a couple questions for Ms. Hill if that's okay with
17 you.

18 MS. HILL: Sure.

19 CROSS-EXAMINATION

20 BY MR. HISER:

21 Q. Ms. Hill, my name is Eric Hiser, and I
22 represent the New Mexico Oil and Gas Association.

23 And I believe that you testified that the
24 adverse health consequences that you found tend to occur
25 with greater effect closer to the well site and that

1 those effects tend to diminish as one moves away; is
2 that correct? You said it was -- there were greater
3 adverse effects at 500 feet and then somewhat less
4 effects if you were like 1,000 or 2,000 feet. Was that
5 the substance of your testimony?

6 A. Yes. Just to clarify, it would be noncancer
7 health risks and cancer risks that would diminish the
8 further you go from oil and gas sites. Yes.

9 Q. Okay.

10 Is it your understanding that ozone is formed
11 from an atmospheric chemistry reaction between nitrogen
12 oxides and volatile organic chemicals? So it's a
13 secondary pollutant and not a direct pollutant?

14 A. Yes.

15 Q. And would the reaction -- would that
16 atmospheric reaction have occurred any substantial
17 effect within that range of 500 feet to, say, 2,000 feet
18 from a particular well site?

19 A. That's a great question, and I have not
20 personally evaluated ozone formation given particular
21 distances from oil and gas sites. The noncancer and
22 cancer health risks that I alluded to previously were
23 focused on the hazardous air pollutant fraction, so
24 focused on VOCs in particular and not focused on ozone.

25 Q. So you'd agree that it seems likely those are

1 from the direct pollutants emitted from the well site,
2 is what you've been seeing?

3 A. Yes. The noncancer and -- the noncancer
4 health risks and cancer risks are associated with the
5 hazardous air pollutant fraction, and in those studies
6 ozone was not evaluated.

7 MR. HISER: I really appreciate your
8 clarification. Thank you very much.

9 HEARING OFFICER ORTH: All right. Thank you,
10 Mr. Hiser.

11 Any other party representatives with questions
12 of Ms. Hill?

13 No.

14 I'll turn, then, to the Board for their
15 questions.

16 If you're an attendee on this platform and
17 would have a question, please reach out through the
18 chat, which is enabled for everyone.

19 EXAMINATION

20 BY THE BOARD:

21 HEARING OFFICER ORTH: Madam Chair, do you
22 have questions of Ms. Hill?

23 CHAIR SUINA: Good morning, Madam Hearing
24 Officer.

25 And thank you for your testimony and

1 information today. At this point I don't have any other
2 questions.

3 HEARING OFFICER ORTH: Thank you.
4 Vice-Chair Trujillo Davis.

5 VICE-CHAIR TRUJILLO DAVIS: Yes. I just have
6 one question.

7 I was wondering -- we've heard a lot of
8 testimony throughout this hearing about the health
9 effects, and a lot of studies were referenced.

10 I'm just curious if any studies have been done
11 on oil field workers themselves?

12 MS. HILL: I did not review any occupational
13 exposure studies as part of the scope of my testimony.
14 It mainly focused on public health or population health
15 and not occupational health.

16 VICE-CHAIR TRUJILLO DAVIS: Oh, okay.
17 Thank you, Ms. Hill. I appreciate the
18 testimony and the information.

19 HEARING OFFICER ORTH: Thank you.
20 Member Cates?

21 MEMBER CATES: Yeah. Just a couple of quick
22 questions.

23 Thanks for the testimony.

24 So when you talk about facilities in general,
25 do you mean upstream, and then do you also mean

1 midstream? That is, are you talking about production
2 sites and pipelines, and, you know, if not, could you,
3 you know, make that distinction?

4 MS. HILL: Yes, absolutely. So the studies
5 that I reviewed focus on upstream oil and gas
6 development. In the most -- in most cases this is
7 classified as well sites. So I would say that's the
8 majority of the sources considered, as opposed to
9 further like midstream sources or gathering and
10 distribution pipelines.

11 MEMBER CATES: So you didn't really look at
12 pipelines.

13 MS. HILL: Right.

14 MEMBER CATES: So it's -- it would be beyond
15 the scope of your work to say that pipelines also pose
16 similar threats or to make any kind of assertion like
17 that?

18 MS. HILL: I did not evaluate the emissions
19 from pipelines as part of my scope of work.

20 MEMBER CATES: Okay.

21 And so you mentioned -- you had some numbers
22 regarding how many people in New Mexico are most
23 directly are -- affected are on the frontline, frontline
24 communities.

25 Did you do a breakdown comparing, say, San

1 Juan Basin communities to Permian Basin communities, and
2 did you come away with an impression of which of those
3 two communities is most affected or is most vulnerable
4 to the kind of thing that you worry about in your
5 testimony?

6 MS. HILL: It's a great question.

7 So in my testimony I do reference work by
8 Ms. Hull, and that analysis, the demographic analysis
9 was performed by her. So I -- I'm unable to answer that
10 question.

11 MEMBER CATES: Yeah.

12 So also in your testimony you went into some
13 detail about, you know, 2,540 feet is, you know, a half
14 mile, is the -- people within that range are still very
15 vulnerable to, say, NOx emissions, and then people within
16 a mile are in higher risk for abnormal rates of cancer,
17 but I think -- I think I'm kind of summing you up here
18 accurately.

19 Is -- so my question is is there a safe
20 distance to live and, you know, to exist -- what's
21 the -- what's the safe distance if you want to not worry
22 about public health concerns? What's a safe distance to
23 live from a wellhead?

24 MS. HILL: It's a -- it's a great question.

25 And I do in my testimony provide, you know,

1 all of the available peer-reviewed studies that perform
2 air quality health risk assessments, of which there are
3 only three, and the furthest distance that they evaluate
4 is out to about one mile in any of those studies.

5 Two of the studies focus on more narrow
6 distances, granularly around 2,000 feet. And so there
7 have been -- there have been instances where there are
8 increased health risks observed beyond -- beyond 1,000
9 feet and out to 2,000 feet, for example.

10 The question around safe distance is -- I
11 would want some additional context, because here we're
12 only talking about air pollution, and there are a lot of
13 other stressors associated with oil and gas development
14 that can contribute to health risks, psychosocial
15 stress, noise, light pollution and other factors that
16 we're not primarily addressing here.

17 So the question around safe distance from air
18 pollution, I would say there's evidence beyond 1,000
19 feet that shows there is elevated risks from air
20 pollution, but that there are also other stressors that
21 can influence health outcomes.

22 MEMBER CATES: Yeah. Okay. Thanks for the
23 testimony.

24 That's all I have. Thanks.

25 HEARING OFFICER ORTH: Thank you.

1 Member Bitzer?

2 MEMBER BITZER: Dang. Make me want to not
3 inhale. That's some serious list of nasties you've got
4 in that criteria emission category.

5 I threw this out yesterday, and the person
6 testifying didn't have any -- any context for it, but
7 we -- you know, we tend to have prevailing winds, as was
8 demonstrated in one of the videos -- one of the
9 satellite photos yesterday. There's a direction the
10 stuff generally blows.

11 And so a circle -- a 1,000-foot circle has got
12 3.14 million square feet in it, but it's equidistant if
13 you're in the middle of that circle and heading one way.
14 It seems to me the criteria emissions pollutants are
15 going to go a lot further that way, but you'd be better
16 off living 300 feet upwind than 2,000 feet downwind.

17 Has anyone ever done sort of an oval type
18 mapping rather than the CEP, this circle error probable,
19 type of thing that you're aware of?

20 MS. HILL: It's a great question.

21 And, you know, taking into account prevailing
22 winds may be more of like a site-specific -- might
23 require more site-specific assessments.

24 There is one study that I do cite in my
25 testimony. It's a health outcome study or an

1 epidemiological study. It is based in California, and
2 it looks at measured lung -- lung function among
3 individuals that live near active and idle oil and gas
4 sites in South Los Angeles, and they look out to about
5 1,000 meters. And what they did find for active sites
6 and for folks living downwind of those sites, that the
7 reductions in lung function were greater than for folks
8 that live, say, upwind of those sites. So there are --
9 there is that differentiation from the air pollution or
10 respiratory pathway.

11 That being said, I think, you know, the shape
12 you choose when drawing a buffer distance is
13 ultimately -- it can be a science policy question. It
14 may be easier to draw a concentric circle as opposed to
15 trying to adapt to prevailing winds which again are
16 site-specific when you're thinking of a policy context.

17 MEMBER BITZER: I want the advocates to start
18 thinking about an app, you know, maybe we could have
19 some sort of automated assessment tool.

20 Anyway, that's my only question. Thank you.

21 MS. HILL: Sure.

22 HEARING OFFICER ORTH: Thank you.

23 I remember going to a talk at the Santa Fe
24 Institute about the development of an app like that,
25 Member Bitzer.

1 Let's see. Member Garcia.

2 MEMBER GARCIA: Yes. Thank you, Madam Hearing
3 Officer.

4 And thank you for your testimony.

5 Just a clarifying question.

6 These studies were done in New Mexico or in
7 other places such as Texas near oil and gas operations?

8 MS. HILL: Yeah. That's a great question.

9 The three air quality health risk assessments
10 that I cited were all conducted in Colorado. To my
11 knowledge, that's the extent of the peer-reviewed
12 literature that's able to look at health risks by
13 distance with an air pollution focus.

14 MEMBER GARCIA: You know, in New Mexico, in
15 the San Juan area in particular, there's also concern
16 about exposure to abandoned uranium mines and tailings,
17 and I would imagine that would compound health effects.

18 Do you look at compounding effects of other
19 area hazards? Is that one of the things that was looked
20 at?

21 MS. HILL: Most of the studies that are
22 included in my testimony have actually done their best
23 to design a methodology so that they are singularly
24 focused on oil and gas development, so that they remove
25 additional explanatory or confounding factors, so that

1 when they are observing associations they can more
2 definitively state that the tie is to the source related
3 to oil -- upstream oil and gas sites, typically wells.
4 And so for the -- for the most part they don't take into
5 account, you know, other factors.

6 That being said, based on my public health
7 background, I would say, you know, it's very important
8 to understand what the additional environmental burden
9 is in a community and in places where there are
10 compounding burdens. So whether they be socioeconomic
11 burdens or environmental burdens, efforts should be made
12 to reduce those burdens as much as possible, to
13 influence greater health outcomes.

14 MEMBER GARCIA: Okay. Thank you. That's all
15 my questions.

16 Thank you very much.

17 HEARING OFFICER ORTH: Thank you.

18 Member Honker?

19 MEMBER HONKER: Yes.

20 Thanks for your testimony.

21 Just one question as a follow-up to Vice-Chair
22 Trujillo Davis' question.

23 Could you compare the health risks in a
24 general sense between an oil field worker who would be
25 at the site on an intermittent basis versus somebody who

1 was living within 1,000 feet of the facility?

2 MS. HILL: There are some general statements I
3 can make about maybe some similarities and differences
4 in exposure. When you say, you know, an oil field
5 worker might be out at sites intermittently, there is
6 evidence in the peer-reviewed literature that there are
7 intermittent or episodic spikes in air pollution
8 emissions particularly related to specific activities at
9 the site, and although a worker isn't, say, there 24
10 hours a day at one site, they may be performing
11 activities that might be putting them at greater risk of
12 exposure to those emissions depending on what the work
13 tasks are.

14 And then for people in the general community,
15 you may typically think that only chronic exposures are
16 relevant, but really, as I presented in my testimony,
17 there are a lot of different health outcomes tied to
18 acute exposure as well as chronic exposures. And so the
19 folks that are living near these communities -- living
20 near these sites also may be experiencing those
21 intermittent episodic spikes over short periods, and
22 there are -- there are absolutely health effects that
23 occur from -- from those short-term exposures to these
24 hazardous air pollutants that are also precursors to
25 ozone.

1 MEMBER HONKER: Okay. Thanks very much.

2 That's very helpful.

3 HEARING OFFICER ORTH: Thank you, Ms. Hill and
4 Member Honker.

5 Ms. Fox, does any of that prompt redirect for
6 you?

7 MS. FOX: No, Madam Hearing Officer.

8 HEARING OFFICER ORTH: All right.

9 Thank you very much for your testimony,
10 Ms. Hill.

11 MS. HILL: Thank you.

12 HEARING OFFICER ORTH: And thank you, Ms. Fox.

13 So do I understand from the e-mail exchanges
14 we had last night around the remaining topics, Ms. Katz,
15 that we will be moving to the liquids unloading?

16 MS. KATZ: Madam Hearing Officer, I believe
17 that we said that we would be starting with storage
18 vessels.

19 HEARING OFFICER ORTH: Ah. Okay. Very sorry.

20 MS. KATZ: No. That's all right.

21 HEARING OFFICER ORTH: Let's take a 10-minute
22 break, please, and come back at -- well, a 14-minute
23 break, come back at 10 after 10:00, and we'll begin with
24 storage vessels.

25 Thank you.

1 (Proceedings in recess from 9:56 a.m. to
2 10:10 a.m.)

3 HEARING OFFICER ORTH: Let's come back from
4 the break, please.

5 We are back after a short break, and I believe
6 at this point we go to storage vessels.

7 Ms. Katz.

8 MS. KATZ: Thank you, Madam Hearing Officer.

9 And I guess I just want to check and make sure
10 that -- because we were going to -- I know we were going
11 to close out -- we were going to try to wrap some things
12 up and close out engines, but my understanding is that
13 we only have one last engines witness and -- and he's
14 not currently available until this afternoon. So I just
15 wanted to make sure that that's correct.

16 HEARING OFFICER ORTH: Let me ask if anyone
17 has other information there.

18 MR. BAAKE: Madam Hearing Officer, that's
19 correct. It will -- it will be very short, and our
20 witness will be going on -- be available after -- this
21 afternoon.

22 HEARING OFFICER ORTH: Thank you very much.

23 MS. KATZ: Okay. Thank you.

24 Okay. So this is -- the Department calls back
25 Ms. Bisbey-Kuehn and Mr. Palmer.

1 ELIZABETH BISBEY-KUEHN and BRIAN PALMER
2 (Relating to Topic Order 34)
3 having been first duly sworn or affirmed, were
4 examined and testified as follows:

5 DIRECT EXAMINATION

6 BY MS. KATZ:

7 MS. KATZ: This is -- this testimony pertains
8 to Section 20.2.50.123 of the rule, storage vessels.
9 The testimony -- the written testimony appears in NMED
10 Exhibit 32 on page 138 and NMED rebuttal Exhibit 1
11 beginning on page 90.

12 And this testimony has already been adopted by
13 the witnesses, and I don't believe there are any
14 corrections that need to be made.

15 So, Ms. Kuehn, can you please discuss the
16 equipment that is the subject of this section of the
17 rule?

18 MS. BISBEY-KUEHN: Yes.

19 Good morning, everyone.

20 We're here this morning to discuss
21 Section 123, storage vessels.

22 Storage vessels are used throughout the oil
23 and gas sector for storing hydrocarbon liquids in
24 produced water. They're used in production, gathering,
25 processing and disposal and are significant sources of

1 VOC emissions. Storage vessels may be installed as a
2 single unit or in a group of similar or identical
3 vessels, commonly referred to as a tank battery.

4 Crude oil contains many light hydrocarbons in
5 solution in the reservoir, and when brought to the
6 surface, many of those dissolved lighter hydrocarbons,
7 as well as water, are removed through a series of
8 separators.

9 Crude oil can be passed through a two-phase
10 separator where the associated gas is removed and any
11 oil and water remain together or a three-phase separator
12 where the associated gas is removed and then the oil and
13 water are also separated. The remaining oil is then
14 directed to a storage vessel where it is stored before
15 being transported off-site, and much of the remaining
16 hydrocarbon gases in the oil are released as vapors in
17 the -- in the storage vessels.

18 VOC emissions can occur from three different
19 types of sources, and they're a function of flashing,
20 emissions, breathing and working losses.

21 Flashing losses occur when liquid with
22 entrained hydrocarbons are transferred from a vessel
23 with a higher pressure to a lower pressure, allowing
24 entrained gases to be vaporized or flash.

25 Breathing losses are the release of gas

1 associated with temperature fluctuations and the
2 expansion and contraction of stored fluids resulting
3 from increased or decreased pressures associated with
4 environmental and weather-related fluctuations.

5 And finally, working losses occur when vapors
6 are displaced due to the emptying and the filling of a
7 storage vessel.

8 And so it's these three different separate
9 types of emissions combined that contribute to the
10 overall emission profile of a -- of a storage vessel.

11 MS. KATZ: And, Ms. Kuehn, can you discuss
12 what options there are for controlling emissions for --
13 from storage tanks?

14 MS. BISBEY-KUEHN: Yes. The methods to reduce
15 VOC emissions from storage vessels or tanks, which we're
16 using interchangeably and can be used interchangeably,
17 owners and operators may route emissions from the
18 storage vessel through an enclosed system to a process
19 where those emissions are recycled or recovered, for
20 example, by installing a vapor recovery unit that
21 recovers vapors from the storage vessel, for reuse in
22 the process or for beneficial use of the gas on site, or
23 they may route those emissions from a storage vessel to
24 a combustion device.

25 And we also heard testimony from other parties

1 that there are additional types of controls available
2 that we'll speak to later on.

3 MS. KATZ: Thank you.

4 And I guess we've skipped over what we've
5 normally done, which was to give the overview of the
6 emission standard. So I'll have Ms. Kuehn do that when
7 we get to the actual rule language.

8 Mr. Palmer, can you discuss what the estimated
9 emission reductions and costs are for this part of the
10 rule?

11 MR. PALMER: Sure. The estimated overall
12 emission reductions from storage tanks are 7,739 tons
13 per year of allowable VOC. The reductions are achieved
14 at an estimated cost effectiveness of \$2,695 per ton of
15 VOC use being combustors to control emissions. And this
16 cost effectiveness was based on the 2016 CTG and the use
17 of a combustor control, and also includes costs for tank
18 retrofits to include a closed vent system.

19 MS. KATZ: And -- sorry. Mr. Palmer, do you
20 have any discussion of where -- the basis for the rule
21 provisions --

22 MR. PALMER: Sure. Yeah. The rule provisions
23 parallel those. They're similar to -- they're similar
24 control requirements as in the NSPS and also Colorado
25 Rule 7, and I also believe Pennsylvania General Permits.

1 MS. KATZ: Okay. Thank you.

2 And, Ms. Kuehn, can you please discuss the
3 definitions in Section 7 of the rule that are related to
4 the storage tank provisions and any revisions that were
5 made to those?

6 MS. BISBEY-KUEHN: Yes. The first definition
7 is the definition of a storage vessel. We received
8 requests from stakeholders to strike the language
9 referring to a process vessel, such as a surge control
10 vessel or bottom receiver or knockout vessel. The
11 Department agreed to strike those. Those are not
12 intended to be covered as storage vessels, and that is
13 consistent with the federal New Source Performance
14 Standard Quad 0a.

15 We also received a comment to add in a psi
16 equivalent pressure, and so that was added in response
17 to comments.

18 NMOGA -- in terms of commencement of
19 operation, that definition we -- the Department received
20 requests regarding that definition, as well, to strike
21 the final language of the -- the sentence, "but no later
22 than the end of well completion operation," and the
23 Department did not agree to that -- that edit. This
24 definition was taken from the Colorado Reg 7, and we
25 are -- we are aligning those two definitions for this

1 rule.

2 MS. KATZ: Thank you.

3 And, Ms. Kuehn, can you please discuss the
4 applicability and emissions standards that apply to
5 storage vessels under the rule and how those have
6 been -- the revisions that have been made to those
7 standards?

8 MS. BISBEY-KUEHN: Yeah. Yes, I will.

9 Similar to the other regulatory -- or --
10 excuse me -- the other sections that we reviewed, we
11 have the applicability section which identifies the
12 types of storage vessels that are subject to this
13 section. So new storage vessels with a potential to
14 emit equal to or greater than two tons per year are
15 subject to this rule, and existing storage vessels with
16 a potential to emit equal to or greater than three tons
17 per year are subject to this rule.

18 So there's a different applicability threshold
19 for new and existing storage vessels.

20 The addition of the second sentence was a
21 request also made by industry stakeholders to clarify
22 that when storage vessels are manifolded together, those
23 emissions may be routed either to an individual storage
24 vessel or to storage vessels that are routed together,
25 and that the PTE may be determined by averaging the

1 emissions across the total number of storage vessels.

2 So the emission standards, which are outlined
3 in Paragraph B, establish the emission reduction
4 requirements. Existing storage vessels again with a PTE
5 greater than three tons per year shall reduce emissions
6 of VOC by at least 95 percent according to the following
7 schedule.

8 We agreed -- it was requested that we have a
9 staggered timeline or deadline for existing storage
10 vessels. The Department agreed that given the -- the
11 universe of storage vessels that this will affect, that
12 a staggered compliance timeline or deadline is
13 appropriate for existing storage vessels. So we have
14 structured deadlines similar to what we have done for
15 engines and turbines.

16 By January 1st, 2024, owners or operators must
17 ensure at least 35 percent of the company's existing
18 storage vessels are controlled; and then again by
19 January 1st, 2026, at least an additional 35 percent of
20 the company's existing storage vessels must be
21 controlled; and then by January 1st, 2028, the remaining
22 existing storage vessels are required to be controlled.

23 We did in our original filed version of the
24 rule back in May have a separate distinctive requirement
25 for existing vessels that were -- had a PTE greater than

1 10, and we had a higher control reduction requirement,
2 and we have struck that requirement because that was --
3 it was not clear, and it's not I don't think technically
4 feasible to meet that kind of emission reduction. And
5 so we have rewritten this -- this part to have the same
6 reduction efficiency requirement for both new and
7 existing storage vessels.

8 So the new Paragraph (2) identifies the
9 requirement for new storage vessels. Again those are
10 storage vessels with a potential to emit greater than
11 two tons per year shall reduce their VOC emissions by at
12 least 95 percent per year. And again we've -- and
13 throughout this rule if a combustion control device is
14 used, the combustion device shall have a minimum design
15 combustion efficiency of 98 percent. And we have made
16 that edit throughout the rule, as you probably have
17 noticed.

18 Paragraph (4) is the equivalent requirement
19 that we -- that we struck.

20 Paragraph -- the new Paragraph (3) is an off
21 ramp for those storage vessels that have actual annual
22 VOC emissions less than two tons per year. So if -- if
23 a tank has actual VOC emissions less than two, they are
24 no longer subject to the emission standards of this
25 part.

1 As an alternative, Paragraph (4) allows owners
2 and operators to shut in the well as an alternative to
3 complying with the control requirements by the
4 applicable date. There is a sunset clause included in
5 this regulation -- in this provision that the owner or
6 operator shall not resume production from the well until
7 the control device is installed and operational.

8 The new Paragraph (5) discusses a requirement
9 to have a pressure relief -- I'm sorry -- a thief hatch
10 automatically close after it is opened due to an
11 overpressuring event. We had received comments from
12 stakeholders about requesting some modifications to that
13 language which we agreed with. The intent of this
14 provision is that any pressure relief valve installed
15 must automatically close once the vessel overpressure is
16 relieved.

17 And so that has been clearly stated in that
18 last sentence, and that's the -- that's the intent of
19 this section.

20 And then the paragraph -- previous Paragraph
21 (8) has been deleted. That was the requirement to
22 install an equipment monitoring tag.

23 And then Paragraph (6), new Paragraph (6),
24 requires owners and operators that are using a control
25 device to comply with the emission standards of this

1 part, to comply with those specific control device
2 operational requirements in Section 115.

3 Paragraph C discusses the monitoring
4 requirements for storage vessels. On a monthly basis
5 they are required to calculate or estimate the -- or
6 monitor directly the total monthly liquid throughput and
7 also the upstream separator pressure if the storage
8 vessel is directly downstream of a separator. That was
9 an important clarification that it -- we are only
10 seeking to know the upstream separator pressure if it is
11 directly upstream of -- of a tank.

12 There's a -- there's a clause also provided
13 that when a storage vessel is loaded less frequently
14 than monthly, that those two monitoring events shall be
15 conducted when or before the storage vessel is unloaded.

16 Owners and operators are also required to
17 conduct an AVO inspection on a weekly basis. And again
18 if the storage vessel is unloaded less frequently, then
19 the AVO inspection shall be conducted before the storage
20 vessel is unloaded. The owner or operator is required
21 to inspect -- actually inspect the monthly -- the vessel
22 on a monthly basis to ensure compliance with the
23 requirements of this part and to ensure the vessel does
24 not have a leak.

25 Paragraph C.(4) requires also the date and

1 time stamp of the -- of the event.

2 Paragraph (5) is again referencing the
3 monitoring requirements that are applicable to that
4 specific control device being used to comply with the
5 emission standards in this part within Section 115.

6 And Paragraph C.(6) is referring to the
7 general monitoring requirements of Section 112.

8 Paragraph D contains the recordkeeping
9 requirements of -- of the monitoring events that are
10 outlined in Paragraph C. On a monthly basis they shall
11 maintain a record for each vessel of the identification
12 number, the monthly liquid throughput, the average
13 separator pressure, and then a calculation of the actual
14 emissions of VOC emissions and the controlled and
15 uncontrolled VOC emissions in ton per year, also the
16 make, type, model and ID of any control device used.

17 There is also a requirement in Paragraph D.(2)
18 to record the liquid throughput and verify that by
19 either a data liquid level measurement, a data delivery
20 receipt from the purchaser of the hydrocarbon liquid,
21 the actual metered value of hydrocarbon liquid sent
22 downstream, or some other type of proof of transfer.

23 The owner or operator shall also make a record
24 of the inspections that are required under the
25 monitoring, and those include a record of the date and

1 time and a time stamp in GPS of the location of the
2 inspection, the person conducting the inspection, and a
3 description of any problems observed and corrective
4 action taken.

5 Paragraph (4) again refers to the
6 recordkeeping requirements of control devices used as
7 required in Section 115.

8 And the Paragraph D.(5) refers to the general
9 recordkeeping requirements of the general provisions
10 that are found in 112.

11 And then similarly for reporting requirements,
12 we are referencing those general reporting requirements
13 for 115 and 112. There are no specific reporting
14 requirements for storage vessels to this -- under this
15 section.

16 And that concludes this section.

17 MS. KATZ: Thank you, Ms. Kuehn.

18 And that concludes the summary of the
19 Department's prefiled testimony on storage vessels.

20 HEARING OFFICER ORTH: Thank you very much,
21 Ms. Kuehn, Mr. Palmer, Ms. Katz.

22 If you're a party and have questions of the
23 Department panel, please turn on your camera.

24 Oh, I see Mr. Rose.

25 Mr. Rose.

1 MR. ROSE: Thank you, Madam Hearing Officer.

2 CROSS-EXAMINATION

3 BY MR. ROSE:

4 MR. ROSE: And either Ms. Kuehn or Mr. Palmer
5 can answer. I'll let them decide who the most
6 appropriate person is.

7 In discussing the proposed requirements for
8 storage vessels, I think both of you alluded to NSPS
9 requirements that may be applicable.

10 Could you identify those NSPS requirements
11 that apply to storage tanks?

12 MS. BISBEY-KUEHN: Yes. There's Quad 0 and
13 Quad 0 and -- which was superseded by Quad 0a, and those
14 require new storage vessels with a PTE greater than six
15 tons per year to control emissions by 95 percent.

16 MR. ROSE: And are any of these units that
17 we're talking about subject to this hearing subject, for
18 example, to Subpart K or Ka or Kb?

19 MS. BISBEY-KUEHN: There -- yes. There are --
20 may -- there may be tanks subject to K, Ka and Kb, as
21 well.

22 MR. ROSE: And would you characterize the
23 requirements you're proposing as being more stringent
24 than those requirements, either K, Ka or Kb or Quad 0a?

25 MS. BISBEY-KUEHN: This section is more

1 stringent in that it requires existing storage vessels
2 to be subject to this part. So we're bringing in a
3 significant number of storage vessels that have never
4 had requirements to control those emissions. And Ka, Kb
5 are -- those are largely targeted towards floating roof
6 tank requirements, and Quad 0 and Quad 0a again only --
7 only cover new units or existing units.

8 So anything, I think, after August, 2012 would
9 have been covered under Quad 0, and anything over
10 September, 2020 -- I'm sorry -- September, 2016 would be
11 covered under 20 -- under Quad 0a.

12 MR. ROSE: Thank you.

13 And I just have a couple questions about the
14 cost figures, and perhaps Mr. Palmer is the right person
15 to ask.

16 You identified a cost figure in cost per ton,
17 and I'm trying to figure out, was that based on
18 reductions that would be attained through the
19 Department's initial proposal, or has that been updated
20 to include now the revised proposal that
21 Ms. Bisbey-Kuehn alluded to earlier?

22 MR. PALMER: That is based on the cost per ton
23 estimates in the 2016 CTG, and those then were scaled
24 up. And so -- and then we applied those to the
25 estimated emission reductions we would get in

1 allowables.

2 MR. ROSE: And I guess my question was the
3 allowables as the rule --

4 MR. PALMER: As --

5 MR. ROSE: -- proposed initially or as the
6 rule is being revised.

7 MR. PALMER: As the rule is being revised. So
8 we removed from our spreadsheet -- cost spreadsheet
9 those tanks that were between two and three tons per
10 year of allowables. So we just changed the filtering.

11 MR. ROSE: And in --

12 (Simultaneous discussion.)

13 MR. PALMER: Based on that we estimated the
14 average cost per ton of the VOC allowables that were
15 reduced.

16 MR. ROSE: And in terms --

17 (Simultaneous discussion.)

18 MR. ROSE: Excuse me. Go ahead.

19 MR. PALMER: Just one more clarification.

20 We also changed the percent reduction to 95
21 from 98 that we had for the larger tanks. So those are
22 the two changes in the spreadsheet.

23 MR. ROSE: Okay.

24 And that's -- that's addressed in, I think,
25 both the presentation today and in your testimony? I

1 think that's been submitted, correct?

2 MR. PALMER: I believe so.

3 MR. ROSE: And I think I've asked you before.

4 My understanding is you -- not you personally, but you
5 were responsible for providing the Department's modeling
6 experts with the emissions inventory that was modeled.

7 Do you know whether the --

8 MR. PALMER: Let me clarify that?

9 MR. ROSE: Sure. Go ahead.

10 MR. PALMER: I was -- we were not responsible
11 for providing the modeling inventory. We were
12 responsible for estimating what we thought the emission
13 reductions would be.

14 MR. ROSE: Okay.

15 And do you know whether those -- the emission
16 reductions we're talking about in the revised proposal
17 today were evaluated as part of that modeling analysis?

18 MR. PALMER: No. The modeling was not updated
19 for the changes in the September 16th version of the
20 rule.

21 MR. ROSE: Thank you, Madam Hearing Officer.

22 I have no further questions.

23 HEARING OFFICER ORTH: Thank you, Mr. Rose.

24 Mr. Hiser, I think I saw you turn on your
25 camera. There you are.

1 MR. HISER: Thank you. Yeah. I have just a
2 couple questions.

3 CROSS-EXAMINATION

4 BY MR. HISER:

5 MR. HISER: Ms. Kuehn, in your direct
6 testimony on page 140, in control options for storage
7 vessels -- and I'll give you a moment because I see
8 you're hunting for it.

9 You talked about some of the advantages of
10 recycling or recovery options; is that correct?

11 MS. BISBEY-KUEHN: Yes.

12 MR. HISER: And that's really talking probably
13 in most cases about a vapor recovery unit; is that
14 correct?

15 MS. BISBEY-KUEHN: Yes.

16 MR. HISER: Did you evaluate as part of your
17 consideration of this the impacts of the Department's
18 other proposal in Section 115 that requires that instead
19 of a single VRU you have to have two, and how that might
20 impact this beneficial recycling and recovery option
21 that you speak to here in page 140 of your testimony?

22 MS. BISBEY-KUEHN: We did not specifically
23 evaluate that -- a redundancy impacting the ability to
24 recycle vapors.

25 MR. HISER: So would that redundancy tend to

1 increase the cost of the recycling and recovery option?

2 MS. BISBEY-KUEHN: It would. And -- but it
3 would also increase the capture and recycling of the
4 vapors during any VRU downtime. And so we -- the reason
5 for that is we have vapor recovery units that -- that
6 are operational on very limited amounts of time, and so
7 the redundancy requirement was meant to cover those VRUs
8 that are cooperating less than 95 percent of the time.

9 And so -- that's all.

10 MR. HISER: So did I understand correctly that
11 the redundancy requirement is to ensure we meet the
12 95 percent requirement, but if you're able to meet that
13 with a single VRU, you don't have to have a redundant
14 VRU?

15 MS. BISBEY-KUEHN: That's not exactly what the
16 requirement says. It says you must meet at least
17 95 percent and then use the VRU as a backup when your
18 first in line VRU goes down for maintenance.

19 MR. HISER: Okay.

20 And then in the Rebuttal Exhibit 1, where
21 it's, I believe, both you and Mr. Palmer -- and this is
22 probably a Mr. Palmer question. In page 91, Mr. Rose
23 just asked you some questions about the cost for that.

24 And I was wondering, Mr. Palmer, if the 13,779
25 that you listed as the ton for a two ton per year

1 tank -- is that the two ton per year tank, or was that
2 the three ton per year tank value? If you could just
3 clarify that.

4 MR. PALMER: It says on my testimony \$13,779
5 per ton for a two ton per year tank.

6 MR. HISER: Did you -- do you have the value
7 that you got using the three ton per year tank available
8 that you could share?

9 That would be the current threshold the
10 Department's proposing.

11 MR. PALMER: Let me look here, sir.

12 So in the -- in the cost spreadsheet from the
13 CTG, which we have as Exhibit 100, there is a tab called
14 Cost Factors, and it shows -- this is from the CTG, and
15 so it shows a two ton per year, four ton per year, six
16 ton per year, so increments of two. So there's actually
17 not a value there for three. There's a value for two
18 which is \$13,779, there's a value for four which is
19 \$6,890 --

20 (Simultaneous discussion.)

21 MR. HISER: What was the value for four?

22 MR. PALMER: \$6,890.

23 MR. HISER: And so you'd expect that three
24 would then be someplace between the 6,890 and the
25 13,970?

1 MR. PALMER: I would expect that to be true.

2 MR. HISER: Okay.

3 Does the cost -- did you evaluate whether the
4 cost estimate varies depending on whether it's a single
5 tank that we're controlling or if it's a multiple tank
6 battery that we're controlling?

7 MR. PALMER: We estimated our costs including
8 retrofit factor for tanks. It was a cost per tank. So
9 we applied that retrofit factor for each tank.

10 MR. HISER: Okay.

11 Then on page 92 of your rebuttal exhibit, this
12 question probably going to Ms. Kuehn, on line 18 of this
13 page, Ms. Kuehn, you say that NMOGA proposed to exempt
14 sources to other federal emission standards from the
15 requirements of this section, NMED does not agree with
16 this proposal.

17 I think subsequent to this testimony we had a
18 discussion about the discovery of floating roof tanks
19 and that for those floating roof tanks you are
20 current -- the Department's current view is that they
21 are looking at NSPS Subpart Kb for those floating roof
22 tanks; is that correct?

23 MS. BISBEY-KUEHN: We have not agreed that Kb
24 is an -- is an equivalent reduction to what Part 50
25 proposes to control. So I'm -- I'm unsure about the

1 question.

2 MR. HISER: Okay. I guess that in the earlier
3 discussion of this issue we -- there had been a question
4 about the control factors and whether or not the
5 controls that were proposed here are appropriate for
6 floating roof tanks because of the differences between
7 how they're constructed and availability of vapor
8 space and routing to combustors. And it had been
9 proposed that maybe those would continue to be regulated
10 under the Part Kb which has specific provisions for
11 floating roof tank controls.

12 And I was just curious whether this statement
13 that you're making here, because it predated that prior
14 discussion, was meant to be read in light of your
15 subsequent discussion in this hearing.

16 MS. BISBEY-KUEHN: So that was the first time
17 that that issue has been brought up. I don't believe
18 that anybody -- any party provided any testimony that Kb
19 should be considered equivalent or an effective means of
20 controlling emissions for those -- those issues.

21 MR. HISER: Mr. Palmer, then, if I can turn,
22 then, to just this question about a Kb tank.

23 When you conducted the technical evaluation,
24 do you know if the example controls that were used
25 included the technical differences between a fixed roof

1 tank and a floating roof tank and what was done?

2 MR. PALMER: Let me look at something here, if
3 you can give me a minute or two.

4 MR. HISER: Yes, certainly.

5 And --

6 MR. PALMER: I'm just --

7 MS. KATZ: Mr. Hiser, I'm just wondering if
8 you -- if you could -- if there -- you're referring to
9 some discussion of that issue, if you can maybe point
10 out where that was or when that occurred.

11 MR. HISER: Well, there was a comment
12 certainly that NMOGA had made about using Kb, and then
13 in this testimony -- and I'm trying to remember -- when
14 we were talking about the definition of tank batteries,
15 Mr. Curtis reminds me that the question had come up
16 about the floating roof tanks.

17 And my goal here is really not to derail the
18 hearing on this issue, but just to make sure that we're
19 all thinking about them, because they're a little bit
20 different in how they're structured and controlled. And
21 the Department's done a lot of work, which I think is
22 very appropriate for fixed roof tanks and there's a lot
23 of testimony on that. The question is about this other
24 sort of universe.

25 And I see Mr. Palmer is looking like maybe

1 he's found something?

2 MR. PALMER: Yeah. Let me -- what I'm trying
3 to do is just refresh my memory on exactly how we
4 handled Kb and Ka tanks and how many we have in our
5 data.

6 MR. HISER: Okay.

7 MR. PALMER: Okay. So I'm just --

8 MR. HISER: And if you -- if it's agreeable to
9 you, Mr. Palmer, I think most of my other questions are
10 for Ms. Kuehn. Maybe I'll touch with her while -- and
11 that will give you time to look at what you're looking
12 at, and then I'll come back to you on the Kb question.

13 Does that seem acceptable to everyone?

14 MR. PALMER: That's fine with me.

15 MR. HISER: Okay. Thank you.

16 Ms. Kuehn, I had, I think, one question for
17 you.

18 There was a proposal, I think, from the
19 Commercial Disposal Group relating to supplemental fuel
20 where the emissions from the tank are not sufficient to
21 support the control device by itself, at least if it's a
22 combustion control device.

23 Do you tend to agree that where we would be
24 adding significant emissions from the supplemental fuel
25 requirements, that that may be an appropriate case to

1 take an alternative approach?

2 MS. BISBEY-KUEHN: It may be. There's -- so
3 first, we didn't receive any emissions data on those
4 tanks, and we didn't receive any Btu content about those
5 tanks' vapors. So we weren't able to evaluate either
6 request because we didn't receive any data about those
7 two pieces of information.

8 We have an applicability threshold for
9 existing tanks of three tons per year. That should
10 handle those low-emitting tanks if they are
11 low-emitting. We also have an off ramp of two tons per
12 year for uncontrolled or for actual VOC emissions. And
13 so if those low-emitting tanks are emitting less than
14 that amount, there is a clear off ramp from the rule for
15 those requirements.

16 In addition, we've had other parties tell us
17 that there are alternative control devices that can be
18 employed on these tanks that are not combustion based.
19 And so instead of writing in another waiver for a
20 control device via this rule, we've kept the control
21 device agnostic and given owners and operators
22 flexibility in the type of control device that they
23 would need to employ.

24 MR. HISER: Thank you for that explanation of
25 the Department's thinking on this issue. It's helpful

1 for us.

2 Mr. Palmer, that did not quite -- take quite
3 as long as I thought it might. So I'm back --

4 MR. PALMER: I'm good. I'm good.

5 So I'm looking at our data here, and so we --
6 of 2,000 tanks or so that were in our final reduction
7 cost tab. And this goes back to the June 2nd
8 spreadsheet that we provided. There are about 37 tanks
9 that are marked Kb, being subject to Subpart Kb, and we
10 primarily looked at whether or not they had an add-on
11 control device.

12 And these are all -- the 37 that I'm looking
13 at are all marked uncontrolled or blank for control
14 device. So I don't think we took into account floating
15 roofs.

16 So there's 37 in the data, there's -- it looks
17 like, oh, about 30 or so of those we assigned a cost and
18 emission reduction to. But there's -- you know, it's 37
19 out of 2,000. But because they were marked
20 uncontrolled, we included them in the cost of emission
21 reduction.

22 So I don't know if that answers your question
23 or not.

24 MR. HISER: That's very helpful. Thank you,
25 Mr. Palmer.

1 How familiar are you with a floating roof
2 tank?

3 Because I don't want to ask you questions if
4 you're not very familiar with them.

5 MR. PALMER: I've had some experience with
6 those working on other NESHAP tangentially. It was not
7 a direct thing. I was estimating costs and emission
8 reductions and impacts for another rule, miscellaneous
9 surface coating, but -- and then I was conferring with
10 some of my colleagues who were working on organic liquid
11 distribution and also miscellaneous organic chemical
12 manufacturing rules.

13 So I understand the principle, that you have a
14 floating roof on top of a liquid and that prevents
15 evaporation and eliminates a head space, that sort of
16 thing --

17 MR. HISER: Okay.

18 And what --

19 (Simultaneous discussion.)

20 MR. PALMER: -- exterior floating roofs. So
21 yeah.

22 MR. HISER: Let me ask my question, and then
23 you can tell us whether you feel qualified to answer it
24 or not, and that would be fine with me.

25 And the question is that where I have a

1 floating roof, and I think particularly for an external
2 floating roof, would it not be very difficult to develop
3 an effective closed vent system for that type of unit to
4 route to a control device, which is sort of the model
5 that would you agree is how the Department looked at how
6 we would handle most of the tanks covered by this
7 rulemaking?

8 MR. PALMER: I'm going to defer on that, but I
9 think it would be easy to determine whether or not
10 those -- those vent systems and add-on controls are an
11 appropriate control device, just basically looking at
12 the control device literature. I think there's a lot
13 out there we can refer to that and not have to rely on
14 my spur-of-the-moment testimony at this time.

15 MR. HISER: Very fair. Mr. Palmer, I
16 appreciate your -- your responses to that.

17 Ms. Kuehn, as well, your clarifications and
18 help in interpreting the rule.

19 I have no further questions.

20 HEARING OFFICER ORTH: Thank you, Mr. Hiser.

21 Is there any other party with questions?

22 Please turn on your camera.

23 No?

24 I will turn then to questions from the Board.

25 While I'm doing that, if you're an attendee on

1 this platform with a question, please reach out through
2 chat.

3 EXAMINATION

4 BY THE BOARD:

5 HEARING OFFICER ORTH: Vice-Chair Trujillo
6 Davis, do you have any questions?

7 VICE-CHAIR TRUJILLO DAVIS: Yes.

8 And I'm just curious. Are we at the point
9 where I can ask questions of -- am I just asking
10 questions of Ms. Kuehn or --

11 HEARING OFFICER ORTH: Both Ms. Kuehn and
12 Mr. Palmer.

13 VICE-CHAIR TRUJILLO DAVIS: Okay. Great.
14 Thank you.

15 Let's see here. I do have a few -- a couple
16 of questions, just trying to sort through my notes here.

17 What -- oh. Is the NMED going to be --
18 there's a lot of talk about inspections of -- throughout
19 this hearing, but I was looking at the part of the rule
20 where it was discussing inspections of tanks
21 specifically.

22 Does the Department have a form that they're
23 looking at? Is there an outline of what that inspection
24 should entail?

25 MS. BISBEY-KUEHN: Madam Vice-Chair, there's

1 not a specific checklist, for instance, for owners and
2 operators to use. It's an AVO inspection. So they
3 would be, I imagine, you know, surveilling the unit for
4 audiovisual, olfactory instances. And then for the
5 actual inspection, the monthly inspection, they're
6 actually inspecting the tank for leaks.

7 VICE-CHAIR TRUJILLO DAVIS: Okay.

8 So at this point you're leaving it up to the
9 operators to determine what that inspection should look
10 like as far as on paper and the specifics in that
11 inspection?

12 MS. BISBEY-KUEHN: Yeah. That's right. We
13 haven't specified other than that you conduct an AVO and
14 you conduct an inspection for leaks. Beyond that it's
15 not specified.

16 VICE-CHAIR TRUJILLO DAVIS: Okay.

17 And Section 123, is it applicable to both --
18 I'm assuming it is, but is it applicable to both
19 production and disposal facilities?

20 MS. BISBEY-KUEHN: It currently -- yes. It
21 is.

22 VICE-CHAIR TRUJILLO DAVIS: And what
23 percentage of the facilities -- I'm going to return back
24 to the floating roof tanks. What percentage of
25 production facilities are you seeing with floating roof

1 tanks?

2 MS. BISBEY-KUEHN: I would imagine it's --

3 Madam Vice-Chair, I would imagine it's very small.

4 VICE-CHAIR TRUJILLO DAVIS: Okay.

5 MS. BISBEY-KUEHN: A very small number have
6 floating roof tanks. Those are for larger tank
7 batteries that -- and there are specific exemptions in
8 that rule for pressure and for -- and for volumetric
9 capacity. And so I haven't seen those employed in the
10 upstream sector, but maybe Mr. Palmer can add to that.

11 MR. PALMER: Am I still on? Yeah.

12 I'm looking at the tank data that we actually
13 have in the equipment -- the equipment spreadsheet, and
14 a lot of those are under the agency interest type, which
15 is a facility type description. A lot of those are oil
16 and gas tank battery bulk fuel storage. Some of them
17 are production. But it looks like about half are bulk
18 fuel storage oil and gas tank battery.

19 So that's -- and some of them are companies
20 listed as marketing. It's possible that some of them
21 are fuel storage rather than oil and gas production.
22 So -- although some of them the -- a lot of them -- I'm
23 looking at the SI description, and a lot of it is crude
24 oil storage, condensate storage. So --

25 VICE-CHAIR TRUJILLO DAVIS: So I'm just --

1 sort out in my head here.

2 Of those facilities how many of them would be
3 under your Title V program, and would the facility
4 apply -- would both of these rules apply to a facility
5 that would also be in Title V?

6 MR. PALMER: I'm looking at -- there are not a
7 lot of them under Title V. These -- well -- yeah.
8 These are the ones that were in -- for which we
9 estimated costs. So there may be some that are already
10 controlled and regulated that are under Title V.

11 MS. BISBEY-KUEHN: Madam Chair, we can do that
12 review, we can do that analysis of our permitting
13 database and find out what portion of tanks are subject
14 to Kb and subject to Title V.

15 VICE-CHAIR TRUJILLO DAVIS: Yeah. I think
16 that would be really helpful in trying to kind of sort
17 out some of this information for us. So thank you. I
18 would appreciate that.

19 And I don't have any more questions.

20 MR. HISER: Madam Hearing -- or Madam Hearing
21 Officer?

22 HEARING OFFICER ORTH: Mr. Hiser.

23 MR. HISER: The ones that I was specifically
24 asking about, if that's helpful for the Board, tend to
25 be located either at the crude oil transport sector, so

1 collection right before it goes into the transportation
2 pipeline, or there might be -- we're trying to run down
3 whether there's any at a central delivery point, some of
4 the very largest of those. That was where these
5 questions came from, if that helps you, Madam
6 Vice-Chair, as to why we raised concern.

7 VICE-CHAIR TRUJILLO DAVIS: Yes. And
8 actually, I understood what you were kind of alluding to
9 there, and in my experience I've seen floating roof
10 tanks on extremely large facilities. And to give
11 context here, you know, most production facilities are,
12 you know, five to eight 500-barrel tanks, whereas the
13 floating roof facilities are closer to the, you know,
14 46,000-barrel mark. So the scale is vastly different.

15 So I was trying to sort out which one of these
16 are subject to, you know, Title V and are -- or have
17 more stringent requirements, and then, you know, what
18 we've been talking about is closer to these -- these
19 smaller volumes in that sense. So that's really what I
20 was trying to sort out as far as this -- this discussion
21 was going.

22 HEARING OFFICER ORTH: Okay. Thank you for --

23 MR. PALMER: Yeah. Okay.

24 HEARING OFFICER ORTH: Thank you, both.

25 Let's see. Member Cates?

1 No.

2 Member Bitzer?

3 MEMBER CATES: No questions here. Thank you.

4 MEMBER BITZER: Real quick, I guess this is
5 for the state. At 20.2.50.123, Paragraph B, it was one
6 of your early slides, you have the schedule of dates.
7 It was January 1st, 2024, then January, '26 and then
8 January, '28 for completion of the upgrades, and I was
9 wondering if there was something magical about 24-month
10 intervals, or if we could perhaps maybe tighten that
11 schedule without a lot of unintended consequences coming
12 down, maybe go 18 months, and have B Section (1)
13 subparagraph (c) start January 1st, 2027 instead of
14 2028.

15 Just trying to imagine the scenario under
16 which we attach two years for each interval. Now, I
17 understand going -- waiting until 2024, middle of 2024
18 to launch, give the industry time to financially and
19 physically prepare and get it in -- get it done.

20 But once -- once the -- I know we're a big
21 state compared to like Colorado, in terms of demands on
22 the supply chain. We're number two, I guess, in the
23 country now. But with that kind of lead time, you know,
24 '25 and '27 seems to be the industry supplier, I guess,
25 would be ready to ramp up enough to supply New Mexico

1 producers. Just thinking out loud.

2 Is there -- is there something that I'm
3 missing in -- in the 24-month intervals?

4 MS. BISBEY-KUEHN: Member Bitzer, you are
5 correct that there -- there will be supply chain issues,
6 and I think -- I'm sure the other parties will put that
7 out there.

8 There -- there are thousands and thousands of
9 tanks in the tank universe that will be subject to these
10 requirements, more so than engines, and so there will be
11 retrofit costs, ordering of control devices. There's
12 going to be competition among manufacturers to
13 manufacture those control devices in a timely basis. So
14 there are real construction and logistical challenges
15 to, I think, even probably having that infrastructure --
16 that infrastructure available to comply with these
17 requirements.

18 I think we'll hear -- we need to put something
19 in that is achievable, a timeline that's achievable
20 given those constraints. So I think this is a
21 reasonable starting point. But I'd like to hear from
22 other stakeholders, and I'm sure they'll be presenting
23 on what alternative timelines might be appropriate.

24 MEMBER BITZER: Fair enough. I just -- I just
25 wanted to put that out there in terms of thinking a

1 little outside the box, not being wedded to year
2 increments necessarily. Maybe it needs to be more than
3 24 months, you know, 30-month intervals, you know,
4 two-and-a-half years between, but -- if there's that
5 many out there.

6 But it's just -- I just want to keep an eye on
7 the prize in terms of getting this done as soon as
8 practical, fair. So thank you.

9 HEARING OFFICER ORTH: Member Garcia?

10 MEMBER GARCIA: No questions. Thank you.

11 HEARING OFFICER ORTH: Thank you.

12 Member Honker.

13 MEMBER HONKER: No questions. Thank you.

14 HEARING OFFICER ORTH: Thank you.

15 Ms. Katz -- oh, I see Mr. Janoe.

16 Mr. Janoe?

17 MR. JANOE: In anticipation of the next point,
18 Madam Hearing Officer.

19 HEARING OFFICER ORTH: Oh, all right.

20 Ms. Katz, did any of that prompt redirect for
21 you?

22 MS. KATZ: Just one quick question to address
23 Vice-Chair Trujillo Davis' questions about inspections
24 and the documentation.
25

1 REDIRECT EXAMINATION

2 BY MS. KATZ:

3 MS. KATZ: Ms. Kuehn, are there recordkeeping
4 requirements in the rule that operators would have to
5 follow and that would capture the required information
6 regarding those inspections?

7 MS. BISBEY-KUEHN: Yes.

8 MS. KATZ: Okay. Thank you.

9 That's all I have.

10 HEARING OFFICER ORTH: Thank you very much,
11 Ms. Katz, Ms. Kuehn and Mr. Palmer.

12 Mr. Janoe?

13 MR. JANOE: Madam Hearing Officer, we had
14 mentioned in an e-mail earlier that Mr. Holderman is not
15 going to be available coming up here soon in the
16 afternoon. If it's all the same to Mr. Hiser and
17 Mr. Rose, we'd appreciate leading off on the industry
18 side.

19 HEARING OFFICER ORTH: All righty. I'll pause
20 for a moment in the event of some fierce objection from
21 Mr. Hiser or Mr. Rose.

22 No.

23 All right. Go ahead, Mr. Janoe.

24 MR. JANOE: Thank you, Madam Hearing Officer.

25 Mr. Holderman is here with me again today.

1 His exhibits are Oxy Exhibit Number 2 and Oxy Rebuttal
2 Exhibit Number 2.

3 As with the other sections, Oxy's concerns
4 have largely been resolved in the September 16
5 submittal. We do have two points we'd like to talk
6 about in direct and rebuttal here. First, a proposed
7 revision to the implementation timeline, and then,
8 second, support for the ENGOs' proposal on vessel
9 management -- vessel measurement.

10 I will turn it over to Mr. Holderman.

11 THE REPORTER: Mr. Holderman, this is the
12 court reporter.

13 I'm just going to ask you to keep your voice
14 up for me.

15 MR. HOLDERMAN: Yes, ma'am.

16 DANNY HOLDERMAN

17 (Relating to Topic Order 34)

18 having been first duly sworn or affirmed, was
19 examined and testified as follows:

20 DIRECT EXAMINATION

21 BY MR. JANOE:

22 Q. Mr. Holderman, if you would, please, can you
23 summarize your testimony on Section 123?

24 A. Yes. Consistent with other sections, some of
25 Oxy USA's concerns with this section have already been

1 resolved for coordination, an open dialogue with the
2 Department and other stakeholders, including EDF and the
3 other ENGOS.

4 For example, Oxy USA previously proposed
5 modifications that would allow for use of alternative
6 control technology for storage vessels with a PTE or
7 actual emissions list that are equal to five tons per
8 year. However, Oxy USA understands and appreciates the
9 Department's position that the definition of control
10 device with its allowance for other controlled equipment
11 or technologies approved by the Department already
12 addresses this concern.

13 Accordingly, my testimony today will focus on
14 the two remaining issues, an extended implementation
15 timeline and incorporation of storage vessel
16 measurements requirements.

17 First, as it concerns the implementation
18 timeline, more than 85 percent of Oxy USA's production
19 in New Mexico comes from 19 facilities that were built
20 after 2017 and already have storage vessels that are
21 controlled pursuant to Quad 0a requirements.

22 The remaining storage vessels affected by this
23 rule would account for only 15 percent of Oxy USA's
24 production. The emissions impact of the phased-in
25 retrofit or installation schedule on these

1 lower-emitting storage vessels would be minimal, but the
2 resource demand to comply with the proposed rule's time
3 frames would be significant.

4 In light of these concerns, Oxy USA proposes a
5 phase-in schedule that aligns with the engine retrofit
6 schedule that would allow operators to prioritize
7 additional emissions controls at higher production
8 facilities while still accomplishing the Department's
9 emissions reduction goals.

10 The Department established a phase-in schedule
11 for existing storage vessels in its September 16th
12 proposal that would begin in 2024. While we appreciate
13 the Department's extension, we continue to believe that
14 our proposed phase-in which begins in 2025 is more
15 appropriate.

16 As I noted in my prior testimony, and as
17 Ms. Kuehn just noted, the new equipment retrofits
18 required by these rules are substantial and subject to
19 significant supply chains challenges. Steel shortages,
20 component shortages, lack of skilled manufacturing
21 labor, limited manufacturing capacity, lack of skilled
22 installers, supply chain issues and growing demand for
23 similar equipment in other states all limit operators'
24 abilities to timely meet the retrofit and installation
25 requirements of these rules.

1 At this point there's simply not enough
2 manufacturers, technicians and laborers to meet this
3 demand in the time frame proposed. This is why Oxy USA
4 believes it is critical to provide additional phase-in
5 time that accounts for the realities of these resource
6 restrictions. Without meaningful additional relief on
7 these deadlines, Oxy USA and other operators run the
8 risk of being out of compliance for reasons that are
9 completely beyond their control.

10 Moving to the second topic as noted in my
11 rebuttal technical testimony, Oxy USA supports the
12 addition of the new storage vessel measurement
13 requirements section to the rule, as advocated by EDF,
14 Clean Air Advocates and NAVA. This new section would
15 require use of a storage vessel measurement system and
16 establishes related operation, inspection and training
17 requirements.

18 Oxy USA believes this addition is reasonable
19 and helps to further emission -- reduce emission --
20 sorry -- helps to further emission reductions goals,
21 also why Oxy USA believes the proposed new section is
22 workable for Oxy USA's New Mexico operations. I can't
23 say whether this is feasible for other operators in the
24 state. I'm only speaking to Oxy USA's individual
25 position.

1 MR. JANOE: Thank you.

2 With that we would submit Mr. Holderman for
3 cross-examination.

4 HEARING OFFICER ORTH: Thank you very much,
5 Mr. Holderman and Mr. Janoe.

6 If you're a party with questions, please turn
7 on your camera.

8 Not seeing anyone.

9 We'll turn then to questions from the Board.

10 While I'm doing that, if you're an attendee on
11 the platform with a question, please reach out through
12 chat.

13 Vice-Chair Trujillo Davis.

14 VICE-CHAIR TRUJILLO DAVIS: I don't know if
15 I'm liking this Member Suina not going first deal here.

16 HEARING OFFICER ORTH: She says she'll be back
17 in about three minutes.

18 VICE-CHAIR TRUJILLO DAVIS: Oh, I'm just
19 giving her a hard time here.

20 But no. I don't have any questions right now.
21 Thank you.

22 HEARING OFFICER ORTH: All right. Thank you.
23 Member Cates?

24 MEMBER CATES: No questions. Thank you.

25 HEARING OFFICER ORTH: Thank you.

1 Member Bitzer?

2 MEMBER BITZER: You two did a lousy job of
3 stalling for Suina, just for the record.

4 No. I have no questions. Thank you.

5 HEARING OFFICER ORTH: Thank you.

6 Member Garcia.

7 MEMBER GARCIA: No questions. Thank you.

8 HEARING OFFICER ORTH: And Member Honker.

9 MEMBER HONKER: No questions. Thank you.

10 HEARING OFFICER ORTH: Wow. All right,
11 Mr. Holderman. You got off easy this time.

12 MR. HOLDERMAN: Thank you.

13 HEARING OFFICER ORTH: Thank you very much for
14 your testimony.

15 Let's see. I think at this point we would
16 turn to NMOGA. As I understand it, Mr. Smitherman is
17 not available today, but I did panelize Mr. Meyer.

18 Is that where we're going, Mr. Hiser?

19 MR. HISER: Yes. It would be Mr. Meyer.

20 HEARING OFFICER ORTH: All right.

21 If you will join us -- there he is.

22 Please go ahead.

23 MR. HISER: I'm sorry. I hit the wrong
24 button.

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ADAM MEYER

(Relating to Topic Order 34)

having been first duly sworn or affirmed, was
examined and testified as follows:

DIRECT EXAMINATION

BY MR. HISER:

Q. Welcome, Mr. Meyer.

You've been previously sworn in this matter;
is that correct?

A. That's correct.

Q. You've adopted your testimony already?

A. Yes, sir.

Q. Do you have any corrections to the testimony
on storage vessels?

A. No, sir.

Q. Okay.

Your exhibits are found, for the Board's
benefit, in NMOGA Exhibit A2 for direct and NMOGA
Exhibit 42 for rebuttal. And so if Board Members would
like to follow along, that would be appropriate.

Did you prepare a summary of your direct and
rebuttal testimony?

A. Yes, I did.

Q. Would you like to share screen?

A. Absolutely.

1 MR. HISER: And, Madam Hearing Officer, I
2 think he asked you that already, correct?

3 Yes. She says you're ready. Yeah.

4 MR. MEYER: I got it.

5 Can everyone see that?

6 MR. HISER: Yes. You can make it a little bit
7 bigger.

8 MR. MEYER: Sure.

9 MR. HISER: Perfect.

10 MR. MEYER: Okay.

11 Q. (BY MR. HISER) Mr. Meyer, what are you going
12 to be speaking to today?

13 A. So today I'm going to be speaking towards the
14 Valor report, direct testimony regarding storage
15 vessels. By association, obviously, control devices and
16 hydrocarbon loadout got rolled into that same report so
17 there may be some crossover here and there.

18 Q. But basically your point is that in addition
19 to the storage vessel we also have to route the
20 emissions to the control device, and so --

21 A. Right. Yes. Exactly.

22 Q. All right. Very good.

23 Why don't we move on and see what you have to
24 say.

25 A. Okay.

1 So the Valor effort was to evaluate these
2 various sections of the rule a couple months ago and to
3 do -- basically the end goal was to provide a cost
4 estimate for -- for that impact of the rule. In kind of
5 a high level, what we did was we used again a lot of the
6 ERG cost estimation, which was great, and made the
7 adjustments where it was necessary based on our
8 experience.

9 So we took numbers that were associated with
10 that study and extrapolated out using reports from the
11 Greenhouse Gas Reporting Program of what other tanks
12 could be out there that maybe were not in the ERG
13 summary. And the next step was to apply our expertise
14 in storage vessel closed vent system analysis and come
15 up with a cost estimate for those affected facilities.

16 And then the last thing we did was to offer up
17 on an alternative rule applicability that may be a good
18 compromise between, you know, the two sides here. So I
19 thought it would be prudent to first go through a little
20 bit of a background on closed vent system analysis.

21 And I apologize ahead of time in this -- in
22 this presentation. I use the term "closed vent system"
23 and "vapor control system" kind of synonymously. So
24 you'll see CVS, and you'll see VCS. They're one and the
25 same.

1 So --

2 Q. So --

3 A. Go ahead, Mr. Hiser.

4 Q. So you're going to now go through sort of how
5 the costs were developed for combined tank and control
6 system; is that correct?

7 A. Correct, correct. As the rule was, it's all
8 encompassing, you know, the capture of vapors during
9 truck loadout to control devices, as well as to storage
10 tanks, and they all kind of get rolled into one.

11 So a little bit about closed vent system
12 analysis for storage tanks is that it can be much more
13 costly than most people think. I think in the ERG cost
14 estimate sheet there was an assumption of like one
15 combustor for a tank and then that could be used for
16 many tanks, that same combustor, for a battery of
17 multiple tanks.

18 That assumption is sometimes not true.
19 Because at the end -- the ultimate goal, and this is
20 bullet point two, is that store -- what we're trying to
21 do is design or evaluate these closed vent systems so to
22 prevent tank pressures from reaching a leak point of
23 thief hatches or relief devices. So in order to prevent
24 that, there's a lot of things we have to consider.

25 There's some common terms that are being --

1 that are used in this context. PPIVFR, which stands for
2 peak potential instantaneous vapor flow rate. So that
3 is a momentary flow rate of vapors that are either
4 created by or enter into the tank system. So I think as
5 NMED had pointed out before, there are flash vapors and
6 working vapors and thermal breathing vapors.

7 Another big point is available head space, as
8 we call it, in the tanks. A tank that is completely
9 full, if you can imagine, has no vapor space. If I
10 throw just a little bit of gas into that, it has a
11 propensity for the pressure to go up pretty quickly.

12 So the point that I -- we were making in our
13 Valor memo was to illustrate that, but say that
14 potentially single standalone tanks in New Mexico could
15 be hardest hit from these rules because they don't have
16 a lot of head space to absorb flash vapors.

17 And so with those two things considered -- and
18 there's other factors to consider, of course, but with
19 those two main points, it almost becomes a balancing act
20 of modifying the upstream facility to reduce or raise
21 into the tanks or to add additional capacity of the
22 closed vent system and associated control device. And
23 also -- I don't have this in here, but tank level
24 control becomes very critical.

25 So what we were -- you know, when you -- when

1 you evaluate these, there's -- the requirement is to do
2 a closed vent system analysis. And it's been loosely
3 defined. However, if we look to more recent consent
4 decrees on the subject, there's kind of been this
5 precedent set of that you have to evaluate the adequacy
6 of the CVS by assuming that all nonprecluded tank inputs
7 operate simultaneously.

8 So what nonprecluded means is any input that
9 can at any time go open and flow liquids or vapors into
10 the tank, you have to assume that it does, along the
11 same time that all the other inputs go in. This is a --
12 it's kind of an improbable event, again another
13 hundred-year flood type situation. But what it can do
14 is create the need at least on paper -- the need for a
15 larger capacity control device or vapor control system
16 that you really don't need.

17 So on this next slide here, I'm trying to
18 illustrate that problem. So this is a tank battery
19 where we had to simulate all the inputs to the tank
20 system that could, although unlikely, could go -- flow
21 liquids or vapors into the tank simultaneously. We had
22 to assume that they did so at time zero.

23 And so you see this huge pressure spike. This
24 is modeled. Right? This is not reality. This is a
25 huge pressure spike that is a probably very unlikely

1 event in the life of this battery.

2 So then you have this post-time zero, this
3 time where the pressure is actually modeled to be very
4 low, because this is more realistic to operations.
5 Right? I wasn't modeling these other inputs going on
6 and on and on continuously.

7 So what this results in -- in summary of this
8 is that it could result in a larger capacity control
9 device than would have otherwise be thought, just
10 because of a precedent set in recent negotiations.

11 Q. Before you move on, Mr. Meyer, let's leave
12 that slide up and talk about that.

13 So your testimony basically is that you
14 believe that we should be designing tanks for some place
15 that's lower than this initial giant spike that you're
16 showing, that your testimony is basically is unlikely to
17 ever occur, but instead we should be designing to cover
18 that second highest spike with some margin of safety,
19 and that would be a more appropriate way to design?

20 A. Absolutely, yes. And I think there needs to
21 be more of a focus on likely events, not peak, all
22 improbable events.

23 Q. Now, were you here during the prior testimony
24 by Ms. Kuehn from the Air Quality Bureau where she spoke
25 about the Department looking to the sort of reasonably

1 anticipated range of operations?

2 A. Yeah. I do -- I do hear that, and that gives
3 me encouragement. You know, that reasonable range of
4 operations is -- you know, what is reasonable to you may
5 be different to me. So I -- although it's encouraging,
6 I feel like I've heard that before, so to speak. If
7 that makes sense.

8 Q. And then let's talk, then, about the adverse
9 consequence. Let's say that we've decided that we want
10 to use this instantaneous rate which is shown in that
11 initial spike.

12 What is the impact on the environment of
13 sizing the control device for that point versus to, say,
14 maybe the second bar up above that intermediate spike
15 that we see?

16 A. Sure. The impacts is that you have oversized
17 control devices that you're required to keep on a
18 large -- let's just say a large combustor -- on the site
19 because the theoretical model tells you you need to.
20 But then in practice, you know, operations, that
21 combustor is not flowing nearly that peak amount, and
22 you have turndown issues, so that you're going to have
23 efficiency issues at the low end of the pressure range.

24 Q. Isn't there --

25 (Simultaneous discussion.)

1 Q. -- Mr. Meyer, to resolve that? One would be
2 to turn down the combustor, and the second would be to
3 burn additional fuel in order to make up the Btu
4 deficit?

5 A. Yes. You could add -- you know, you could add
6 more gas to your tank system to make it up or to your --
7 to the inlet of the combustor, but you basically have to
8 try to cover that range of operations better. You know,
9 ultimately what it means is that if you have normal
10 operations, you're actually creating more emissions from
11 unburnt, you know, hydrocarbon vapors, because
12 99 percent of the operation is operating as you see
13 below in the very low range.

14 I think this has been acknowledged in other
15 negotiations because they have -- it's been brought up
16 having a -- the concept of peak -- not peak -- potential
17 minimum vapor flow rate. So you have to also size for
18 that. Well, the minimum is zero. Right? There could
19 be no vapors going to the flare or combustor, which
20 means you would have an infinite turndown, which is
21 going to be nearly impossible.

22 Q. Okay.

23 Let's reset our focus here.

24 A. Sure.

25 Q. Your testimony as you're making it today is

1 that you believe that that reasonable range should
2 accommodate the likely foreseeable peak to minimize
3 potential excess emissions from having to add
4 supplemental fuel or from inefficiencies that result
5 from having a too large control device.

6 A. Right. There's middle -- there's middle
7 grounds for sure.

8 Q. Okay.

9 Why don't we move to the next slide.

10 A. Okay.

11 So with that in mind, that there is a
12 potential for oversizing of equipment, there are
13 instances where you actually do need bigger equipment
14 than is usually -- than is reasonably thought to be
15 needed. You know, again a lot of times if you have
16 tanks with low vapor space, head space, you do need a
17 larger combustor, you know, many times.

18 So based on our experience, you know, there's
19 a kind of a size of combustor that we think is generally
20 appropriate or that -- as a minimum. So it's a larger
21 combustor than you would think, and so with that comes a
22 whole bunch of other additional costs associated with
23 that larger combustor or control device.

24 So, you know, things that have to be added to
25 the facility include like concrete pads or foundations

1 for the control devices. And, you know, burner
2 management systems, although they're kind of
3 traditionally provided in the costs, there may be a
4 requirement to have redundant BMS or redundant pilot
5 systems.

6 There's a lot of piping and flame arresters
7 and a lot of different equipment, solar backup, to keep
8 these things running. And some instances you need to do
9 some fuel gas -- you need to do some gas conditioning.

10 And one of the things that I brought up in the
11 Valor memo was this potential that, you know, for a lot
12 of these smaller facilities or older facilities, you
13 know, the tanks may have a -- may be rated for something
14 much lower -- lower in pressure so that they can't
15 actually handle a lot of vapors without relieving out of
16 the thief hatch.

17 So a traditional API 12F tank is rated for
18 16 ounces of pressure. There are some tanks that are
19 eight ounces, and some of the older ones are four ounce
20 rating, and then there's others that are just stamped as
21 ATM, meaning atmospheric. Those latter two, they really
22 can't handle a lot of pressure before they have to
23 relieve out of their relief devices.

24 So for the applicability of this rule, there
25 are costs associated with replacing those storage

1 vessels completely. So it's not just the combustor or
2 even a bigger combustor. It's -- you have to maybe
3 replace your tank in order to comply.

4 Q. And is that --

5 A. So -- sorry.

6 Q. Is that a greater problem with the single tank
7 battery where you have very little head space and you
8 can't share head space between multiple facility -- or
9 multiple tanks?

10 A. Yes, yes. So the single standalone in our
11 assessment was the hardest hit by the rules, or will be,
12 unless there is some sort of carveout to it. And I
13 think I've heard testimony about smaller operators and,
14 you know, local communities depending on them. And, you
15 know, the sites that are of the single tanks will
16 probably -- probably will not be cost effective for them
17 to continue.

18 That's just my opinion.

19 Q. Okay.

20 Did you hear the testimony from Mr. Holderman,
21 the representative of Oxy USA? He was, I think, right
22 before you?

23 A. Yes. I -- I caught bits and pieces of it.
24 Yes.

25 Q. And he discussed some concerns he had about

1 supply chain issues and availability of materials for
2 these tanks installations.

3 Do you have any similar concerns?

4 A. Oh, yes. Yeah, absolutely. Just steel in
5 general is hard to come by. So there is a -- there will
6 be -- if -- if people have to replace tanks as a result
7 of this rule, there -- there will be a timeline issue,
8 for sure.

9 Q. And are you generally sympathetic, then, to
10 the suggestions of Mr. Holderman that some sort of
11 implementation schedule is appropriate?

12 A. Yes. Yes. Being more explicit, yeah.

13 Q. Why don't we move on.

14 A. Okay.

15 So there was a lot of cost information and
16 details in the -- in the Valor report, but at the end of
17 it, if you consider the rules in its entirety,
18 hydrocarbon liquid -- hydrocarbon vapor capture during
19 truck loadout, potential for larger combustor or control
20 device, replacing of tanks, all these things added up,
21 you could have a significant cost associated with
22 especially the smaller tank, single standalone tank
23 batteries.

24 Here's just a summary that was at the end of
25 applicability of the two tons per year for existing

1 storage vessels. I understand that this has been
2 superseded by a newer red-line.

3 And so the last part that Valor did was to
4 kind of offer up a happy medium here, and so what we had
5 proposed was a six tons per year threshold. And when
6 you -- when we did the math, again using ERG's data as a
7 baseline, you know, we concluded that we can -- you can
8 have a significant reduction in VOCs, but for a much
9 cheaper price tag to the industry.

10 And I would go as far to say that, you know,
11 maybe something to consider is, yes, it's six tons per
12 year, but possibly have a whole carveout for single
13 standalone tank batteries and make their applicability a
14 little higher.

15 Q. And basically your point on that slide is to
16 show that depending where you sit it there may be a much
17 greater cost reduction than there is a loss in VOC
18 reduction?

19 A. Yeah. I think there will be a tipping point
20 or a point of diminishing returns, I'd say.

21 Q. Okay.

22 Please continue.

23 A. The remainder of these is regarding the
24 rebuttal, so clarifications.

25 This came down to, you know, why adding the

1 term "tank battery" as a definition. We believed it was
2 necessary just because it was used throughout the rules,
3 and, you know, tank battery in New Mexico may mean
4 something different in Colorado, for example. So we
5 thought that was prudent.

6 We also thought it was appropriate when it
7 came to truck vapor capture to say that vapors need to
8 be returned to the tank battery, you know, not
9 necessarily the individual tank that you're loading out
10 from.

11 Q. That's because it allows you to take advantage
12 of the combined head space and thus reduce the pressure
13 requirement?

14 A. That -- yes, that, but to me it didn't
15 matter -- it was too -- it was too explicit to say you
16 got to put the vapors directly back into the tank you're
17 loading out from. It doesn't matter where I send the
18 vapors as long as I'm controlling them. Right?

19 Q. As far as they're all manifolded together?

20 A. Correct.

21 Q. Okay.

22 A. And the last -- the last portion, which was on
23 rebuttal for auto gauging, there was the thought of
24 adding -- or requiring level transmitters or other kind
25 of auto gauging to -- you know, to all tanks.

1 And our -- what we wanted to kind of put out
2 is we believe that, you know, auto gauging for new
3 storage vessels, newly procured storage vessels for new
4 facilities, we completely support that, but we -- we
5 wanted to put a little asterisk on that to say, you
6 know, what if you're modifying an existing tank battery
7 and adding that -- a new storage tank, or replacing one.

8 The require -- there should not be a
9 requirement to have auto gauging for that replacement
10 tank, because it would -- in our opinion, it would
11 create some confusion between, you know, truckers where
12 they may have to say should I manually gauge that tank,
13 but this one I'm not allowed to. And it just seemed
14 like an operational nightmare to us.

15 So we were -- anyway, it was our opinion to
16 actually specifically have a carveout for that
17 situation.

18 Q. And so our position is that NMOGA is
19 supportive for any new tank and a new storage battery
20 context, we agree with auto gauging, but we don't
21 believe it should apply to modifications of existing
22 tanks?

23 A. Correct.

24 Q. Okay.

25 And then you had, I think, a comment about our

1 concern about some of how the language read as it
2 related to maintenance practices? Could you explain
3 that concern?

4 A. I'm sorry. In what -- what context?

5 Q. The last bullet point.

6 A. The last one? Okay.

7 Yeah. The last bullet point is that there was
8 parts in the rule where it could be interpreted that
9 you're not allowed to open these thief hatches ever, and
10 I believe that we have to have that ability to perform
11 maintenance, to clean them, to maintain them, without
12 fear of ramifications. So --

13 Q. Okay. Thank you very much for that.

14 Did you have any other topics that you wanted
15 to address? Does that complete your direct and --
16 summary of your direct and rebuttal?

17 A. That completes my summary.

18 MR. HISER: Thank you, Mr. Meyer.

19 Madam Hearing Officer, we'll make him
20 available for questions.

21 HEARING OFFICER ORTH: Thank you.

22 And if you would shrink your screen there for
23 a moment.

24 If you're a party with questions, please turn
25 on your camera.

1 I'm not seeing anyone.

2 I'll turn then to the Board for their
3 questions.

4 If you're an attendee on the platform with a
5 question, please reach out through the chat.

6 EXAMINATION

7 BY THE BOARD:

8 HEARING OFFICER ORTH: Madam Chair, do you
9 have questions of Mr. Meyer?

10 CHAIR SUINA: Thank you, Madam Hearing
11 Officer. None at this point. Thank you.

12 HEARING OFFICER ORTH: Thank you.

13 Vice-Chair Trujillo Davis.

14 VICE-CHAIR TRUJILLO DAVIS: Yes.

15 And I'm glad Phoebe's back.

16 Okay. Mr. Meyer, my question really -- you
17 were discussing the -- in slide 5, I think it is -- 6
18 maybe -- no. I'm sorry. Yes. It's definitely slide 6.

19 I apologize. Sometimes it's difficult to see
20 the slides on the -- zoomed in.

21 HEARING OFFICER ORTH: Mr. Meyer can bring it
22 up again if that would be helpful.

23 MR. MEYER: I was just about to do that.

24 VICE-CHAIR TRUJILLO DAVIS: It was the --
25 there's a comment on there about the worst hit

1 facilities were going to be standalone tank batteries.

2 And I'm wondering. Generally aren't those
3 standalone tank batteries dry gas wells or stripper
4 wells?

5 MR. MEYER: Excellent question.

6 And this is -- that is the common
7 misconception. Right? Is that because they're lower
8 producing, if you were to totalize their emissions
9 throughout the year, yes, they're a lower contributor.
10 Right? However, it's because in my world we look at
11 preventing overpressurization of the tanks to where a
12 thief hatch is open.

13 So say there's a facility with a separator,
14 just a separator and a single tank. When that
15 separator -- it may not produce at all, maybe a half a
16 barrel a day, but during that one time a day, where the
17 separator dumps from the dump valve, the amount of
18 liquids or the flash vapors overwhelm that tank, and it
19 relieves out of its thief hatch.

20 So the one thing to take away is just because
21 a facility is low producing does not mean it -- it's,
22 you know, not going to vent, you know. Sometimes it is.
23 Right? And we found cases where that's the case -- you
24 know, where that's true. But production is not the same
25 as flow rate, instantaneous flow rate. That's the

1 takeaway, if that makes sense.

2 VICE-CHAIR TRUJILLO DAVIS: It does, but it
3 leads me to a couple more questions.

4 I've noticed we mention thief hatches a lot,
5 but do these tanks generally have an Enardo valve on
6 them?

7 MR. MEYER: So yeah. I think -- I use the
8 term "thief hatches" because most people can relate to
9 that, but there are tons of different types of relief
10 devices that can be on tanks. An Enardo, what they call
11 an EPRV, an emergency one, right, that's green, you may
12 have seen that. Thief hatches, Enardo makes some, and
13 there's a whole bunch of other manufacturers. And
14 there's also relief devices by, you know, Morrison
15 Brothers, and -- there are all makes and models.

16 But at the end of it, what we do when we
17 analyze these facilities is we look at the one that has
18 the lowest setting, you know, this one is set at
19 16 ounces, this one is set at 14, this one is set at 10,
20 and we have to design the closed vent system and control
21 device for that 10-ounce one, because that's the one
22 that's going to go first.

23 VICE-CHAIR TRUJILLO DAVIS: Okay.

24 So the Enardo should go before the thief
25 hatch, correct?

1 MR. MEYER: There -- well, so there's a lot
2 of -- depending on what engineer you talk to, they
3 set -- some set them that way, some set them the other
4 way, where the thief hatch goes first and then the
5 Enardo, as you call it, the --

6 VICE-CHAIR TRUJILLO DAVIS: EPRV?

7 MR. MEYER: The emergency one. We'll call it
8 that. The emergency relief valve goes second. I'm
9 of -- when I design them, I design for the emergency one
10 to go first, and not the thief hatch, because I know how
11 finicky the thief hatches can be.

12 VICE-CHAIR TRUJILLO DAVIS: Okay.

13 But my original train of thought on asking you
14 about these single standalone batteries, isn't -- I
15 believe there is a cutoff -- or a carveout in the rule
16 for them with the -- and let me pull the rule back up
17 here. I have so many tabs open at this point in this
18 hearing.

19 That there are two that exist, one for how
20 many times it's unloaded and -- and I apologize. Now
21 I'm -- now that I'm looking at it, I'm finding it
22 difficult to find them --

23 MR. MEYER: I think you're referring to the
24 truck vapor capture being required only for a tank
25 battery that has had X number, 12 or 13 loadouts in a

1 time period? Is that a year, I want to say?

2 VICE-CHAIR TRUJILLO DAVIS: I think it says a
3 month, if it's only unloaded more than once a month, or
4 less -- less frequently than monthly.

5 MR. MEYER: Right.

6 VICE-CHAIR TRUJILLO DAVIS: And then I know
7 that there was another provision for dry gas wells that
8 was less than two tons per year. So --

9 MR. MEYER: That's --

10 (Simultaneous discussion.)

11 VICE-CHAIR TRUJILLO DAVIS: -- less than two
12 tons per year, I'm thinking?

13 MR. MEYER: That's the applicability. Yeah.
14 So the -- so let's look at the truck loadout one first.

15 So hauling once a month. Right? You know,
16 you still -- that is an added cost, right, to add that
17 line and the vapor balance line. And -- well, actually,
18 before I say that, let me -- let me say that these
19 cost -- the cost estimates I'm presenting here were from
20 the first draft, not what has been modified since.

21 Right? So that 12 loadouts, this cost estimate was
22 before that. Right?

23 But anyway, but let's just put the truck vapor
24 capture system aside, because let's -- you know, in
25 theory you could easily remove -- now, with the new

1 rule -- the new red-lines, we don't -- you know, we
2 could actually vapor balance now. You know, before it
3 was you had to send the vapors to another combustor.

4 And also, the, you know, water -- we don't
5 have to capture water truck vapors now per the new
6 red-line, the 9/16 version. So that's a huge -- you
7 know, that's a huge win.

8 But still at the -- for the small single tank
9 batteries, you know, it all comes down to that head
10 space. I don't have enough head space to absorb a lot
11 of flash. So usually the debate becomes, you know, you
12 can change trim sizes on valves, like make valves
13 smaller that are flowing into it, or you make your
14 closed vapor capture system bigger.

15 We've even gone down the route of adding a
16 whole other stage of separation between the facility and
17 the tank to dampen out any pressure spikes in that
18 single tank.

19 So there -- the modifications -- from our
20 opinion and what we know and have seen, the
21 modifications may be greatly disproportional for a
22 single tank battery right now, even -- even with the new
23 three tons per year applicability.

24 VICE-CHAIR TRUJILLO DAVIS: Okay. That kind
25 of clears up what you -- some of that testimony for me.

1 And then the last question I had was on the
2 spikes that you were showing on slide 5.

3 MR. MEYER: Sure.

4 VICE-CHAIR TRUJILLO DAVIS: And let me pull
5 that back up. Or you've got it up. There you go.

6 MR. MEYER: Yeah.

7 VICE-CHAIR TRUJILLO DAVIS: So the spike --
8 the first spike -- and again I have a little hard time
9 seeing the detail in your graph. So that's really what
10 I'm asking about.

11 MR. MEYER: My apologies.

12 VICE-CHAIR TRUJILLO DAVIS: Is that coming on
13 when you bring a well on, that first bit of heavy flow
14 that comes at the beginning of a well being turned on?

15 MR. MEYER: No. This is a by-product of --
16 you know, it's very difficult to do a theoretical
17 dynamic model. That's what you're looking at right now.
18 And you've got to kind of start at some time. Right?
19 And so we just pick an arbitrary time in -- in the life
20 of the facility, or usually it's how is a facility being
21 operated right now.

22 But when I model it, I have to model as if --
23 if I have a main separator that's flowing, and flowing
24 to the tanks, but say I have a gas scrubber that's over
25 there, it has a dump valve, and then over there is a

1 pneumatic pump, and over there is some other piece of
2 equipment, all of which could -- or, you know, are piped
3 into the tanks. From a modeling perspective we have to
4 assume that they all dump at once.

5 That's what that initial spike represents, is
6 this idea that you have to -- you know, the precedent
7 being set in these consent decrees, and you have to
8 model as if they all go off together, at time zero. And
9 that's where the -- what this spike in this graph
10 represents.

11 But if I model that I start all the valves to
12 open at time zero, and then the remaining of this graph,
13 they're just kind of going on their own, you know, in
14 the model, it's unlikely that they will ever sync up
15 again, to dump all at the same time. You know, there's
16 a second spike you see here, you know, the little lower
17 one, around 4 -- around 5 ounces.

18 VICE-CHAIR TRUJILLO DAVIS: Um-hum.

19 MR. MEYER: That may be a spike from a
20 miscellaneous gas scrubber, if it dumps to the tank.

21 VICE-CHAIR TRUJILLO DAVIS: Do you model for a
22 hung up valve?

23 MR. MEYER: Say again? I'm sorry?

24 VICE-CHAIR TRUJILLO DAVIS: Do you model for a
25 valve that's been hung up?

1 MR. MEYER: No. We tend to not model failures
2 and malfunctions, because in that case that's what the
3 hatches and relief devices on the tanks are for.
4 They're there to prevent a tank explosion due to a
5 gas -- what we call a gas blowby event. So these --
6 these models are never run with malfunction considered.

7 VICE-CHAIR TRUJILLO DAVIS: Okay.

8 And are all these engineered to dump at the
9 same time, like you were saying in that first initial
10 spike? Are these devices engineered to do that?

11 MR. MEYER: There -- it becomes a discussion
12 of what's the probability of that happening. It's very
13 improbable that they will. However, the precedent set
14 in other -- in recent consent decrees is that you have
15 to model as if they do.

16 VICE-CHAIR TRUJILLO DAVIS: Okay.

17 Okay. Thank you for answering my questions.
18 I don't have any --

19 MR. MEYER: Welcome.

20 HEARING OFFICER ORTH: Thank you, Madam Chair.
21 Member Cates?

22 MEMBER CATES: No questions here. Thank you.

23 HEARING OFFICER ORTH: Thank you.

24 Member Bitzer?

25 MEMBER BITZER: No questions. Thanks.

1 HEARING OFFICER ORTH: Thank you.

2 Member Garcia.

3 MEMBER GARCIA: No questions. Thank you.

4 HEARING OFFICER ORTH: And Member Honker.

5 MEMBER HONKER: No questions. Thanks.

6 HEARING OFFICER ORTH: Thank you.

7 Will there be any redirect?

8 Mr. Hiser?

9 MR. HISER: I can't get myself unmuted.

10 I guess I just have one question for Mr. Meyer
11 back on slide 6, which you spent some time on.

12 FURTHER DIRECT EXAMINATION

13 BY MR. HISER:

14 Q. At the bottom of this slide, there's a
15 comment, and I just want to make sure that -- you've
16 talked there about a single standalone tank battery, but
17 what you're really talking about is a single tank which
18 is the only tank in a tank battery; is that correct?

19 A. Correct, yep. It's just sitting out on the
20 facility by itself. Yep.

21 Q. All right. That was my only question, was to
22 make sure it was clear what you meant by that term.

23 A. Got you.

24 MR. HISER: Nothing else, Madam Hearing
25 Officer.

1 HEARING OFFICER ORTH: Thank you, Mr. Hiser.

2 Thank you, Mr. Meyer, for your testimony.

3 Let's -- well, let's see. It's 11:46. We are
4 close to needing a break. We're also close to lunch.
5 Let me ask Ms. Katz -- oh. Actually -- first let me
6 confirm with Mr. Rose.

7 Mr. Rose, it wasn't clear to me whether we'd
8 be hearing from Mr. Davis or Mr. Brown.

9 MR. ROSE: Madam Hearing Officer, with respect
10 to the storage vessels, I don't believe that Mr. Davis
11 actually testified on those. I think his direct and
12 rebuttal go to loadouts and other equipment, but not the
13 tanks.

14 And as to Mr. Brown, as I indicated before,
15 his testimony was related to general requirements in
16 Section 112, that's the recordkeeping and reporting, and
17 that section is referenced in this one. So I guess his
18 testimony goes to this to some extent, but it's
19 addressed in his comments on Section 112 as they apply.

20 So we were -- we had not intended to offer any
21 additional testimony on this item.

22 HEARING OFFICER ORTH: Thank you.

23 So, then, it seems we would go to Mr. Kim; is
24 that correct?

25 MS. SHPALL: That's correct.

1 This is Casey Shpall.

2 HEARING OFFICER ORTH: Oh, thank you,
3 Ms. Shpall.

4 All right. Do we have Mr. Kim on the
5 platform?

6 MR. KIM: Yes, you do.

7 HEARING OFFICER ORTH: Oh, terrific.
8 Shall we do that before a short lunch break?

9 MS. SHPALL: That would be fine.

10 HEARING OFFICER ORTH: All right.

11 I see you're on the screen, Mr. Kim. Hello.

12 And, Ms. Shpall, you can be on camera or not
13 depending on your bandwidth.

14 MS. SHPALL: Okay.

15 IL KIM

16 (Relating to Topic Order 34)

17 having been first duly sworn or affirmed, was
18 examined and testified as follows:

19 DIRECT EXAMINATION

20 BY MS. SHPALL:

21 MS. SHPALL: Mr. Kim has previously testified,
22 and so he's been sworn in. His testimony is under
23 Appendix A for direct and Appendix A for rebuttal for
24 the Commercial Disposal Group.

25 Q. And, Mr. Kim, the Department has developed a

1 definition of storage vessel under Section 20.2.5.7RR.

2 Do you agree with that definition, or do you
3 have a recommendation for that definition?

4 A. Yes, I do.

5 But before I start, can I get sharing
6 capabilities so I can share my screen for some of our
7 PowerPoint slides?

8 Thank you.

9 And is that coming up for everybody?

10 Q. It is.

11 A. Awesome.

12 Yes. The group agrees with the definition of
13 storage vessel and simply recommends adding numbers to
14 the list of the types of vessels not included in the
15 definition for ease of understanding, as shown in this
16 slide.

17 As you can see on the slide, starting with "A
18 storage vessel does not include (1) a vessel that is
19 skid-mounted or permanently attached to a mobile source
20 and located at the site for less than 180 consecutive
21 days, such as a truck or railcar, (2) a process vessel
22 such as a surge control vessel, bottom receiver, or
23 knockout vessel, or (3) a pressure vessel designed to
24 operate in excess of 204.9 kilopascals without emissions
25 to the atmosphere."

1 And the reason for the request is just ease of
2 understanding.

3 Q. Thank you.

4 What comments do you have regarding the
5 applicability section of 123A?

6 A. As stated in my direct testimony, Section 123
7 imposes emission control requirements in relation to
8 storage vessels which are technically infeasible where
9 the use of supplemental fuel is required. The group is
10 concerned that facilities with very low emissions can
11 end up increasing total VOC and NOx emissions with the
12 use of supplemental fuel in order to combust the vapors.

13 As we have emphasized throughout our
14 testimony, both written and oral, due to low hydrocarbon
15 concentrations in the vapor stream, our group's
16 facilities are not already controlled like E&P
17 facilities and therefore would require significant
18 modification to achieve capture and combustion
19 efficiencies for both storage tanks and hydrocarbon
20 liquid loadout.

21 I'll move to slide 2.

22 In addition, it is important to understand
23 that the low Btu content and high moisture content of
24 the vapors from which tank -- the tank would not be able
25 to combust without supplemental fuel. The vapors from

1 these tanks are not the same as from a well site. The
2 vapors are highly diluted and have high moisture
3 content. Thus, supplemental fuel is needed for
4 combustion.

5 Cimarron -- a Cimarron letter discussing the
6 need for supplemental fuel at streams with high moisture
7 content are attached in my -- are attached as Attachment
8 D in my direct testimony. The slide 2 is the letter
9 which was given to us by Cimarron. It shows that the
10 type of vapors in our processes with high moisture
11 content, they would require about 1,200 Btu per standard
12 cubic feet for 95 percent combustion efficiency.

13 This does vary on a case-by-case basis, and
14 this would be something we would end up doing sampling
15 with and then seeing where -- how much supplemental fuel
16 would need to be added to the combustor for a combustion
17 efficiency of 95 percent.

18 And these modifications are costly and may not
19 result in any VOC reductions. In total, the capital
20 costs could be over \$500,000 per site with an annual
21 operation and maintenance cost of \$40,000. The
22 calculated cost to control VOCs in dollars per ton would
23 be roughly \$28,657.85 per ton of VOC controlled.

24 A detailed cost estimate of economic impacts
25 of this section of proposed rules as applied to the

1 group's facilities is attached to my direct testimony as
2 Attachment E.

3 Q. Mr. Kim, do you suggest a different approach
4 to regulating storage vessels where the use of air
5 pollution control equipment would not be technically
6 feasible?

7 A. The group supports NMED's language from its
8 latest proposal on September 16th, 2021, regarding the
9 applicability of the requirements of Section 20.2.50.123
10 NMAC to new storage vessels with an uncontrolled PTE
11 equal to or greater than two tons per year of VOCs and
12 existing storage vessels with a PTE equal to or greater
13 than three tons per year of VOC with one exception.

14 Based on NMED's comments during the hearing,
15 we are asking the Board to consider a modification to
16 our rebuttal testimony to move a statement from our new
17 section -- or from our new Section B.(9) to Section A.

18 Q. And do you have specific suggestions for
19 transferring that section into Section A?

20 A. Yes. We are proposing that one of the
21 following provisions be added to Section 123A as a
22 second paragraph. We have given two options. We are
23 more in favor of option one, but have decided to put up
24 both options for a representation of what could possibly
25 be.

1 Option one, "Storage vessels are not subject
2 to Section 123B where the use of air pollution control
3 technology would be technically infeasible for reasons
4 including but not limited to the inability to operate
5 without supplemental fuel. The Department can request
6 information at any time regarding the owner's or
7 operator's infeasibility calculations," or "Storage
8 vessels for which vapors do not meet minimum Btu values
9 for the combustion device based on manufacturer
10 specifications, are not subject to 123B."

11 With either of these changes, we would no
12 longer propose our addition of Section 123B.(9). This
13 language would apply to storage vessels with very low
14 hydrocarbon concentrations where there are technical
15 difficulties associated with bringing in supplemental
16 fuel to operate the control devices.

17 Q. Do you have any other concerns with this
18 section?

19 A. No.

20 MS. SHPALL: Thank you.

21 Mr. Kim is now available for cross.

22 HEARING OFFICER ORTH: Thank you very much,
23 Ms. Shpall and Mr. Kim.

24 Let me ask you to minimize your screen for
25 just a moment.

1 Thank you.

2 If you're a party with questions of Mr. Kim,
3 please turn on your camera.

4 Not seeing anyone.

5 Turn to the Board for their questions.

6 While I'm doing that, if you're an attendee on
7 this platform, please reach out through chat with any
8 questions.

9 EXAMINATION

10 BY THE BOARD:

11 HEARING OFFICER ORTH: Madam Chair.

12 CHAIR SUINA: Thank you, Madam Hearing
13 Officer.

14 And thank you, Mr. Kim, for your presentation
15 and going through the evolution of the latest language
16 in your -- and also the presentation of your -- your
17 last recommendation.

18 I just wanted to have a quick question in
19 terms of processes.

20 So this language was already shared with the
21 New Mexico Environmental Department as part of this
22 proceeding; is that correct?

23 MR. KIM: Casey, can you verify?

24 But I believe we have.

25 (Simultaneous discussion.)

1 MR. KIM: Casey, you're muted.

2 MS. SHPALL: What I was saying is yes -- can
3 you hear me?

4 MR. KIM: Yep.

5 MS. SHPALL: Okay.

6 The provisions that we had were just in a
7 different subsection of what we proposed, but the
8 concept was in a previous iteration that we submitted
9 with our testimony in the direct and the rebuttal.

10 CHAIR SUINA: Okay. Thank you for that
11 clarification. Appreciate it. Thank you, Mr. Kim.

12 Madam Hearing Officer, that's the only
13 question I have.

14 HEARING OFFICER ORTH: Thank you.

15 Vice-Chair Trujillo Davis?

16 VICE-CHAIR TRUJILLO DAVIS: Yes.

17 Thank you, Mr. Kim. I just have one question.

18 What kind of supplemental fuel would you have
19 to purchase?

20 MR. KIM: Yes. So this would be brought in,
21 delivered as a tank rental, and it would be propane,
22 which is the most readily available fuel source for
23 combustion that we would be able to receive in the
24 field.

25 But including with just the purchase of the

1 supplemental fuel would be, you know, the controls for
2 that supplemental fuel, the fuel tank and then the
3 delivery once that tank has been emptied for more
4 supplemental fuel to be added to the facility. That
5 supplemental fuel would also be used to keep the pilot
6 light lit in the combustor, as well.

7 VICE-CHAIR TRUJILLO DAVIS: And as I
8 understand it, the moisture content of the -- of the
9 dead oil that you were referencing, it fluctuates; is
10 that correct?

11 MR. KIM: Yes. It does fluctuate. You know,
12 what we've seen with sampling is because of our oil has
13 been separated from a water stream, any of the per se
14 working, breathing and very little flashing losses that
15 would be considered that vapor do -- does tend to have
16 higher moisture content and less Btus than you would see
17 at a standard E&P type facility.

18 VICE-CHAIR TRUJILLO DAVIS: Okay.

19 I guess what I was wondering is would propane
20 consistently allow you to achieve the combustion rates
21 you are seeking?

22 MR. KIM: Yes. The propane would. The
23 difference would be the amount of propane needed based
24 on our -- our vapor in the tanks being routed to the
25 combustion device. So that is going to be the

1 difference. And that has to be done on a basis -- or a
2 site-by-site calculation. But yes. You could flood
3 essentially any stream with dry propane to get it up to
4 the combustion efficiencies that you would need.

5 VICE-CHAIR TRUJILLO DAVIS: Would that take
6 continuous monitoring, or would that just be a -- you
7 know, a regular inspection to make sure you're getting
8 your combustion rates?

9 MR. KIM: So that would -- I think it would
10 all depend. Again it's going to be a
11 facility-by-facility type basis. But you could
12 essentially design for worst case scenario, and any time
13 that there is a -- per se a dump or a flow of vapor to
14 the combustor, then you would just do worst case
15 scenario, and essentially it would be considered
16 flooding the system with propane to get that combustion
17 up to the 95 percent, as well as to have a smokeless
18 combustor.

19 VICE-CHAIR TRUJILLO DAVIS: So I didn't think
20 of this until now, but it sounds like you could end up
21 burning more fuel -- or more supplemental fuel than you
22 may -- may have intended to?

23 MR. KIM: Correct. And -- and that's just
24 because of the slight changing nature of what's being
25 sent to the combustor. And we've touched on this

1 subject in our direct testimony and our rebuttal, just
2 that, you know, supplemental fuel would need to be added
3 in our circumstances to control storage tanks and
4 hydrocarbon liquid.

5 VICE-CHAIR TRUJILLO DAVIS: Thank you.

6 And I apologize for asking more than one
7 question, because I -- (unintelligible and/or
8 inaudible).

9 MR. KIM: It's all good.

10 VICE-CHAIR TRUJILLO DAVIS: But I -- thank
11 you.

12 MR. KIM: Thank you.

13 HEARING OFFICER ORTH: Thank you, Madam
14 Vice-Chair.

15 Member Cates?

16 MEMBER CATES: No questions here. Thank you.

17 HEARING OFFICER ORTH: Thank you.

18 Member Bitzer?

19 MEMBER BITZER: No questions. Thanks.

20 HEARING OFFICER ORTH: Member Garcia.

21 MEMBER GARCIA: No questions. Thank you.

22 HEARING OFFICER ORTH: And Member Honker.

23 MEMBER HONKER: Yes. One question.

24 And you may have covered this, and I may have
25 missed it, but how does the potential to emit calculate

1 for these kind of facilities that you're talking about?

2 MR. KIM: So the PTE is calculated very
3 similarly as an E&P site, but what it fails to do is to
4 actually calculate or give evidence that the vapor
5 streams are actually high enough in Btu and low enough
6 in moisture content to be able to combust it effectively
7 without having to add supplemental fuel or add other
8 pieces of equipment that -- to get that waste gas or
9 vapor into a combustible state.

10 And so two tons per year at our facility
11 essentially would look very different than two tons per
12 year at a -- at an E&P site.

13 MEMBER HONKER: Okay.

14 And I think Mr. -- well, second question for
15 me. I, too, said I only had one, but -- I think it was
16 Mr. Meyer tossed out the idea of a six ton per year
17 threshold rather than two tons per year.

18 Would that favorably impact your facilities?

19 MR. KIM: I do not believe it would actually
20 favorably impact our facilities from the stance of being
21 able to combust our vapors. You know, we're not worried
22 really about having a two ton versus a five ton versus a
23 10 ton, but we're more concerned with the fact that we
24 actually just can't combust all our vapors --

25 MEMBER HONKER: Right.

1 MR. KIM: -- without having that supplemental
2 fuel on site.

3 MEMBER HONKER: Okay. Understood.
4 Thank you. That's all I have.

5 HEARING OFFICER ORTH: All right. Thank you
6 very much, Mr. Honker.

7 So let's see. It's a little bit after noon.
8 What I'd like to do is to confirm the order of the
9 upcoming witnesses.

10 And thank you, Mr. Kim and Ms. Shpall.

11 MS. SHPALL: Thank you.

12 MR. KIM: Thank you.

13 HEARING OFFICER ORTH: So we don't have the
14 EDF witness we would otherwise hear from, I think, at
15 this point. We'll have him tomorrow.

16 Do I understand, Ms. Fox, we'll be going to
17 Mr. McCabe?

18 MR. BAAKE: Madam Hearing Officer, David Baake
19 here.

20 We are prepared to put on Dr. McCabe. We also
21 have Dr. Orozco who is -- has about eight minutes on
22 engines that we would like to take out of order if at
23 all possible.

24 HEARING OFFICER ORTH: Okay.

25 Is he on the platform right now?

1 MR. BAAKE: I don't believe he is on right
2 now. We were thinking right after lunch, but I could
3 call him if need be.

4 Were you thinking of doing Dr. McCabe right
5 now? We might be able to do that.

6 HEARING OFFICER ORTH: No. I'm just wondering
7 the best use of our time. I don't -- I don't have a
8 preference one way or another.

9 Let me hear from Ms. Katz.

10 MS. KATZ: I would think if there was a
11 witness that had a very short presentation, that we
12 could do that now and get it over with. But it sounds
13 like there might be availability issues.

14 HEARING OFFICER ORTH: All right.

15 So, Mr. Baake, if you have a short witness,
16 I'd love to do that.

17 MR. BAAKE: Thank you.

18 Let me give him a call right now and see if we
19 can get him on now.

20 HEARING OFFICER ORTH: Thank you.

21 MS. GUTIERREZ: Madam Hearing Officer, may I
22 raise a logistical or procedural issue?

23 HEARING OFFICER ORTH: Yes.

24 MS. GUTIERREZ: So I think we're about to go
25 into Clean Air Advocates' engines and turbines

1 surrebuttal, if that is what I understand; is that
2 right?

3 HEARING OFFICER ORTH: I do understand that if
4 it's Mr. Orozco. If it's Dr. McCabe --

5 MS. FOX: That's correct.

6 HEARING OFFICER ORTH: Okay.

7 MS. GUTIERREZ: Thank you.

8 So I -- and I figure I would raise this here
9 so we can use this time.

10 But Kinder Morgan would like to enter an
11 objection to Clean Air Advocates' proposed Exhibit 28.
12 They did not offer direct or rebuttal testimony on the
13 topic of engines and turbines, and while we recognize
14 that they characterize this as surrebuttal, this is a
15 90-page report that was served on the parties, I think,
16 at 10:30 last night.

17 So I think it's worth noting, you know, that
18 the language that they're surrebutting was filed
19 September 7th and 16th, so there was ample time for
20 Clean Air Advocates to notify the parties of this
21 significant technical testimony and a new witness.

22 And overall, you know, this filing feels
23 inconsistent with the approach to manage this hearing to
24 avoid unfair surprises, and it's not reasonable to ask
25 all of us to review this in that time frame. So

1 perhaps, you know, consistent with prior rulings, if
2 anything, Clean Air Advocates should be limited to a
3 proffer on Exhibit 28.

4 HEARING OFFICER ORTH: Let me ask Mr. Baake.
5 Perhaps -- and we could certainly take Mr. Orozco after
6 public comment at 1:00, for example, if that's
7 consistent with his availability, but perhaps we could
8 spend the next few moments on this objection from Kinder
9 Morgan.

10 And I believe there may be other parties who
11 join this objection.

12 MR. HISER: Yes. We would have a similar
13 concern, Madam Hearing Officer.

14 HEARING OFFICER ORTH: All right. That was
15 Mr. Hiser.

16 Anyone else joining the objection?

17 MS. KATZ: As would the Department. If there
18 were -- if the testimony pertains only to changes that
19 were made in the September 16th version that was filed,
20 that would potentially be, I think, acceptable for
21 surrebuttal. But if it's anything beyond that, I would
22 think -- and then, yes, the extensive exhibit, it
23 doesn't seem to comport with the procedural
24 requirements.

25 HEARING OFFICER ORTH: Thank you.

1 Mr. Rose?

2 MR. ROSE: Yes. IPANM would join in the
3 objection, as well.

4 HEARING OFFICER ORTH: All right.
5 And Mr. Swift.

6 MR. SWIFT: Yes, Madam Hearing Officer. The
7 Gas Compressor Association will also join in the
8 objection.

9 HEARING OFFICER ORTH: Thank you.

10 Mr. Baake, you've heard the essence of the
11 objection, and I certainly would agree with any
12 distinction that was made between what was submitted
13 perhaps in response to the Department's Exhibit 23,
14 namely its final rule proposal. So I certainly
15 understand the drive to do that.

16 But if you would please respond to the
17 objection as to all of the other material.

18 MR. BAAKE: Yes. So thank you, Madam Hearing
19 Officer.

20 And I -- we do recognize this is an unusual
21 position for us to be in. However, I do think that the
22 record shows that the Department in its surrebuttal made
23 very extensive, very substantive changes to this
24 provision, and though -- you know, we were fine with the
25 provision going into the rule which is why we didn't

1 submit direct, and, you know, having seen these changes,
2 we do have some concerns.

3 With that said, I do think when the parties
4 hear the testimony it's going to be similar to what the
5 National Park Service had to say. It's not going to be
6 as -- you know, as extensive as some might be worried
7 about. We did want to provide that because Dr. -- that
8 document because Dr. Orozco will reference it.

9 But I don't think -- you know, I think that
10 perhaps once his testimony is heard and it's understood,
11 that the focus really is -- of his testimony really is
12 on changes that were made, saying we don't like this
13 change that was made in rebuttal, we would like to go
14 back to what was in direct. When it's seen in the
15 context of the testimony, I think that may allay some of
16 the concerns about unfair surprise.

17 We're not trying to write a new rule that's
18 different from what the Department had introduced
19 originally.

20 HEARING OFFICER ORTH: All right.

21 Ms. Katz -- and I -- Ms. Gutierrez, I'll ask
22 for your opinion, as well.

23 Let me ask if you were to draw a distinction
24 along the lines of a proffer, what would that
25 distinction be in these 90 pages?

1 I'll confess I haven't read them myself yet.

2 MS. KATZ: I think that first the -- Mr. Baake
3 would need to specifically identify the particular
4 change that he -- they are referring to, and then I
5 still believe that that exhibit would not be
6 appropriate.

7 And so Mr. Orozco could -- or Dr. Orozco could
8 testify simply based on -- he could present his
9 testimony if it's solely based on something that was
10 changed either in the September 16th draft or if they're
11 saying it's something that the Department changed in
12 response in its surrebuttal to the engine -- in the oral
13 testimony on the engines provisions.

14 HEARING OFFICER ORTH: All right. Thank you.

15 Ms. Gutierrez, anything to add there?

16 MS. GUTIERREZ: I would just echo what
17 Ms. Katz shared. It is a significant and lengthy
18 document to have to parse, you know, what applies to
19 where. It's just not feasible in the next, you know,
20 lunch hour.

21 HEARING OFFICER ORTH: All right. Thank you.

22 Mr. Baake, let me ask if it is possible for
23 you to chat with Dr. Orozco on the lunch hour -- and I
24 now have -- don't know what his cutoff time is this
25 afternoon. It doesn't have to be right after lunch.

1 But chat with Dr. Orozco to identify those portions that
2 relate, as Ms. Katz described, to either a change in the
3 September 16th Exhibit 23 or to something that actually
4 does represent surrebuttal.

5 MR. BAAKE: Certainly, Madam Hearing Officer.

6 And I would sort of push back on the idea that
7 there's extensive stuff that's not relevant. It seems
8 to me that almost every standard was changed in this
9 rebuttal. So the extent there's, you know, discussion
10 of these different engines, I think, it all could, you
11 know -- but we (unintelligible and/or inaudible).

12 HEARING OFFICER ORTH: All right. And I would
13 certainly accept a proffer as I did with NMOGA,
14 certainly accept a proffer of all of it that is not --
15 that is not clearly admissible.

16 So thank you, all, for that.

17 We've reached 12:14. Let's come back at 1:00
18 for public comment and see where we go from there.

19 (Proceedings in recess from 12:14 p.m. to
20 1:00 p.m.)

21 HEARING OFFICER ORTH: Let's come back from
22 the break, please.

23 Good afternoon.

24 We are back after a lunch break. We have
25 reached the 1:00 p.m. public comment session in EIB

1 21-27. We have several folks who reached out to the
2 Board administrator to offer comment.

3 If you are on the platform and did not reach
4 out to the administrator by e-mail, that's fine. I
5 encourage you to reach out through the chat, and I would
6 be happy to take your comment. If you have any trouble
7 with the chat function, please contact the administrator
8 at (505) 660-4305.

9 The public comment is taken under oath
10 pursuant to the Board rules, is taken by audio, not
11 video, and is limited to five minutes.

12 The speakers I'll call on first are Jerry
13 McHugh, Junior, Khalsa Saraswati, Genie Stevens, Liz
14 Stefanics, Holly Steinberg and Antoinette Reyes.

15 Let me start with Mr. McHugh.

16 Hold on here.

17 All right. Mr. McHugh, I have unmuted you.

18 Can you hear me?

19 MR. MC HUGH: Yes, I can.

20 HEARING OFFICER ORTH: Oh, good. I can hear
21 you.

22 If you would please spell your name for the
23 transcript.

24 MR. MC HUGH: It's J-E-R-R-Y, last name
25 M-C-capital-H-U-G-H, comma, Junior, J-R.

1 HEARING OFFICER ORTH: Thank you.
2 If you would raise your right hand.
3 Do you swear or affirm to tell the truth?

4 MR. MC HUGH: I do.

5 HEARING OFFICER ORTH: Thank you very much.

6 JERRY MC HUGH, JR.

7 having been first duly sworn or affirmed, gave
8 public comment as follows:

9 PUBLIC COMMENT

10 HEARING OFFICER ORTH: I'll start your five
11 minutes now.

12 MR. MC HUGH: Okay. Thanks.

13 Well, thank you for the opportunity, Felicia,
14 and for the listening people.

15 My name is Jerry McHugh, Junior. I own and
16 operate San Juan Resources, a New Mexico corporation
17 since 1990. And I have been in oil and gas for my
18 entire career.

19 After having worked in Farmington for Dugan
20 Production and Jerome McHugh, Senior in the 1980s, I
21 formed my own company in 1990 with operations in the San
22 Juan Basin. We operate 40 wells, have nonop interests
23 in several hundred and have exploration and drilling
24 projects. You might say that oil and gas is in my
25 blood, because I've relished these opportunities to

1 explore for and produce oil and gas. It's not for
2 everybody as the risks and challenges are formidable.

3 Most of San Juan's production are marginal gas
4 wells where production averages less than 60 Mcf of gas
5 per day. We're able to operate cost efficiently and
6 effectively, being more profitable when gas prices are
7 above \$3.50 per Mcf. We don't choose the price we sell
8 our natural gas and oil production. We are price takers
9 at the mercy of markets.

10 For the past 40 years I have been positive
11 about the oil and gas industry and continue to have that
12 optimism for our natural gas and oil prospects in New
13 Mexico.

14 Marginal wells, and I'll talk about them a bit
15 here, are usually held by independents, holding acreage
16 for further development, deeper, newer technologies and
17 developing concepts for increasing production. The
18 Mancos gas and oil drilling in the San Juan are
19 excellent examples of small companies producing marginal
20 wells, thus holding leasehold acreage for development.

21 With new technologies these wells could not
22 have been drilled 20 or 30 years ago, maybe not even 10
23 years ago. But as the knowledge and technologies
24 advance, these marginally held leases become more viable
25 as independents utilize new science, engineering,

1 technological know-how, and take on risks to grow and
2 drill production.

3 As long-time New Mexico Permian producers can
4 attest this -- how has this worked with long-term leases
5 and marginal wells eventually proving up sizeable
6 horizontal drilling projects with advanced technologies
7 to get the Permian to what it is today?

8 Highly stringent, overregulated, over-the-top
9 methane rules, the state will quench that innovative
10 spirit and technology-driven advances in future drilling
11 and production growth. Long term this will be
12 devastating to the state's economy. Would the Permian
13 production in New Mexico be what it is today had there
14 been huge, excessive regulations 10, 15 years ago? No.
15 It would not be the Permian that it is today.

16 Prior to the recent proposal for the EIB, New
17 Mexico independents had worked with the New Mexico
18 Environmental Department and the Oil Conservation
19 Division through the methane advisory committee to
20 cobble an agreement where marginal wells would be exempt
21 from methane regulations.

22 When our company does cost/benefit analyses,
23 it doesn't make sense to spend excessively on a gas well
24 that, A, leaks measurable -- negligible amounts, or
25 minute amounts; B, that costs exorbitant amount to

1 mitigate, making the well largely uneconomic; and C,
2 takes away valuable marginal production from the state
3 severance taxes, shrinking state revenues.

4 Do not put excessive, over-the-top regulations
5 onto already struggling marginal natural gas wells or
6 oil wells as this will quench those leases which could
7 yield additional oil and natural gas, like the next
8 Permian or the next San Juan Mancos.

9 All of American modern conveniences in life
10 are attributable to the abundance of affordable,
11 reliable, plentiful energy, primarily natural gas and
12 oil, which we've enjoyed for more than 150 years. We
13 wouldn't be the country we are today without the rule of
14 law and free enterprise which gives risk takers like me
15 the ability to explore for and produce natural gas and
16 oil.

17 How many of us have seen the billboard that
18 says "If you can read this, then thank a teacher"? But
19 let's look at this from an American energy perspective.
20 If you value driving your car to the store for food or
21 other items or you value turning up your thermostat for
22 heat in the winter or hot showers or you value your
23 handheld computer and the things in cloud storage or you
24 value traveling across the state or other parts of the
25 US or the world, then thank a natural gas and oil

1 producer.

2 I really appreciate this opportunity to share
3 with you today. That's my testimony. I'm Jerry McHugh,
4 Junior with San Juan Resources. Thanks, Felicia, and
5 thank you for all that listen.

6 Bye-bye. Have a great day.

7 HEARING OFFICER ORTH: Thank you very much,
8 Mr. McHugh.

9 Go now to Saraswati Khalsa. And if I am
10 mispronouncing your name, please correct me.

11 Hello? Can you hear me?

12 MS. KHALSA: Hi.

13 I'm sorry, I can't figure out how to use the
14 video.

15 HEARING OFFICER ORTH: Video is not available.
16 If you would, please, spell your name.

17 MS. KHALSA: Sure. My name is Saraswati, all
18 one word, S-A-R-A-S-W-A-T-I, and my last name is Khalsa,
19 K-H-A-L-S-A.

20 HEARING OFFICER ORTH: Thank you.

21 If you would raise your right hand.

22 Do you swear or affirm to tell the truth?

23 MS. KHALSA: Yes, I do.

24 HEARING OFFICER ORTH: Thank you.

25

1 SARASWATI KHALSA

2 having been first duly sworn or affirmed, gave
3 public comment as follows:

4 PUBLIC COMMENT

5 HEARING OFFICER ORTH: I'll start your five
6 minutes now.

7 MS. KHALSA: Thank you.

8 Good afternoon, and thank you for the
9 opportunity to provide comment.

10 My name is Saraswati Khalsa. I live in
11 Espanola. But I'm speaking today on behalf of New
12 Energy Economy and also as the mother of three children,
13 three children who will live with the consequences of
14 the decisions that you make.

15 If we do not adopt the most stringent leak
16 detection and repair rules, if we ignore the science,
17 ignore the pleas of the public, ignore the fact that
18 70 percent of the oil and gas industry's methane
19 emissions in New Mexico stem from these leaks, by my
20 calculation, that's at least 700,000 metric tons, my
21 children and all the children in New Mexico and beyond
22 will suffer the consequences.

23 New Mexico's current administration likes to
24 talk a big talk on climate action, trumpeting far and
25 wide that they are committed to enacting, quote,

1 nation-leading methane emissions rules, but all too
2 often kowtowing to NMOGA and the oil and gas companies
3 and lobbyists who clearly feel confident that they have
4 the government in their pockets.

5 As Greta would say, nation-leading emissions
6 rules, blah, blah, blah. Those words mean nothing at
7 all until and unless our government regulations have
8 real teeth and are strictly enforced, until and unless
9 those of you with decision-making power stop listening
10 to the companies profiting off the destruction of our
11 children's future, their very lives, and use your power
12 for change, until and unless emissions start decreasing
13 in a meaningful way.

14 And that will only happen if you have the
15 courage to mandate frequent LDAR inspections and
16 fast-track the installation of zero bleed and zero
17 emission pneumatic controllers for all oil and gas
18 wells, no matter the size or how marginal they are.

19 Leaking methane is not only a threat to all of
20 humanity, but ozone precursors affect the health of the
21 many New Mexicans who live in close proximity to oil and
22 gas wells. They are so often our Native American
23 neighbors, especially in the San Juan Basin. The
24 Department owes a maximum duty of care to those on
25 Indian lands, because, remember, every single oil or gas

1 well, every pipeline, every compressor station and
2 processing plant, every one of those oil company assets,
3 they stand on lands that were the home of the first
4 people.

5 We can already feel our climate changing. We
6 feel the excessive heat. We breathe in the wildfire
7 smoke. We see the dried up rivers. Will we wait until
8 the fields can no longer produce enough food for our
9 children before we act? I hope you will not.

10 Unlike most of us, you have the power and the
11 responsibility to make meaningful change. I hope for
12 the sake of my children and all the children of New
13 Mexico that you will use that power for more than lip
14 service and you will enact the most stringent leak
15 detection and repair rules.

16 Thank you again for this opportunity.

17 HEARING OFFICER ORTH: Thank you, Ms. Khalsa.

18 Go to Genie Stevens next. Let's see. I
19 believe I saw her.

20 I've unmuted you.

21 Can you hear me?

22 MS. STEVENS: Yep.

23 Can you hear me?

24 HEARING OFFICER ORTH: Yes, I can.

25 If you would spell your name for the

1 transcript, please.

2 MS. STEVENS: My name is Genie Stevens, it's
3 G-E-N-I-E, S-like-Sam-T-like-Tom-E-V-like-Victor-E-N-S.

4 HEARING OFFICER ORTH: Thank you.

5 If you would raise your right hand.

6 Do you swear or affirm to tell the truth?

7 MS. STEVENS: I do swear to tell the truth.

8 HEARING OFFICER ORTH: Thank you.

9 GENIE STEVENS

10 having been first duly sworn or affirmed, gave
11 public comment as follows:

12 PUBLIC COMMENT

13 HEARING OFFICER ORTH: I'll start your five
14 minutes now.

15 MS. STEVENS: Thank you.

16 Hello.

17 And my gratitude to the Environmental
18 Improvement Board for providing an opportunity for me to
19 testify at this hearing.

20 My name is Genie Stevens. I'm the director of
21 climate education with the Rio Grande Chapter of the
22 Sierra Club, and I run a science -- climate science arts
23 and advocacy program founded by kids called The Global
24 Warming Express in public schools throughout New Mexico
25 for fourth through sixth graders.

1 Now in its ninth year, the program gives
2 children access to environmental education and teaches
3 them how to become civically engaged citizens. The last
4 time the New Mexico legislature went into session, 500
5 Global Warming Expressers attended to listen and to give
6 testimony.

7 Our children are disproportionately impacted
8 by pollution from oil and gas operations, including
9 ozone-forming toxins that worsen respiratory diseases
10 and trigger asthma attacks. Ozone or smog can also
11 worsen emphysema and cause heart disease.

12 We at The Global Warming Express, or the GWE,
13 usually let the kids do the talking, but they're all in
14 school right now, so they can't attend this hearing. I
15 asked some of our Global Warming Express students ages
16 10 to 13 from various parts of New Mexico for their
17 thoughts about this hearing on ozone and methane levels
18 in the air. Their replies reflect their intense concern
19 for the bigger picture, their future. Here are some of
20 their responses.

21 Leaders of New Mexico, you have power, you can
22 make laws happen. What on earth are you grown-ups
23 doing? We need your support. There are ways we can
24 slow down and stop the climate crisis. Please stop
25 taking profits from oil and gas corporations. We

1 children are fed up. If I could miss school today to
2 talk with you, I would, because I don't want to watch
3 our future go to waste.

4 Another student said we care about our future
5 and our kids' future and our grandkids' future. We
6 don't want our lives to be destroyed, and we want a
7 healthy world. Remember you are our representatives and
8 not representatives of the oil and gas companies that
9 are ruining our lives.

10 And finally, a final student said the earth is
11 very fragile. We have so many problems, including
12 extinction of plants and animals and air and water
13 pollution. It's unthinkable that people are still
14 refusing to stop the leaking of methane. It's hard to
15 understand. There's a disconnect somewhere.

16 In the midst of political and economic
17 wrangling, I implore you all to pause and remember the
18 children.

19 Thank you very much for allowing my testimony.

20 HEARING OFFICER ORTH: Thank you, Ms. Stevens.

21 Senator Stefanics, I've unmuted you.

22 Can you hear me?

23 MS. STEFANICS: Yes, I can.

24 HEARING OFFICER ORTH: Oh, good. Your voice
25 is nice and clear.

1 Would you spell your name for the transcript,
2 please.

3 MS. STEFANICS: Yes. Elizabeth,
4 E-L-I-Z-A-B-E-T-H, middle name Liz, last name Stefanics,
5 S-T-E-F-A-N-I-C-S.

6 HEARING OFFICER ORTH: Thank you.

7 And if you would raise your right hand.

8 Do you swear or affirm to tell the truth?

9 MS. STEFANICS: I do.

10 HEARING OFFICER ORTH: Thank you.

11 ELIZABETH STEFANICS

12 having been first duly sworn or affirmed, gave
13 public comment as follows:

14 PUBLIC COMMENT

15 HEARING OFFICER ORTH: I'll start your five
16 minutes now.

17 MS. STEFANICS: Thank you.

18 It's a pleasure to be with you all this
19 afternoon.

20 I'm speaking as the State Senator from
21 District 39, which is parts of six counties, and I am
22 trying to speak here today to represent my constituents.

23 I have a lot of knowledge about the energy
24 field, and I realize that the fossil fuels needs to be
25 in existence with our renewable energy for the

1 foreseeable future. But while we continue to do that,
2 let's protect not only the environment, but let's really
3 protect the people who live close to the working
4 establishments for the fossil fuels.

5 Now, most of my district is rural, and I would
6 say that many of the people in my district don't have
7 the opportunity to really come to the legislature to
8 speak, to get on a computer to speak, because the
9 Internet services in many parts of my district are
10 nonexistent. When the children have to go to school,
11 the parents drive them to a hot spot, you know, the
12 libraries or Walmart.

13 But today what I want to talk about is those
14 individuals who live close to a site. While I was a
15 County Commissioner, we dealt with many renewable
16 energies. We dealt with oil and gas prohibitions, we
17 dealt with wind, we dealt with solar. And I myself live
18 in a rural area.

19 One of the things we try to do is we try to
20 put science behind our decisions on how far away the
21 production could occur in order not to harm individuals.
22 Even when we were going to go into areas where we would
23 do any kind of -- I'm losing the word for exploding
24 materials -- but whether it was gravel or whether it was
25 fracking, we wanted to make sure that we were doing it

1 in such a way that we were not harming the surrounding
2 communities, that the air quality and that the water
3 quality would remain.

4 So one of the things I would recommend is that
5 there be frequent inspections, that we protect those
6 individuals within a certain circumference, whether it's
7 a half a mile or a mile, and I probably -- we probably
8 could not accommodate the mile anymore, and that we do
9 some sampling of air and water in advance in order to
10 acknowledge whether or not there is harm made later on
11 during production.

12 I believe that's all I need to say today, and
13 I appreciate all the work of the EIB.

14 Thank you. And have a great afternoon.

15 HEARING OFFICER ORTH: Thank you very much,
16 Senator.

17 Go to Holly Steinberg.

18 Ms. Steinberg, can you hear me?

19 MS. STEINBERG: Yes, I can hear you.

20 Can you hear me?

21 HEARING OFFICER ORTH: Yes, I can.

22 If you would spell your name for the record,
23 please.

24 MS. STEINBERG: Holly, H-O-L-L-Y, Steinberg,
25 S-T-E-I-N-B-E-R-G.

1 HEARING OFFICER ORTH: Thank you.
2 And if you would raise your right hand.
3 Do you swear or affirm to tell the truth?

4 MS. STEINBERG: I do.

5 HEARING OFFICER ORTH: Thank you.

6 HOLLY STEINBERG

7 having been first duly sworn or affirmed, gave
8 public comment as follows:

9 PUBLIC COMMENT

10 HEARING OFFICER ORTH: I'll start your five
11 minutes now.

12 MS. STEINBERG: Thank you very much.

13 I live in Albuquerque, and I believe we have
14 an obligation to our future children. I also believe we
15 can do that while still supporting the industries that
16 support our state.

17 I think the intention of making improvements
18 in how we capture and utilize our natural resources is
19 very important, and to think that those who support the
20 oil and gas industry also don't support the environment,
21 that's shortsighted. When we are making improvements in
22 the process, we have to be mindful of a fine line we
23 need to walk to pay attention to the economic factors as
24 well as the long-term benefits of our future
25 generations.

1 So our state spends on the -- depends on the
2 production from the oil and gas industry, to the tune of
3 about \$1.3 billion. This accounts for over a third of
4 our state's budget. Those monies go towards schools,
5 infrastructure, health care and public safety.

6 So many of our oil and gas producers are
7 smaller producers in the state, and there are 35
8 proposed new requirements that can be very crippling to
9 the smaller producers. Even though there are businesses
10 that are excluded, that produce 250,000 gross revenue,
11 they don't -- they don't have to participate, but that
12 still does not take into consideration the small
13 producers who might have more gross revenue net, but the
14 costs would be crippling if they would have to comply
15 with those 35 regulations that are proposed.

16 One area that is of specific concern to me is
17 the impact of recycling the produced water from the oil
18 and gas operations. Right now they use the recycled
19 water, but this new proposed rule does not take into
20 consideration that rule, and so it would allow
21 freshwater to be used for that, which I believe is
22 wasteful.

23 If we're going to be flexible in implementing
24 our new administrative requirements that are being
25 proposed in this rule, this would allow businesses to

1 continue to work toward improving, but by doing it
2 through sharing best practices and implementing
3 improvements that would make a more practical approach
4 as opposed to a cookie cutter approach, making every
5 single company comply exactly the same.

6 If we do this in stages and we consider
7 improvements that are being made, I think that's a much
8 more feasible approach to making improvements that I
9 think is the intention of this -- of this ruling.

10 So bottom line, I think any time we're in the
11 process of making changes for any business, you have to
12 continue to prove our processes, but not do it at the
13 detriment of the greater good, and the people that will
14 pay for this ends up being the citizens and the business
15 of our state. I think it's more feasible to take a
16 staggered approach, a slightly less aggressive approach,
17 and one that's a little bit more informed.

18 Thank you so much for your time and your
19 consideration.

20 HEARING OFFICER ORTH: Thank you,
21 Ms. Steinberg.

22 We go next to Antoinette Reyes. Let's see
23 here.

24 Ms. Reyes, I've unmuted you.

25 Can you hear me?

1 MS. REYES: Yes.

2 HEARING OFFICER ORTH: Oh, good. You're
3 coming through nice and clear.

4 Would you spell your name for the transcript,
5 please.

6 MS. REYES: Antoinette, A-N-T-O-I-N-E-T-T-E,
7 Reyes, R-E-Y-E-S.

8 HEARING OFFICER ORTH: Thank you.

9 And raise your right hand.

10 Do you swear or affirm to tell the truth?

11 MS. REYES: Yes.

12 HEARING OFFICER ORTH: Thank you.

13 ANTOINETTE REYES

14 having been first duly sworn or affirmed, gave
15 public comment as follows:

16 PUBLIC COMMENT

17 HEARING OFFICER ORTH: I'll start your five
18 minutes now.

19 MS. REYES: Hello.

20 I am speaking on behalf of myself today as a
21 15th generation New Mexican and a mother of two in
22 Southern New Mexico.

23 Thank you for considering my comment today.

24 I fully support the proposed ozone precursor
25 rules and their goal of protecting those that live

1 closest to development. Much of my family has been
2 impacted by the disproportionate impacts of extractive
3 industries. These industries tend to drive up the cost
4 of living in areas while only bringing low-wage service
5 jobs outside of industry, creating a wider income gap.

6 Aside from displacing people by income, the
7 high wages offered by industry come with numerous health
8 and safety risks. My hope is that these rules will
9 lessen the burden these risks have on workers, our
10 children, our elders and residents that live in impacted
11 communities.

12 I also want to thank the Department for
13 accepting the proposal to include increased inspections
14 based on proximity. This proposal will help strengthen
15 the rule. And I hope the Board adopts other proposals
16 to protect New Mexicans such as the proposals around
17 completions and zero bleed pneumatics.

18 Thank you.

19 HEARING OFFICER ORTH: Thank you very much,
20 Ms. Reyes.

21 Let's see. Mr. Sonntag reached out, asking
22 that I look for Melanie Lahey.

23 I'm sorry. I don't see Ms. Lahey on the
24 platform, and I don't have any unidentified callers.

25 Mr. Sonntag, if you would please let Ms. Lahey

1 know that she can submit her public writing in -- her
2 public comment in writing to Pamela Jones or join us
3 tomorrow at 9:00, 1:00 or 5:00 or even today at 5:00.

4 So thank you, all, for participating in public
5 comment today.

6 And at this point we will return to the
7 technical case.

8 Mr. Baake, are we -- are we going to
9 Dr. Orozco, or will that wait?

10 MR. BAAKE: Yeah. We'll go ahead with
11 Dr. Orozco. I believe he should be on and perhaps even
12 already made a panelist.

13 MR. OROZCO: Yeah. I'm here.

14 Can you hear me?

15 MR. BAAKE: Oh, yes. There you are,
16 Dr. Orozco.

17 Madam Hearing Officer, in light of the
18 discussion we had before lunch, I think we will go ahead
19 and withdraw Exhibit 28. It's information we wanted
20 to -- it's largely a summary of statutes and regulations
21 which you could take administrative notice anyway if we
22 want to do that. We'll go ahead and withdraw that.

23 I don't think there were any objections to Dr.
24 Orozco (unintelligible and/or inaudible).

25 THE REPORTER: Mr. Baake, I'm sorry. You're

1 cutting in and out for me. Could you please repeat.

2 MR. BAAKE: Yes. From the beginning?

3 THE REPORTER: Please. Sorry.

4 MR. BAAKE: Sorry.

5 Madam Hearing Officer, in light of the
6 discussion we had before lunch, I think we will withdraw
7 Exhibit 28, which is largely a summary of statutes and
8 regulations that we think we can introduce by
9 administrative notice.

10 I don't believe there were any objections to
11 Exhibit 27, which is Dr. Orozco's CV.

12 HEARING OFFICER ORTH: Let me pause for a
13 moment in the event a party wishes to lodge an
14 objection.

15 I'm not seeing anyone.

16 Exhibit 27 is admitted.

17 (Exhibit CAA 27 admitted into evidence.)

18 HEARING OFFICER ORTH: And, Dr. Orozco, I
19 believe I need to swear you.

20 Would you raise your right -- oh, first spell
21 your name.

22 Now you're unmuted. Please spell your name.

23 MR. OROZCO: Sure. My name is Daniel Orozco,
24 Daniel is the starred spelling for Daniel, and last name
25 is O-R-O-Z-C-O.

1 HEARING OFFICER ORTH: Thank you.

2 And raise your right hand.

3 Do you swear or affirm to tell the truth?

4 MR. OROZCO: I do.

5 HEARING OFFICER ORTH: Thank you.

6 Mr. Baake.

7 MR. BAAKE: Thank you, Madam Hearing Officer.

8 DANIEL OROZCO

9 (Relating to Topic Order 24)

10 having been first duly sworn or affirmed, was
11 examined and testified as follows:

12 DIRECT EXAMINATION

13 BY MR. BAAKE:

14 Q. Dr. Orozco, what is your educational
15 background?

16 A. I'm a physics engineer by training, and I also
17 completed a master's degree and a doctoral degree in
18 atmospheric physics at the University of Maryland,
19 Baltimore County.

20 Q. And what is your work background?

21 A. For more than 12 years, my research and work
22 has focused on the study of chemical and optical
23 properties of air pollutants, development of
24 instrumentation to analyze pollution, as well as the
25 study of sources and impacts of air pollution.

1 I work as research assistant at the University
2 of Maryland. I then work in the Air and Radiation
3 Management Association at the Maryland Department of the
4 Environment. And I currently work at the National Parks
5 Conservation Association as the senior clean air and
6 climate analyst.

7 Q. And National Parks Conservation Association is
8 part of the Clean Air Advocates coalition, correct?

9 A. Yes. That's correct.

10 Q. Clean Air Advocates Exhibit 27 is an accurate
11 copy of your CV?

12 A. Yes.

13 Q. Dr. Orozco, can you please summarize your
14 testimony.

15 A. Sure. The purpose of my comment today is to
16 explain why Clean Air Advocates oppose certain changes
17 that NMED made to the engines and turbines provisions as
18 part of its rebuttal testimony on September 7, 2021.
19 Engines and turbines are by far the largest source of NOx
20 from the oil and gas industry.

21 As we heard earlier in the hearing, ozone
22 formation in New Mexico is often NOx limited.
23 Accordingly, reducing NOx from engines and turbines is an
24 important strategy for reducing ozone levels in New
25 Mexico. We are particularly concerned about two aspects

1 of the revised proposal.

2 First, the proposal will delete the prior
3 requirement that engines or turbines installed after the
4 effective date of the rule make the emission standards
5 applicable to new equipment.

6 MR. HISER: Madam Hearing Officer?

7 HEARING OFFICER ORTH: Mr. Hiser?

8 MR. HISER: The changes that were made were
9 advocated by NMOGA in its direct, and the appropriate
10 time to respond to NMOGA's arguments that those changes
11 should be made would have been in rebuttal, not in
12 surrebuttal for the first time.

13 MR. BAAKE: Madam Hearing Officer, we are
14 providing surrebuttal to changes that the Department --
15 the Department adopted.

16 HEARING OFFICER ORTH: That was my
17 understanding, as well.

18 MR. BAAKE: He didn't provide any testimony
19 before because we agreed with the prior proposal.

20 HEARING OFFICER ORTH: Yeah. That was my
21 understanding.

22 Please go ahead.

23 And, Dr. Orozco, if you would, please, speak
24 slowly.

25 MR. OROZCO: Sure.

1 We are concerned that these provisions might
2 make New Mexico a dumping ground for old, high-pollution
3 equipment that is no longer allowed in other states.
4 There is no reason an operator constructing a new
5 modified -- new or modified facility in a high-ozone
6 area of New Mexico cannot use a state-of-the-art
7 equipment.

8 Second, we believe that the standards for
9 existing four-stroke lean-burn engines in particular are
10 not protective enough. Last year Colorado adopted a
11 standard of 1.2 grams of NOx per horsepower-hour for
12 these engines. The Colorado Air Pollution Control
13 Division found these standards to be cost effective and
14 achievable.

15 While NMED has adopted an appropriately
16 stringent emission limit for larger four-stroke
17 lean-burn engines, those with a rated horsepower of
18 1,775, its emission limit for medium size four-stroke
19 lean-burn engines with a rating horsepower between 1,000
20 and 1,775, is too low. NMED's revised standard is 2
21 grams of NOx per horsepower-hour, which is 40 percent
22 higher than the Colorado standard applicable to these
23 same engines.

24 MR. BAAKE: Thank you, Dr. Orozco.

25 Q. Are there any other jurisdictions that have

1 adopted emission standards for these existing
2 four-stroke lean-burn engines that are more stringent
3 than the ones the Department has proposed here?

4 A. Yes. Many other states and -- or local air
5 agencies have adopted more stringent regulations for
6 existing engines. For example, Texas has adopted a
7 standard of 0.7 gram per horse -- grams per
8 horsepower-hour for existing lean-burn engines within
9 the Dallas-Fort Worth ozone nonattainment area. Those
10 standards can be found at 30 Texas Administrative Code
11 Section 117.2110.

12 Pennsylvania's standard for these engines when
13 installed at new or modified facilities is 0.5 grams per
14 horsepower-hour.

15 In addition, many air districts in California
16 have even tighter NOx emissions limits with some
17 requiring emissions as low as 0.15 grams per
18 horsepower-hour.

19 Q. Thank you, Dr. Orozco.

20 And I just wanted to clarify. When you're
21 talking about these standards, we're only talking about
22 NOx, or NOx, correct?

23 A. Yeah. That's correct.

24 Q. And we -- are Clean Air Advocates objecting to
25 standards for carbon monoxide, for example?

1 A. Can you repeat? I'm sorry? I didn't hear
2 that.

3 Q. Are Clean Air Advocates objecting to the
4 proposed standard for carbon monoxide?

5 A. No.

6 Q. Okay. Thank you.

7 Did you see any evidence in the record as to
8 why this stricter standard for existing four-stroke
9 lean-burn engines was appropriate here?

10 A. No. I reviewed the other parties' submissions
11 and did not see any justification as to why the higher
12 limit of 2.0 grams of NOx per horsepower-hour was
13 proposed here. In fact, the analysis submitted by NMOGA
14 stated that some retrofitted legacy engines can
15 currently meet 0.8 grams per horsepower-hour NOx, but
16 that the cost to bring the emissions rate at these units
17 down to 0.5 will be excessive.

18 The -- that analysis for that stated that most
19 state regulatory agencies recognize the challenges for
20 engines made prior to 2007 to meet 1.0 grams per
21 horsepower-hour emissions levels. There is no
22 discussion of why these engines cannot meet a standard
23 of 1.2 grams of NOx per horsepower-hour consistent with
24 what is required in Colorado.

25 NMED's discussion did not explain the decision

1 to use a 2.0 gram standard either. NMED provided a
2 table showing that 100 percent of the medium size
3 existing four-stroke lean-burn engines tested in Ohio
4 were emitting at rates less than 2.0 grams per
5 horsepower-hour. That suggests that the limit is not
6 nearly as stringent enough.

7 Notably, the rule contains numerous
8 flexibilities to allow operators to continue using
9 engines that do not meet the Department's emission
10 standards. For example, operators can reduce the annual
11 hours of operation, can submit an Alternative Compliance
12 Plan that averages emissions across the operator's
13 entire fleet of engines, and can seek exemptions for
14 particular engines that cannot meet the standard in a
15 cost effective manner.

16 Including all of these alternative compliance
17 mechanisms while setting the standard at a level that
18 all of the subject engines can meet is inappropriate,
19 because it means that operators will not be required to
20 implement cost-effective controls at all of their
21 engines.

22 Q. Thank you, Dr. Orozco.

23 Do you have anything else to add?

24 A. Just to summarize my testimony, we
25 respectfully request that the Board, first, include the

1 language originally proposed by the Department that will
2 apply the most stringent emission standards to engines
3 and turbines that are installed after the effective date
4 of the rule; and second, adopt emission standard for
5 existing four-stroke lean-burn engines that are at least
6 as protective as those adopted last year in Colorado.

7 Thank you.

8 MR. BAAKE: Thank you, Dr. Orozco.

9 With that we will make Dr. Orozco available
10 for cross-examination.

11 HEARING OFFICER ORTH: Thank you very much,
12 Mr. Baake and Dr. Orozco.

13 If you are a party with questions, please turn
14 on your camera.

15 I see Ms. Gutierrez.

16 MS. GUTIERREZ: Thank you, Madam Hearing
17 Officer.

18 CROSS-EXAMINATION

19 BY MS. GUTIERREZ:

20 Q. Dr. Orozco, it's nice to meet you.

21 My name is Ana Gutierrez with Hogan Lovells,
22 and I'm here on behalf of Kinder Morgan.

23 I have just one, I think, clarification
24 question for you.

25 You referenced that in California they may

1 have adopted a lower NOx limit than is being proposed by
2 the Department here for four-stroke lean-burn engines;
3 is that right?

4 A. Right.

5 Q. And are you also aware -- and I think what I
6 heard you say is you referenced the limit that equates
7 to about 0.15 grams per horsepower-hour, correct?

8 A. Correct.

9 Q. And are you also aware that that limit does
10 not apply to lean-burn engines used for gas compression
11 or those used -- those engines of limited use operations
12 or engines that are waste gas -- that are waste gas
13 fuel?

14 A. No. I'm not particularly aware of that, but
15 I -- my understanding is that apply for four-stroke
16 lean-burn engines, as well.

17 Q. Thank you. I appreciate that.

18 And I have no further questions for you.

19 HEARING OFFICER ORTH: Thank you.

20 I see Professor Pacyniak.

21 MR. PACYNIK: Thank you, Madam Hearing
22 Officer.

23

24

25

1 CROSS-EXAMINATION

2 BY MR. PACYNIAK:

3 Q. Dr. Orozco, my name is Gabe Pacyniak. I
4 represent the Center for Civic Policy and NAVA Education
5 Project.

6 I just have a couple of questions for you, and
7 thank you for your testimony.

8 Could you clarify, prior to the September 16th
9 proposal, what was the -- the Department's proposal for
10 four-stroke lean-burn engines, and how did -- how did
11 the Department's proposal compare with Colorado's new
12 standards?

13 A. That is, I believe, in Table 1, Table 2 -- 1
14 and 2 of the Section 113.

15 So can you repeat the question? Specifically
16 the four-stroke lean-burn, right?

17 Q. Yes. So I thought I heard you say that --
18 recommend the Department adopt standards that were at
19 least as stringent as Colorado's.

20 Was that correct?

21 A. Yeah, which is 1.2 grams of NOx per
22 horsepower-hour.

23 Q. And -- and what were the standards due -- are
24 you aware of what the standards were that were proposed
25 by the Department prior to the September 16th revision?

1 A. It was 0.5 grams per horsepower-hour, but it
2 was -- it didn't specify the specific rated horsepower.

3 Q. And so in the September 16th revision, is your
4 testimony that the standards became weaker?

5 A. Yeah.

6 Q. I see.

7 And so was -- would the pre-September 16th
8 standards meet your recommendation for being at least as
9 protective as Colorado's standards?

10 A. Yes.

11 Q. So if I understand correctly, you're just
12 asking the Department go back to what they had
13 previously introduced?

14 A. No. We are not necessarily asking them to go
15 back to what they introduced. There is -- there is not
16 a direct comparison between what it was originally
17 proposed and what it's now, because again the rated
18 horsepower is different. So what we are proposing is
19 that they adopt -- for that same size of engines, to
20 adopt the Colorado standard, which is 1.2 grams per
21 horsepower-hour.

22 MR. PACYNIK: Thank you. I appreciate that.

23 I have no further questions.

24 HEARING OFFICER ORTH: Thank you, Professor
25 Pacyniak.

1 I see Mr. Swift.

2 MR. SWIFT: Thank you, Madam Hearing Officer.

3 CROSS-EXAMINATION

4 BY MR. SWIFT:

5 Q. A couple questions for you.

6 Good afternoon, Dr. Orozco.

7 My name is Whit Swift. I'm an attorney for
8 the Gas Compressor Association, or GCA.

9 A couple follow-up questions based on your
10 testimony.

11 I believe tied to this use of the language
12 about installed in the applicability section of the New
13 Mexico -- proposed New Mexico rules, you said you were
14 concerned that New Mexico may become a dumping ground
15 for old, high-polluting equipment; is that correct?

16 A. Correct.

17 Q. Now, existing engines will be regulated under
18 the proposed rule, correct?

19 A. Yes.

20 Q. And do you consider an engine that can -- an
21 existing lean-burn engine that can meet 2 grams of NOx
22 per horsepower-hour to be old, high-polluting equipment?

23 A. Can you repeat the question, please?

24 Q. Sure.

25 So existing engines are regulated under the

1 proposed standard, correct?

2 A. Yep. Um-hum.

3 Q. And the proposed standard sets a limit of
4 2.0 grams of NOx per horsepower-hour for those engines,
5 correct?

6 A. Yeah. Yeah.

7 Q. Now, an engine that can meet 2 grams of NOx per
8 horsepower-hour, that's not an old, high-polluting
9 engine, is it?

10 A. No.

11 MR. SWIFT: Thank you very much.

12 No further questions for the witness.

13 HEARING OFFICER ORTH: Thank you, Mr. Swift.

14 I don't see any other parties on screen to
15 question Dr. Orozco so I'll turn to the Board for their
16 questions.

17 While I'm doing that, in the event you're an
18 attendee on this platform, please reach out through chat
19 if you have a question.

20 EXAMINATION

21 BY THE BOARD:

22 HEARING OFFICER ORTH: Madam Chair, do you
23 have questions?

24 CHAIR SUINA: Yes. Thank you, Madam Hearing
25 Officer.

1 Good afternoon.

2 Thank you for your testimony, and I just want
3 to clarify in my head here.

4 So the rules that you are recommending are now
5 the Colorado standards; is that correct?

6 MR. OROZCO: Correct.

7 CHAIR SUINA: Okay.

8 And is that -- I think you referred to as
9 going back to the May rules was not necessarily apples
10 to apples because of the recent revisions; is that
11 correct?

12 MR. OROZCO: Yes, because of the distinction
13 between the size of the engines.

14 CHAIR SUINA: Okay.

15 And so the difference in the September, 2021
16 proposed rules would be an apples to apples comparison
17 or revision to -- with the Colorado rules; is that
18 correct?

19 MR. OROZCO: Correct.

20 CHAIR SUINA: Okay.

21 And I don't know in terms of logistics and
22 process here.

23 Have those rules been proposed as part of this
24 section?

25 MR. OROZCO: I'm not sure about the answer to

1 that question.

2 CHAIR SUINA: Okay. All right.

3 Well, thank you for your testimony. I
4 appreciate that.

5 MR. OROZCO: Thank you.

6 HEARING OFFICER ORTH: Madam Vice-Chair?

7 VICE-CHAIR TRUJILLO DAVIS: Yes. Thank you.

8 Ms. Suina asked my second line of questioning.
9 I'm sorry. Member Suina. So I wanted to just talk
10 about the point, Dr. Orozco, that you brought up about
11 the engines being moved and concern over old engines
12 that wouldn't meet standards.

13 And I believe in some previous testimony, and
14 I apologize because I don't remember who gave the
15 testimony, but it was mentioned that an engine had to be
16 registered when it was put into service. As it came
17 into the state, it needed to be registered when it was
18 put into service.

19 Does that satisfy your concern over that
20 issue?

21 MR. OROZCO: Well, first of all, I'd like to
22 state that maybe a suggestion for the Department is to
23 make this completely clear because it could be really
24 confusing. So clarifying that will make -- will make it
25 easier for everybody and to make sure that overall NOx

1 emissions are reduced overall from any -- any source.

2 But in -- in summary, we -- we -- our concern
3 is that old engines, say, from other states are brought
4 in -- or brought in to the states for operation, and if
5 it's not clear, they may run and they may operate
6 without the most stringent emission limits. So
7 that's -- that's the main concern, that when they are
8 installed or relocated, the most stringent controls are
9 applied to those engines, which are the ones given in
10 Table 2 of Section 113.

11 VICE-CHAIR TRUJILLO DAVIS: Okay. Thank you.
12 I appreciate you clarifying that for me and for taking
13 the time to talk with us.

14 MR. OROZCO: Thank you.

15 HEARING OFFICER ORTH: Thank you.

16 Member Cates, any questions?

17 MEMBER CATES: No questions at the moment.

18 Thank you.

19 HEARING OFFICER ORTH: Thank you.

20 Member Bitzer?

21 MEMBER BITZER: No questions. Thank you.

22 HEARING OFFICER ORTH: All right.

23 Member Garcia.

24 MEMBER GARCIA: No questions.

25 Thank you for your testimony, Mr. Orozco.

1 MR. OROZCO: Thank you for the opportunity.

2 HEARING OFFICER ORTH: Member Honker.

3 All right. Did any of that prompt redirect
4 for you, Mr. Baake?

5 MR. BAAKE: No, no redirect. Thank you very
6 much.

7 HEARING OFFICER ORTH: All right.

8 Thank you very much, Dr. Orozco and Mr. Baake.

9 Let's see. Ms. Katz.

10 MR. HISER: Madam Hearing Officer, it may be
11 appropriate for Mr. Lisowski's surrebuttal after the NPS
12 proposal before we go to the Department.

13 HEARING OFFICER ORTH: Oh. That is just fine.
14 Thank you, Mr. Hiser.

15 Thank you, Ms. Katz, for turning on your
16 camera.

17 I believe I panelized Mr. Lisowski. So we
18 should be able to see him.

19 There we are.

20 MR. HISER: All right.

21 Mr. Lisowski, are you on?

22 I am not seeing him.

23 MR. LISOWSKI: How is that? Is that better?

24 MR. HISER: I can hear you now. Oh, there you
25 are.

1 MR. LISOWSKI: Great.

2 JUSTIN LISOWSKI

3 (Relating to Topic Order 24 continued)

4 having been first duly sworn or affirmed, was
5 examined and testified further as follows:

6 DIRECT EXAMINATION

7 BY MR. HISER:

8 Q. Can you please state your name for the record?

9 A. Yes. It's Justin Lisowski, spelled
10 L-I-S-O-W-S-K-I.

11 Q. And you were previously sworn in this matter;
12 is that correct?

13 A. Yes, sir.

14 Q. And your testimony has been previously
15 adopted?

16 A. That's correct.

17 Q. And have you listened to the testimony of the
18 other parties in this hearing on engines and turbines?

19 A. Yes, I have.

20 Q. And did you hear testimony from the National
21 Park Service regarding a possible expansion of this
22 program to lower horsepower engines?

23 A. Yes, I did.

24 Q. And did they withdraw that recommendation for
25 purposes of this rulemaking?

1 A. Yes. That's correct.

2 Q. And do you support that recommendation? And
3 if so, why?

4 A. I do support that recommendation, and their
5 recommendation that was withdrawn expanded the
6 horsepower limits to a much lower and impractical limit
7 that -- for us to actually manage or maintain. It
8 was -- had some infeasible targets that provided
9 significant challenges, technical challenges, as well as
10 costs associated with these extremely low limits on a
11 pretty small horsepower range.

12 You know, for all of National Park Service's
13 recommendations below 1,000 horsepower, this argument
14 has been raised and refuted in other rulemakings, such
15 as Colorado, that, generally speaking, you can say that
16 extremely low NOx limits may be initially achieved, but
17 for various reasons, catalyst degradation, AFR drift,
18 other parameters, engine limitations, it just isn't
19 something that is a sustainable limit to propose at this
20 time.

21 Q. Did you hear this most recent testimony from
22 Dr. Orozco on behalf of National Parks Conservation
23 Association?

24 A. I did, yes.

25 Q. And do you agree with his comments on the

1 achievability of lower limits for four-stroke lean-burn
2 engines?

3 A. As a broad statement, no. I don't agree with
4 those. The memo that I supplied on behalf of Valor for
5 NMOGA was really focused upon what is technically
6 achievable in this space.

7 NMED, I think, did an excellent job trying to
8 distill down, you know, what the desired limits would
9 be. You know, everyone agrees that we want to approach
10 this rule in a way that is beneficial environmentally
11 for ground-level ozone creation. But at the same time
12 we need to balance that with what is technically
13 practical within the industry.

14 And proposing NOx targets, since this is a
15 general, you know, criteria pollutant we're talking
16 about in this context -- if you propose something that's
17 not achievable, then you're not -- probably not going to
18 be achieving the intent of the goal, because you'll be
19 looking for exemptions or you'll be shifting to
20 alternative sources of -- of compression driving
21 capabilities.

22 But the -- you know, we tried to balance out
23 what was achievable in current technology, and in many
24 instances existing engines already have all those low
25 emission control technologies, as I explained to the

1 Board, that limits your NOx input based upon lots of
2 different engine parameters, vintages, architecture,
3 size, and such that, you know, those limits proposed by
4 Mr. Orozco is not a blanket achievable target.

5 Q. I think one of the limits he spoke to at some
6 length was a 1.2 grams per horsepower-hour.

7 Do you have any thoughts on that limit?

8 A. I do. I'm aware that that's part -- you know,
9 part of the Colorado Reg 7, and I'm not entirely savvy
10 on that rule. I know it's pretty nuanced, and there's
11 quite a bit -- quite a few caveats, as Ms. Gutierrez
12 mentioned.

13 But generally what that means is there's going
14 to be a large subset of engines in New Mexico that
15 cannot achieve that target and will need to be replaced
16 either by new horsepower or potentially electric drivers
17 which creates a different type of emission source. It's
18 not eliminating your emission source.

19 MR. HISER: Thank you. That completes all of
20 my questions.

21 Madam Hearing Officer, we'll make Mr. Lisowski
22 available for any cross.

23 HEARING OFFICER ORTH: Thank you very much,
24 Mr. Hiser and Mr. Lisowski.

25 I see Mr. Baake on screen and Ms. Devore.

1 Mr. Baake?

2 MR. BAAKE: Thank you, Madam Hearing Officer.

3 CROSS-EXAMINATION

4 BY MR. BAAKE:

5 Q. And thank you, Mr. -- Lisowski?

6 A. That's correct.

7 Q. Okay.

8 A couple questions.

9 I think you said that the limit we had
10 proposed of 1.2 grams of NOx per horsepower-hour is not
11 blank -- is not blanketly achievable, or something to
12 that effect?

13 A. That's correct. You put a broad blanket to
14 put on all existing engines, all existing lean-burns
15 specifically can meet 1.2, and that just isn't true.

16 Q. But doesn't the rule as recently rewritten
17 allow for averaging across engines?

18 A. There's the potential for that, yet you do
19 have to have an engine that can exceed your limit in
20 order to have that averaging.

21 Q. And there's also the ability to get relief for
22 a specific engine that cannot meet the standard; is that
23 also correct?

24 A. There's provisions within the rule for your
25 alternate emission standard, as well as your Alternative

1 Compliance Plan. But that's not just a you can do this.
2 It does need to be reviewed, go out for public comment
3 and all those things. So it's not just a statement that
4 you just can average your emissions. It does need to go
5 through the proper approval protocols, and we're not
6 fully certain as to how that will work out.

7 Q. And I appreciate that.

8 I guess what I'd like to know is if there
9 were, you know, a small number of engines that could not
10 technically meet this standard, but you did have those
11 flexibilities, would that -- would that allay those
12 concerns?

13 A. I can't comment on that since I don't have the
14 specific -- specificity of what you're referring to.

15 Q. Yeah. I was just referring to the -- like the
16 averaging provision that's included in the NMED draft.

17 A. Are you referring to the Alternative
18 Compliance Plan?

19 Q. Yes, yes. That alternate compliance --

20 A. Well, like I said, you know, we're not exactly
21 sure how that's going to work out with the peer reviews,
22 as well as public comments. And so conceptually it
23 might prove to have the proper off ramps, but until we
24 actually see it in practice, I can't comment on that.

25 Q. That's helpful.

1 So I think that -- one other question I just
2 wanted to make sure I understood.

3 Any -- any lean-burn engine built after 2007
4 is going to be required to meet a limit of 1 gram of NOx
5 per horsepower-hour; is that correct?

6 A. Under which standard? NSPS?

7 Q. Yes, under the NSPS.

8 A. You know, I don't have the NSPS rules directly
9 in front of me on terms of what that limit is, but yes.
10 The engines are regulated by NSPS.

11 Q. Yeah. I -- because I'm looking at your
12 Valor -- your report for Valor, and I think you said,
13 you know, a challenge really comes with the pre-2007
14 engines in terms of getting below 1. -- 1.0 grams.

15 A. There's multiple categories I reference in the
16 Valor memo, one being the legacy engines, as well as,
17 you know, engines before 2007. For instance, you know,
18 a comment of some legacy engines being able to meet
19 .8 grams that Mr. Orozco referenced, and that was
20 actually referring to old legacy, large-bore engines
21 that already had extensive LEC technology installed that
22 would undergo a significant economic upgrade to get
23 beyond that .8. And so that was for a capital expense
24 argument.

25 MR. BAAKE: All right. No further questions.

1 I really appreciate it. Thanks so much.

2 MR. LISOWSKI: You're welcome.

3 HEARING OFFICER ORTH: Thank you, Mr. Baake.

4 Ms. Devore?

5 MS. DEVORE: Mr. Baake, he addressed most of
6 my questions. I just had one remaining question for
7 Mr. Lisowski.

8 CROSS-EXAMINATION

9 BY MS. DEVORE:

10 Q. I hope I'm not mangling your name.

11 Thank you for your --

12 A. No problem.

13 Q. Thank you for your testimony.

14 So I was just curious if you would consider 2
15 grams per horsepower-hour to be a high-emitting engine
16 because of the NSPS rules at this point in time, because
17 (unintelligible and/or inaudible) -- might be sold in
18 the US for the last 10 years?

19 A. You know, I think a high-emitting engine
20 statement is kind of a, you know, general statement that
21 it really depends. You know, I think it's somewhat of a
22 subjective statement.

23 But if you have an engine emitting beyond its
24 regulated NSPS limit, you know, one could argue that it
25 is a high-emitting engine. But it depends on that

1 reference. It's analogous to calling an engine a
2 large-bore versus a small-bore. There's not exactly a
3 definitive number which designates large-bore versus
4 small-bore. So, you know, I don't think it does any
5 justice high-emitting versus low-emitting.

6 It wouldn't be a compliant engine if it
7 exceeded NSPS.

8 Q. And then just, I think, one last question now
9 that I'm thinking about it.

10 So as far as construction goes, so are you
11 aware of like do engines when they go -- undergo
12 construction how long it might be before they're
13 actually installed at a site?

14 A. You know, that -- that varies significantly.
15 It depends on what kind of site you're talking about.
16 For instance, at my previous company, we would set
17 multiple engines at the beginning of a -- of a tank
18 battery facility, or we would wait to see if we'd need
19 gas lift, and they would come on site six months to a
20 year later depending on what the well requirements are.

21 So I would say it varies. For large plants
22 you're likely setting the equipment earlier on, during
23 the construction phase. But it really depends.

24 MS. DEVORE: Okay. Those are my questions.
25 Thank you.

1 MR. LISOWSKI: You're welcome.

2 HEARING OFFICER ORTH: Thank you very much,
3 Ms. Devore.

4 Any other parties with questions of
5 Mr. Lisowski?

6 All right. I'll move to questions from the
7 Board.

8 While I'm doing that, if you're an attendee on
9 this platform, please reach out through the chat with
10 any questions.

11 EXAMINATION

12 BY THE BOARD:

13 HEARING OFFICER ORTH: Madam Chair, any
14 questions of Mr. Lisowski?

15 CHAIR SUINA: Thank you, Madam Hearing
16 Officer.

17 Good afternoon, Mr. Lisowski.

18 Did I say it right? I'm sorry.

19 MR. LISOWSKI: You did, you nailed it.

20 CHAIR SUINA: Okay. Lisowski.

21 Thank you again for your information and what
22 you presented here today.

23 So I just want to make sure I'm -- kind of
24 wrap my head around it, as well.

25 I know you had said earlier that -- that you

3000

1 would need an engine to exceed the limit, and I think in
2 this case you were saying one, right, one --

3 MR. LISOWSKI: (Unintelligible and/or
4 inaudible) lower than the limit. Yeah.

5 CHAIR SUINA: Yeah. In order to kind of
6 average everything out.

7 And I was just wondering, are there engines
8 available to exceed or do -- you know, better that
9 limit?

10 MR. LISOWSKI: Now, are you referring
11 specifically to the Table 2, the existing engines?

12 CHAIR SUINA: Yes.

13 MR. LISOWSKI: Yeah. So they'll be -- you
14 know, it's -- it's a tough category to work through,
15 because you're trying to make sure that you're offering
16 enough flexibility technically so that you can, you
17 know, in practice achieve these limits. And so, yeah,
18 there will be engines within that category that can
19 exceed the 2, but, you know, as a -- generally a lot of
20 those will be in that, you know, maximum 2.0 grams
21 without replacement.

22 But it really depends, because that's the
23 really hard part with existing engines, is you have the
24 entire state fleet within this category. Right? And so
25 there's going to be some winners, and there's going to

1 be some losers. And in some cases perhaps there will be
2 some opportunity to reduce, you know, on a -- on an
3 engine that's -- you know, for instance, an old legacy
4 engine that has all this LEC technology, maybe it can
5 get down to, you know, 1.8 grams, or maybe it can get
6 down to 1 gram.

7 But as a broad statement, a lot of the
8 horsepower that's in place, which is -- you know, like
9 the Caterpillar 3500, that's probably the most common in
10 service right now in gathering space, 2 grams is going
11 to be most achievable for many of those engines.

12 CHAIR SUINA: Okay.

13 And then for new engines, is that -- is that
14 level easier to meet? Just throwing that out there.

15 MR. LISOWSKI: It is. And once again it
16 depends on what type of engine we have. But for
17 instance, you know, we were supportive of that .3 grams
18 or greater than the 1,875 because there's product
19 offerings. Now, that doesn't mean that that's
20 necessarily easy target, but it is more practically
21 achievable.

22 And that's where, you know, in my -- in my
23 memo that's what I'm trying to balance, is what's -- you
24 know, trying to meet these limits. I'm in agreement
25 that, you know, this is a good rule, but you also need

1 to balance it out with what's actually possible so
2 you're not shifting it to a different type of source,
3 whether it be power plants that drive electric motors
4 or -- or whatnot.

5 CHAIR SUINA: And thank you for kind of
6 leading into my next question.

7 So I think -- and so I think you mentioned
8 there were other jurisdictions that had stricter limits,
9 and California, I think, was mentioned and -- and
10 Colorado.

11 So are they running into issues in terms of
12 meeting these new compliance -- or those amended
13 compliance limits?

14 MR. LISOWSKI: You know, I -- I can't speak to
15 the -- you know, the result of these rules, especially
16 because they're fairly new, and I don't have any
17 experience with California rules.

18 I do have personal anecdotal experience where
19 we were trying to -- we had an old legacy Ajax
20 compressor engine -- and you guys have a lot of those in
21 New Mexico. They're old legacy two-stroke engines. And
22 we needed to replace it. It was at a Title V facility.
23 And right across the street was another operator's Title
24 V facility.

25 And part of NESHAP meant that we had to do

1 fence line monitoring to meet the NAAQS rule. Excuse
2 me. The NAAQS rule, not NESHAP. And we -- we had a kit
3 that -- offered by Ajax at the time. I don't believe
4 it's offered anymore. They've gone out of business.
5 But that lowered the NOx of that engine plus upgrade --
6 upgraded the horsepower.

7 And we failed. We were not able to pass that
8 modeling criteria because of the -- the -- just the
9 large emitting source from this Title V facility plus
10 the operator across the street.

11 And so what we ended up doing is instead of
12 making that Ajax cleaner and getting more horsepower,
13 reducing our annual tonnage and achieving our needs, we
14 ended up setting two electric motors as a result so that
15 we didn't have to get into our air permit because it
16 would have eliminated the grandfather status.

17 And the point of that story is, you know, that
18 there are unintended consequences if you can't meet
19 these standards, not just that we'll magically meet
20 them, it's just that we'll have to find alternative ways
21 to satisfy them, and it might not be the intended
22 purpose -- the intended outcome of the rule.

23 CHAIR SUINA: Thank you for that.

24 And was that example here in New Mexico, that
25 you just --

1 MR. LISOWSKI: No. That was in Colorado.

2 CHAIR SUINA: So that was in Colorado. So --

3 MR. LISOWSKI: Yeah. That was one at a
4 facility I had worked on at one point in my career.

5 CHAIR SUINA: Okay.

6 And how long ago was that?

7 MR. LISOWSKI: That was probably in -- in the
8 20 -- 2012 to 2014 time frame.

9 CHAIR SUINA: Okay. All right.

10 Well -- and at that time were there these more
11 stricter standards at that time?

12 MR. LISOWSKI: No. Colorado was going through
13 some nonattainment challenges. So I -- you would say
14 that it was probably pretty strict, but it wasn't these
15 rules that are currently in place.

16 CHAIR SUINA: Okay. Well, thank you for that
17 information. I appreciate it.

18 MR. LISOWSKI: You bet.

19 CHAIR SUINA: Madam Hearing -- thank you,
20 Mr. Lisowski.

21 And, Madam Hearing Officer, that's all I have.

22 HEARING OFFICER ORTH: Thank you.

23 Vice-Chair Trujillo Davis.

24 VICE-CHAIR TRUJILLO DAVIS: I don't have any
25 questions.

1 Great line of questioning, Madam -- yeah,
2 Madam Suina.

3 HEARING OFFICER ORTH: Thank you.
4 Member Cates?

5 MEMBER CATES: No questions here. Thanks.

6 HEARING OFFICER ORTH: Thank you.
7 Member Bitzer?

8 MEMBER BITZER: No questions. Thank you.

9 HEARING OFFICER ORTH: Thank you.
10 Member Garcia?

11 MEMBER GARCIA: No questions. Thank you.

12 HEARING OFFICER ORTH: And Member Honker.

13 MEMBER HONKER: No questions. Thank you.

14 HEARING OFFICER ORTH: All right. Thank you
15 very much, Mr. Lisowski.

16 Let's see if any of the Chair's questioning or
17 the other parties' questioning prompts redirect.

18 MR. HISER: No, I don't believe so. Thank
19 you, Madam Hearing Officer.

20 HEARING OFFICER ORTH: All right. Thank you,
21 Mr. Hiser and Mr. Lisowski.

22 MR. LISOWSKI: You're welcome. Thank you.

23 HEARING OFFICER ORTH: So I would like to
24 clarify. Are we going to hear from Ms. Cooper or
25 Dr. McCabe and then go back to the Department? Is

1 that --

2 MS. KATZ: I believe, Madam Hearing Officer,
3 that we would hear from all the other witnesses that are
4 available before we go back to the Department on the
5 storage vessels.

6 HEARING OFFICER ORTH: All right.

7 Mr. Baake?

8 MR. BAAKE: Madam Hearing Officer, I
9 believe -- sorry to interrupt.

10 But I believe Dr. McCabe is ready.

11 HEARING OFFICER ORTH: Okay.

12 And I saw Ms. Gutierrez briefly.

13 Will we hear from Ms. Cooper after -- after
14 that?

15 MS. GUTIERREZ: Sorry. That was an accidental
16 video push. Apologies.

17 HEARING OFFICER ORTH: All right. Thank you.

18 MS. KATZ: And we also do have -- I believe we
19 have Mr. Kim and Ms. Cooper for CDG? Do we?

20 HEARING OFFICER ORTH: I thought we already
21 heard from Mr. Kim. Maybe --

22 MS. KATZ: Oh, we did. You're right. Sorry.

23 I have Ms. Cooper listed as a rebuttal witness
24 that -- as having provided rebuttal testimony, but maybe
25 that -- I don't know. They would have to answer that.

1 HEARING OFFICER ORTH: All right. I'll
2 clarify after we hear from Dr. McCabe.

3 Mr. Baake?

4 And I am certain I made Dr. McCabe a panelist
5 so we should be able to see him.

6 Oh, there he is.

7 Hello, Dr. McCabe.

8 MR. MC CABB: Hello.

9 MR. BAAKE: I believe Dr. McCabe is still
10 under oath.

11 DAVID MC CABB

12 (Relating to Topic Orders 34 and 33 continued)
13 having been first duly sworn or affirmed, was
14 examined and testified further as follows:

15 DIRECT EXAMINATION

16 BY MR. BAAKE:

17 Q. Dr. McCabe, can you summarize your testimony
18 today?

19 A. Yes. I will be summarizing my direct and
20 rebuttal testimony regarding storage vessels and then
21 offering some brief surrebuttal. And I also wanted to
22 provide some information in response to questions I
23 received from the Board the first time that I testified
24 on Tuesday.

25 First, Chair Suina asked whether there had

1 been a negative impact on the oil and gas industry in
2 Colorado since the state adopted the first -- the
3 nation's first methane regulations for the oil and gas
4 industry.

5 I will summarize my written rebuttal testimony
6 which showed that there had been no discernible negative
7 impact.

8 Second, several members asked for additional
9 information about the benefits that can be realized by
10 retrofitting natural gas-driven pneumatic controllers
11 that are not captured in NMED's cost analysis, and so I
12 will briefly respond to that inquiry, as well.

13 Q. Thank you, Dr. McCabe.

14 On the subject of storage vessels, NMED
15 proposes to require emission controls at any existing
16 storage vessel with a potential to emit at least two
17 tons per year of VOCs. NMOGA proposes that this
18 threshold should be increased to six tons per year.

19 Why do Clean Air Advocates oppose that change?

20 A. So several jurisdictions require control of
21 emissions from storage tanks with VOC emissions lower
22 than six tons per year. These include Colorado, with a
23 threshold of two tons per year for new and existing
24 tanks, and Pennsylvania, which has required the control
25 of all new or modified tanks with VOC emissions above

1 2.7 tons per year since back in 2013.

2 Finally, since 2012 the USEPA has required any
3 existing tank required to control emissions under
4 NSPS -- NSPS Quad 0 or NSPS Quad 0a has to retrain that
5 control until emissions drop below four tons per year.

6 When Colorado lowered its threshold for
7 control of tanks to two tons per year, the Colorado Air
8 Quality Control Commission found the control of tanks
9 emitting less than six tons per year of VOC is cost
10 effective. In fact, the commission specifically found
11 that control is cost effective even for the lowest
12 emitting tanks in that cohort, those emitting between
13 two and three tons per year of VOC. And then, of
14 course, tanks with higher emissions than that are even
15 more cost effective.

16 Therefore, it would be inappropriate to raise
17 the threshold for control of tanks from two tons to six
18 tons.

19 Q. Thank you, Dr. McCabe.

20 And could you describe the proposal the Clean
21 Air Advocates have made to include a storage vessel
22 measurement requirement in this tank provision?

23 A. Yes. Clean Air Advocates propose to add a new
24 Subsection C to this section entitled Storage vessel
25 measurement requirements. This provision would mirror

1 almost word for word an amendment to Regulation 7
2 adopted by Colorado in December, 2019. And that
3 specific citation is included in my written direct
4 testimony.

5 Q. What would be the purpose of this new proposed
6 subsection?

7 A. So the new section -- subsection, sorry, would
8 reduce emissions from storage vessels installed at new
9 or modified facilities by requiring those tanks to
10 employ a storage vessel measurement system to determine
11 both the quantity and quality of liquids in -- in the
12 storage vessel.

13 Typically in order to measure the level of
14 liquid in a tank, operators open a thief hatch on top of
15 the tank to insert a gauging device, and then operators
16 also typically collect samples of the liquid in the
17 vessels through the hatch. When the hatch is opened, of
18 course, air pollutants, including methane, VOCs and
19 hazardous air pollutants, are released. Since gauging
20 is often performed quite frequently and the hatch is
21 opened every time a measurement is taken, these
22 emissions can be significant.

23 Operators can avoid these emissions by
24 employing an alternative system to measure and sample
25 the liquids in the vessel. Examples of alternative

1 systems include automatic tank gauging systems and lease
2 automatic custody transfer, or LACT, units. The
3 Colorado regulation requires operators to employ these
4 types of alternative systems for new or modified storage
5 vessels, and our proposal would require the same in New
6 Mexico.

7 Q. What are some of the benefits of Clean Air
8 Advocates' proposed storage vessel measurement
9 provision?

10 A. So the Clean Air Advocates' proposal reduces
11 emissions using systems that have been used for years in
12 the field at a reasonable cost to industry. And as I'll
13 describe later, it also has important safety benefits
14 which I'll discuss briefly.

15 So the Colorado Air Pollution Control Division
16 included an analysis of the storage vessel measurement
17 system regulation in the regulatory analysis that went
18 in with the -- those regulations in 2019. Using cost
19 data for automatic tank gauging systems, this analysis
20 showed that the use of a measurement system is generally
21 cost effective and the cost effectiveness will increase
22 the more often measurement occurs.

23 In general, measurement is carried out each
24 time liquid is transferred from the tank to a truck, a
25 process often referred to as loadout. If a measurement

1 occurs 100 times per year, the requirement will reduce
2 VOC emissions from an 8-tank battery by 5.1 tons per
3 year, which works out to a cost of about \$3,447 per ton.
4 If measurement occurs once per day, then the requirement
5 would reduce emissions by 18.6 tons for such a tank
6 battery at a cost of \$944 per ton.

7 Colorado's -- when the Air Pollution Control
8 Division put forth this analysis, they stated that these
9 numbers were, quote, extremely conservative insofar as
10 the new and modified facilities that will be subject to
11 these requirements will likely have production at such a
12 level where loadout happens more often than even one
13 time per day.

14 In addition, the division found that -- the
15 Air Pollution Control Division found that equipment
16 costs would be lower for owners and operators who use
17 storage vessel measurement system at multiple facilities
18 and that the use of such a system would provide benefits
19 to owners and operators by increasing the accuracy of
20 measurement. And the benefits of the -- that benefit
21 was also not included in the division's cost analysis.

22 Q. And, Dr. McCabe, does the use of this type of
23 system have safety co-benefits?

24 A. Yes, it does. The National Institute of
25 Occupational Safety and Health and the Occupational

1 Safety and Health Administration jointly issued a hazard
2 alert in February, 2016, explaining that the agencies
3 had identified health and safety risks to workers who
4 manually gauge or sample fluids on production and
5 flowback tanks from exposure to hydrocarbon gases and
6 vapors, exposure to oxygen deficient atmospheres, and
7 the potential for fires and explosions.

8 The hazard alert explained that opening tank
9 hatches, often referred to as thief hatches, can result
10 in the release of high concentrations of hydrocarbon
11 gases and vapors which can have immediate health
12 effects, including loss of consciousness and death. It
13 went on to survey nine cases between 2010 and 2014 where
14 a worker died while performing manual tank gauging.

15 The agency's recommended use of alternative
16 tank gauging and sampling procedures that enable workers
17 to monitor tank fluid levels and take samples without
18 opening the tank hatch to reduce the hazards associated
19 with the gauging, manual gauging.

20 Clean Air Advocates' propose -- proposal would
21 require exactly that at new and modified facilities,
22 including an important co-benefit in terms of
23 occupational safety at time -- at the same time it
24 reduces emissions of ozone-causing VOCs and other
25 pollutants.

1 Q. Thank you, Dr. McCabe.

2 (Unintelligible and/or inaudible) we'd also
3 like to do our surrebuttal related to tanks.

4 Dr. McCabe, did you review the rebuttal
5 testimony, this proposed -- this proposal that was
6 submitted by NMOGA witness John Smitherman?

7 A. Yes, I did.

8 Q. Can you summarize what Mr. Smitherman had to
9 say?

10 A. Yes. Mr. Smitherman notes that the Oil
11 Conservation Commission's waste rule, which was adopted
12 this year, does include a requirement to use auto
13 gauging technology at certain new storage vessels, and
14 so he suggested that NMED should not impose separate
15 requirements to those already established in order to
16 avoid conflict between agency requirements.

17 He also character -- characterized our
18 proposal as requiring the use of a lease automatic
19 custody transfer unit, a LACT unit, at all new or
20 modified tanks, apparently in addition to requiring an
21 automatic gauging system. He suggests that LACT units
22 are very expensive and infeasible at sites without
23 electric power.

24 And he also contended that the economic
25 analysis prepared to support the Colorado proposal

1 underestimates the cost of installing an auto gauging
2 system in a LACT unit.

3 Q. Dr. McCabe, do you agree that because the Oil
4 Conservation Commission adopted a rule that already
5 requires auto gauging for certain new storage tanks,
6 that NMED does not need to address this issue?

7 A. No. The OCC rule is a good start, but it is
8 not as protective as our proposal. There are two
9 important differences.

10 First, my understanding is that the OCC rule
11 only requires the auto gauging technology to be able to
12 measure the quantity, the amount of liquid in the tank.
13 Our proposal, like the Colorado precedent, requires that
14 the auto gauging technology be able to measure both the
15 quantity and the quality of the liquids, meaning that
16 operators would be able to collect a sample of the
17 liquid without opening the hatch.

18 Second, our proposal and the Colorado rule
19 expressly forbid operators from opening thief hatches to
20 gauge or sample tanks where auto gauging technology is
21 required, which the OCC rule does not do.

22 Q. And, Dr. McCabe, I think there was a
23 suggestion earlier that we might be prohibiting
24 operators from ever opening their thief hatches, but is
25 that -- is that correct?

1 A. No. The intention is to simply prohibit
2 opening a thief hatch at a tank with an auto gauging
3 system for the purpose of gauging the tank or sampling
4 the liquid.

5 Q. Is Mr. Smitherman correct that our proposal
6 requires the use of a LACT unit?

7 A. No. Our proposal simply requires operators to
8 utilize a storage vessel measurement system. It doesn't
9 require a LACT.

10 Q. Thank you, Dr. McCabe.

11 We now are going to summarize the written
12 rebuttal on economic impacts, and this may go to a
13 question, I believe, from Chair Suina.

14 And can I have sharing privileges?

15 I'd like to just pull up that testimony, which
16 is Exhibit 23, Clean Air Advocates Exhibit 23.

17 I always get confused when I do this.

18 Is that --

19 A. That's working.

20 Q. You see the chart? Okay.

21 A. Yes.

22 Q. So, Dr. McCabe, we have heard some dire
23 predictions about the potential impact of this
24 rulemaking on the oil and gas industry.

25 Do you agree that this rule will negatively

1 impact the industry?

2 A. No. We -- I do not agree. We can be
3 confident that these rules will not hamper the oil and
4 gas industry in New Mexico. The rules that NMED
5 proposed and the strengthened rules that we proposed
6 will require the New Mexico oil and gas industry to
7 adopt measures similar to those required in Colorado.
8 Most of those rules were put in place in rulemakings in
9 February, 2014; December, 2017; December, 2019; and
10 between December, 2020 and February, 2021.

11 Comparing the historical record of oil
12 production and drilling from Colorado to that from other
13 states, it is clear that neither oil production nor
14 drilling was hampered by the Colorado rules.

15 Excuse me.

16 The volume of production and especially the
17 count of rigs, which is an indicator of drilling
18 activity, vary tremendously over time, in response to
19 the price of oil, other economic factors, developments
20 in technology, and the evolution of production patterns
21 in the US. For example, the growth of activity in the
22 Permian in recent years has pulled investment away from
23 other states.

24 Because of these hugely influential exogenous
25 factors, it is helpful to compare Colorado's trajectory

1 of rig count and oil production to other states that
2 have not put in place similar protective regulations to
3 reduce oil -- I'm sorry -- reduce air pollution from
4 upstream oil and gas sites.

5 So the first thing that I just looked at, and
6 we described this a little bit, but it's sort of hard to
7 describe a graph without having it in front of us, so we
8 did -- I did discuss this a little bit on Tuesday, I
9 believe it was. This is just looking at the rig count
10 for Colorado since the beginning of 2012 and comparing
11 it to North Dakota and Oklahoma.

12 The size of the industry and the -- and the
13 quantity of natural resources vary a lot between states.
14 In North Dakota and Oklahoma, each had about 180 to 190
15 rigs back in January, 2012, while Colorado only had 77.
16 So it's most informative to look at the changes in each
17 state's rig count since the beginning of 2012.
18 Therefore, this graph shows for each state the ratio of
19 the rig count in each state to that state's average rig
20 count back in January, 2012. And then we just set
21 that -- that January 12 rig count at 100 for the
22 purposes of the graph.

23 So clearly drilling activity in Colorado has
24 tracked very closely to activity in the other two
25 states. After Colorado put its rules in effect in

1 February, 2014, which happens to be -- it was right
2 about, yeah, where that line is, the rig count actually
3 grew in Colorado, but it did in the other states, too,
4 that did not put in place rules to reduce these
5 unnecessary emissions.

6 There are actually many, many changes in each
7 state's drilling activity, but the states move quite
8 similarly. There's simply no evidence that the drilling
9 activity in Colorado dropped in response to the rules
10 that Colorado put in place. And now, in 2021, with all
11 the sets of rules in place from all -- 2014, '17, '19
12 and 2020, the ratio of present day drilling to early
13 2012 drilling is the same or higher in Colorado as it is
14 in Oklahoma and North Dakota.

15 Oil production shows the same story. Colorado
16 there is again red. Quite simply, relative to 2012
17 Colorado has outpaced North Dakota and Oklahoma for oil
18 production despite the fact that those states don't have
19 these rules -- these rules in place. So there's simply
20 no evidence that these rules have hampered oil
21 production.

22 In summary, the evidence from drilling and
23 production statistics shows that drilling activity and
24 oil production in Colorado weren't hampered by the
25 protective rules that Colorado put in place, and given

1 the similarity between the Colorado rules and the rules
2 proposed by NMED and by environmental stakeholders, we
3 can be confident that adoption of those rules will not
4 lead to dire economic consequences that some
5 stakeholders have predicted.

6 Q. And, Dr. McCabe, before we respond to the
7 questions that we had from the Board about pneumatics,
8 we did get a question from the Board about how
9 significant a producer of Colorado is. I think that
10 might be -- we could take that now.

11 A. Okay.

12 Q. Do you have that information?

13 A. Yes. For both 2019 and 2020, Colorado was the
14 number five producer of crude oil, just behind Oklahoma
15 and just ahead of Alaska. For 2020, Colorado was the
16 number nine producer of gas, just behind New Mexico,
17 which passed it that year. Colorado was number eight,
18 just ahead of New Mexico, for gas production in 2019.
19 Production of gas grew in both states in 2020, but New
20 Mexico's gas production grew faster than Colorado's. So
21 that's why it passed Colorado.

22 Q. Thank you, Dr. McCabe.

23 And our final question here. On Tuesday
24 certain Members of the Board, I believe it was Member
25 Garcia, but may have been several members asked similar

1 questions, had asked whether we could provide estimates
2 of how much lower the estimated cost a pneumatic
3 retrofit program would be if the analysis took into
4 account the increased revenue that operators would
5 receive from selling conserved gas and the maintenance
6 savings that operators tend to experience when using
7 alternatives to natural gas-driven pneumatics.

8 Could you briefly provide those estimates?

9 A. Yes. So I'll provide the estimates of the
10 effect of those factors on the cost estimates for well
11 pads, just because it will be too many numbers if we try
12 to do it in too many different types of facilities.
13 NMED -- but it will give an idea of how -- of the fact
14 that these -- factoring in these -- these effects can be
15 significant.

16 So just as a reminder, NMED calculated that
17 the cost of the retrofit program that they propose for
18 well pads would be \$2,745 per ton of VOC.

19 For the first issue, which is the increased
20 revenue from the sale of conserved gas, we use the value
21 of gas -- the cost of gas that Mr. Smitherman
22 recommended during Tuesday's testimony, which was \$3.20
23 per Mcf of gas, as representative of the net value that
24 a producer might get, discounted from the Henry Hub
25 price, for example. Accounting for the revenue from

1 selling the conserved gas at this price, we find that --
2 we find that reduces the cost of the rule by \$900 per
3 ton of VOC.

4 And then regarding maintenance costs for
5 facilities that handle wet gas that is more viable to
6 condense and heavier in hydrocarbons, such as oil well
7 pads, we estimate that accounting for net maintenance
8 savings when calculating abatement costs reduces the
9 abatement costs by \$674 per ton of VOC. This net
10 savings in maintenance cost would be smaller for
11 facilities that handle drier gas, such as some gas well
12 pads and gathering stations if they handle drier gas
13 without large amounts of condensable heavier
14 hydrocarbons.

15 For well pads -- well pads handling the drier
16 gas, we estimate that accounting for net maintenance and
17 savings when calculating abatement cost reduces the
18 abatement costs by \$270 per ton of VOC.

19 MR. BAAKE: Thank you, Dr. McCabe.

20 That concludes my direct questioning of you.

21 So we will now make Dr. McCabe available for
22 cross-examination.

23 HEARING OFFICER ORTH: Thank you very much,
24 Mr. Baake and Dr. McCabe.

25 If you're a party in this action and you have

1 questions of him, please turn on your camera.

2 I see Mr. Curtis, and then I see

3 Mr. de Saillan.

4 Mr. Curtis, go ahead.

5 MR. CURTIS: Thank you.

6 CROSS-EXAMINATION

7 BY MR. CURTIS:

8 Q. Good afternoon, Dr. McCabe.

9 I just have a few questions here.

10 So you testified a little bit on your storage
11 vessel measurement proposal, and I believe you said that
12 the intent of that was to not preclude opening the thief
13 hatch in all cases; is that correct?

14 A. Yes, sir.

15 Q. Okay.

16 And so as an example, if an operator needs to
17 open a tank to perform maintenance or to fix a leak,
18 open the thief hatch to do that, you think that would be
19 an appropriate step; is that correct?

20 A. Yeah. I mean, it's -- it's hard to speculate
21 about individual cases, but our intention is certainly
22 not to preclude ever opening the thief hatch.

23 Q. In cases of required maintenance to ensure the
24 continued operation of the tank or to address leaks or
25 things along those lines, you think that's appropriate

1 and within the scope of what you proposed?

2 A. Yes. That's our intent.

3 Q. You spoke quite a bit about the cost per ton
4 analysis that was done for tanks at two tons per year in
5 Colorado.

6 At the time that analysis was conducted, had
7 the impacts that the worldwide pandemic and related
8 supply shortages have had on the economy -- had those
9 taken effect at that time, and was that taken into
10 account by Colorado?

11 A. No. It -- it preceded the -- preceded the
12 pandemic.

13 Q. And so if, as others have testified, the costs
14 and supply shortages associated have increased, you
15 would anticipate that to affect the cost per ton
16 effectiveness of the proposal, correct?

17 A. I -- I would expect some -- some impact on
18 cost.

19 Q. Okay. Thank you.

20 You provided a little bit of context on
21 drilling activity to suggest that the oil and gas
22 industry has not been impacted by the regulatory
23 provisions.

24 Did you provide any data on the amount of rigs
25 that have been -- I'm sorry -- the amount of wells that

1 have been plugged and abandoned since the rules have
2 been passed?

3 A. No. That data is very challenging to work
4 with. It's very noisy data, and it's very hard to -- if
5 you look at a typical source and try to discern the
6 number of wells that have been plugged and abandoned,
7 you get negative numbers in certain years, and it's --
8 so it's very difficult to get reliable data for
9 abandonment.

10 Q. So drilling activity doesn't really tell us
11 anything about a rule's impact on existing gas and oil
12 wells; is that correct?

13 A. I -- I don't think that's a fair statement.
14 If a company decides to make an investment in -- in
15 drilling, which is substantial, they're looking forward
16 over the anticipated life of that well and anticipating
17 that it's a worthwhile investment, and they certainly
18 are going to consider operational costs for the well and
19 the value of the well over time since many of them sell
20 wells.

21 So no. I don't -- I think that's too sweeping
22 a statement.

23 Q. And do you recall Mr. Smitherman's testimony
24 that when an oil and gas company is considering the
25 economics of the project they're looking at individual

1 sites and considering whether that particular asset will
2 provide a return on investment? Do you recall that
3 testimony?

4 A. I'm sorry, sir. I -- I don't recall it at
5 this time. There's a lot of -- this is a voluminous
6 record.

7 Q. A lot going on. Okay. Thank you.

8 You provided some information on your cost
9 estimates of what money we would save -- that the oil
10 and gas industry would save as a result of capturing
11 additional emissions from pneumatics.

12 Can I ask what emission factor you used when
13 conducting that analysis?

14 A. Yes. That's using the NMED emissions factors.

15 Q. Okay.

16 And specifically for intermittent pneumatics,
17 what emission factor was used for that?

18 A. I believe that's the 13.5 Mcf per hour.

19 Q. And just to refresh my memory, you endorse the
20 use of 3.5 standard cubic foot per hour in the Colorado
21 rulemaking; is that correct?

22 A. Yes. We did as a conservative analysis of
23 emissions in that particular state.

24 MR. CURTIS: I don't think I have any other
25 questions.

1 Thank you, Dr. McCabe.

2 MR. MC CABB: Welcome.

3 HEARING OFFICER ORTH: Thank you, Mr. Curtis.

4 Mr. de Saillan?

5 MR. DE SAILLAN: Thank you, Madam Hearing

6 Officer.

7 Can you hear me okay?

8 MR. MC CABB: Yes, sir.

9 MR. DE SAILLAN: Great.

10 CROSS-EXAMINATION

11 BY MR. DE SAILLAN:

12 Q. Good afternoon, Dr. McCabe.

13 I just have a very quick question for you.

14 Is it your understanding that the New Mexico
15 Environmental Law Center also supports the proposal to
16 require automatic gauging systems or other alternative
17 systems on tanks?

18 A. Yes, sir.

19 MR. DE SAILLAN: Thank you.

20 That's all I have.

21 HEARING OFFICER ORTH: Thank you,

22 Mr. de Saillan.

23 Any other parties with questions?

24 No?

25 I'll turn now to the Board for their

1 questions.

2 If you're an attendee on this platform and
3 have a question, please reach out through the chat.

4 Madam Chair?

5 CHAIR SUINA: Good afternoon, Madam Hearing
6 Officer.

7 And thank you, Dr. McCabe, for your testimony.

8 I don't have any questions at this time.

9 HEARING OFFICER ORTH: Thank you.

10 Vice-Chair Trujillo Davis.

11 VICE-CHAIR TRUJILLO DAVIS: I don't have any
12 follow-up questions either. Thank you.

13 HEARING OFFICER ORTH: Thank you.

14 Member Cates?

15 MEMBER CATES: No questions here. Thank you.

16 HEARING OFFICER ORTH: Thank you.

17 Member Bitzer?

18 I think that was no questions.

19 Member Garcia?

20 MEMBER GARCIA: No questions. Thank you.

21 But I really appreciate the graphs showing the
22 comparison of Colorado's activity postrule. Thank you.

23 HEARING OFFICER ORTH: And Member Honker.

24 MEMBER HONKER: No questions. Thank you.

25 HEARING OFFICER ORTH: All right. Thank you.

1 Mr. Baake, did any of the questioning by
2 Mr. Curtis prompt redirect?

3 MR. BAAKE: No redirect.

4 HEARING OFFICER ORTH: All right. Thank you,
5 Mr. Baake.

6 Thank you, Dr. McCabe, for your testimony.

7 Let's see. Casey Shpall did reach out through
8 chat to say that CDG has no further rebuttal on this
9 topic from either Mr. Kim or Ms. Cooper.

10 So I believe we would return to the
11 Department. If there's any disagreement on that, please
12 turn on your camera.

13 No? Okay.

14 So let's come back at five of 3:00 -- oh,
15 there's Mr. Hiser.

16 MR. HISER: Madam Hearing Officer,
17 Mr. Smitherman who is our witness on one of the issues
18 that was just touched on is not here today. So I would
19 need to just give him a brief review of what was said
20 and see if he would need to say anything. So I'll check
21 with him as soon as I can and let you know.

22 HEARING OFFICER ORTH: All righty. Thank you.

23 Ms. Katz, you're nodding your head. I take it
24 we can return at five of 3:00 with the Department.

25 Yes. Okay. Thank you.

1 (Proceedings in recess from 2:40 p.m. to
2 2:55 p.m.)

3 HEARING OFFICER ORTH: Let's come back from
4 the break, please.

5 We are back after a short break.

6 And, Ms. Katz, I believe we return to the
7 Department for their surrebuttal.

8 MS. KATZ: Thank you, Madam Hearing Officer.

9 The Department will call back Ms. Kuehn and
10 Mr. Palmer for surrebuttal.

11 I'm just going to wait for Mr. Palmer if --
12 there he is. Okay.

13 ELIZABETH BISBEY-KUEHN and BRIAN PALMER

14 (Relating to Topic Order 34 continued)

15 having been first duly sworn or affirmed, were
16 examined and testified further as follows:

17 DIRECT EXAMINATION

18 BY MS. KATZ:

19 MS. KATZ: Ms. Kuehn, regarding Oxy's request
20 for extending the compliance deadlines for existing
21 tanks to 2029, as was discussed by Mr. Holderman in his
22 testimony, upon further review of the number of affected
23 tanks, would the Department accept that -- that request?

24 MS. BISBEY-KUEHN: (Unintelligible and/or
25 inaudible) that there will be -- there will be thousands

1 of existing tanks subject to this part, the Department
2 would support Oxy's original proposed compliance
3 deadlines.

4 MS. KATZ: Thank you.

5 Ms. Kuehn, can you -- can you explain the
6 Department's position regarding Clean Air Advocates'
7 request to add an automatic tank measurement system
8 requirement?

9 MS. BISBEY-KUEHN: Yes. So there were a
10 consortium of stakeholders, including EDF, the Center
11 for Civic Policy and NAVA Education Project and Clean
12 Air Advocates, that propose to require operators utilize
13 a storage vessel measurement system on new storage
14 vessels to determine the quantity of liquids in the
15 storage tanks. And this would allow thief hatches to
16 remain closed during the measurement of the tank's
17 contents, which would minimize emissions.

18 Oxy USA and NMOGA generally support this
19 requirement, and NMED agrees with the commenters that
20 the use of a storage vessel measurement system on new
21 storage vessels to determine the quantity of liquids in
22 the vessels would reduce emissions, and so NMED
23 generally accepts and supports the proposal.

24 MS. KATZ: Thank you.

25 Can you -- can you discuss CDG's request to

1 exclude certain types of vessels from the definition of
2 storage vessel and what the Department's position is
3 with respect to that request?

4 MS. BISBEY-KUEHN: Yes. And I spoke to this
5 earlier in the -- in our PowerPoint presentation for
6 storage vessels.

7 CDG proposed to revise the definition of
8 storage vessel to exclude certain types of vessels,
9 including process vessels that are surge control bottom
10 receivers or knockout vessels, and the Department does
11 agree with that change, which would align with the
12 definition of storage vessel within the definition of
13 NSPS Quad 0a.

14 MS. KATZ: Thank you.

15 And has CDG provided any emissions data for
16 their storage vessels or any data justifying why it
17 would be technically infeasible to control those storage
18 vessel emissions?

19 MS. BISBEY-KUEHN: The Department did not
20 receive any emissions data regarding those specific
21 storage vessels or any data to indicate why it is
22 technically infeasible to control those emissions. CDG
23 is requesting exemptions from the rule for their storage
24 vessels, but they did not provide the information
25 establishing why those additional exemptions would be

1 necessary.

2 MS. KATZ: And how does the rule address
3 existing low-emitting storage vessels?

4 MS. BISBEY-KUEHN: The rule as proposed has an
5 applicability on ramp of three tons per year and
6 provides an off ramp from the requirements of the
7 section if the actual emissions are less than two tons
8 per year. So it was unclear why this applicability
9 threshold and this off ramp from the section are not
10 sufficient to address those low-emission storage
11 vessels.

12 MS. KATZ: And, Ms. Kuehn, despite those two
13 points that you have just made, observing those issues,
14 has the Department considered CDG's request to add
15 language to Section 123 that would authorize an
16 exception for those storage vessels for which vapors do
17 not meet minimum Btu values for the combustion device,
18 based on manufacturer specifications?

19 MS. BISBEY-KUEHN: Yes. It was -- we did. We
20 did review their request. The Department understands
21 the concept of the -- of the technical issue identified
22 by CDG. You know, without the data to support those
23 claims, it was -- we were not able to verify whether
24 those were appropriate or not. But we understand the
25 concept around this issue.

1 And so the Department agrees that the issue
2 warrants a very narrow exception if it is accompanied by
3 a record verifying the Btu of the vapor from those
4 storage vessels, which would then demonstrate that the
5 vapor is, in fact, below the thresh -- excuse me -- the
6 threshold established by manufacturers.

7 MS. KATZ: Thank you.

8 So turning -- turning to Mr. Palmer, do any
9 other state rules have similar applicability thresholds
10 for existing storage tanks as that proposed by the
11 Department?

12 MR. PALMER: Yes. Colorado -- excuse me.
13 Colorado Regulation 7 has an applicability threshold of
14 two tons per year VOC for existing storage tanks.

15 MS. KATZ: And, Mr. Palmer, if the rule were
16 to exempt tanks that were between three and six tons per
17 year -- emitted three and six tons per year, how many
18 tanks would that leave unaddressed, and what are the
19 emission -- what would the emissions from those tanks
20 be?

21 MR. PALMER: The NMED equipment data shows
22 that there are 694 tanks with allowable VOC emissions
23 between three and six tons per year, and those 694 tanks
24 account for 3,149 tons per year of VOC.

25 MS. KATZ: Thank you.

1 And in response to the testimony that was
2 presented by Mr. Meyer on behalf of NMOGA, can the
3 Department estimate the costs for controlling a single
4 storage vessel with a combustor?

5 MR. PALMER: Yes. Since his testimony, we
6 went back and looked at our storage tank cost
7 spreadsheet, and we set up a -- set it up to estimate
8 the cost for a small storage tank. And I can walk folks
9 through that spreadsheet really quickly, if I can screen
10 share.

11 MS. KATZ: And this is -- this is the
12 spreadsheet that was submitted as NMED Exhibit 100?

13 MR. PALMER: That is correct. Yes.

14 Okay. I'm going to share. Okay.

15 Right. So this is the same spreadsheet that
16 we actually reviewed, I think, earlier in the week,
17 except that we've just set it up for a single tank
18 analysis. And actually within the sheet we took some of
19 the values from Mr. Meyer's memo that he prepared for
20 Valor and plugged them into the sheet. So these cells
21 that are highlighted in pink are the ones that we've
22 modified, using the information from Valor.

23 And so we selected for a combustor the value
24 for a 48-inch 23,000 standard cubic foot per day
25 combustor from Table 6 in his memo, and then for storage

1 vessel replacement we selected the value for a 300 or
2 400 barrel tank from Table 7 in his memo and plugged
3 those into the spreadsheet. I think those are really
4 the only values we replaced.

5 And then -- so this is a total capital
6 investment. These are the annualized costs here. And
7 then we just down at the bottom calculated what the ton
8 per year -- or -- excuse me -- the cost per ton would
9 be.

10 MS. KATZ: So, Mr. Palmer, I'm going to have
11 you for the record -- you need to say what the numbers
12 are.

13 MR. PALMER: Okay. Sure.

14 All right. So we selected for a combustor
15 cost \$10,500, a total annualized cost of the combustor,
16 freight and design, auto ignitor, surveillance system,
17 combustor insulation, and the -- would be \$2,144. The
18 cost of the storage vessel is \$18,000, and the
19 annualized cost of that is \$1,535. The annual O&M cost
20 would remain at \$14,659. So that the total annual cost
21 would be \$18,377.

22 So then we calculated what the cost per ton
23 emission would be at 95 percent control. So at three
24 tons per year the cost per ton would be \$6,434 per ton.
25 At four tons per year it would be \$4,826. At six tons

1 per year it would be \$3,217. And at eight tons per year
2 it would be \$2,413. And I will stop there since all
3 those are even less.

4 MS. KATZ: It gets progressively lower as
5 the --

6 (Simultaneous discussion.)

7 MR. PALMER: Correct, yes. At 10 tons per
8 year it's \$1,930. So --

9 MS. KATZ: That's fine. Thank you.

10 And so I believe that's all the surrebuttal
11 questions that I have for NMED's witnesses.

12 HEARING OFFICER ORTH: Thank you very much,
13 Ms. Katz.

14 If you're a party with questions of the
15 Department panel, please turn on your camera.

16 I'm not seeing anyone.

17 Oh, there's Mr. Rose.

18 MR. ROSE: Thank you, Madam Hearing Officer.

19 CROSS-EXAMINATION

20 BY MR. ROSE:

21 MR. ROSE: I was wondering if Mr. Palmer could
22 put the spreadsheet back up.

23 MR. PALMER: Sure.

24 MR. ROSE: At the risk of alienating
25 everybody, I guess, we can talk about it.

1 MR. PALMER: Okay.

2 MR. ROSE: Let's see if I can -- yeah. See if
3 I can -- I just can't read it.

4 MR. PALMER: I'll Zoom in for you.

5 MR. ROSE: Yeah. No. That helps. I can
6 actually see it now.

7 MS. KATZ: Eric, I believe you're not on mute.

8 MR. ROSE: It's an interesting conversation,
9 but yeah.

10 With respect to -- and I think we went through
11 it before, but I just want to make sure I understand.
12 If I look at line 6, your 2012 dollars is 18,000, 2019
13 is 10,000.

14 So is --

15 MR. PALMER: Correct. These numbers here are
16 from the original CTG --

17 MR. ROSE: Okay.

18 MR. PALMER: -- spreadsheet. The ones in
19 pink, these 2019 ones are the ones that we are using
20 now.

21 MR. ROSE: And that's -- it looks like you're
22 attributing that to -- is that Valor's numbers? Is that
23 what that means?

24 MR. PALMER: Correct.

25 MR. ROSE: And so if I read this correctly,

1 the price of the unit now is about half or a little more
2 than half of what it was in 2012?

3 MR. PALMER: Well, this was -- this was a
4 single tank analysis that we did using the combustor
5 sizes that he had in Table 6.

6 MR. ROSE: Okay.

7 MR. PALMER: So it's a -- it's a smaller tank,
8 it's a smaller combustor. And so we were just sort of
9 looking at, you know, what -- what would happen if you
10 plugged in some of the numbers from his -- his tables,
11 and assumed it was just for a single tank, because he
12 had said that these facilities would be --

13 (Simultaneous discussion.)

14 MS. KATZ: It's not comparable -- Brian, it's
15 not comparable to the 2012 values --

16 MR. PALMER: Okay.

17 MS. KATZ: -- that are in the --

18 MR. PALMER: That's correct.

19 MS. KATZ: -- other column.

20 Right?

21 MR. PALMER: Right. It's not comparable.

22 Yeah.

23 MR. ROSE: Okay. And that's what -- that kind
24 of surprised me, seeing the numbers being that much
25 lower.

1 Your total capital investment is 43,000?

2 That's based on 2019 dollars.

3 MR. PALMER: Correct.

4 MR. ROSE: And annualized costs, I think,
5 is -- and then correct me -- is based on financing that
6 capital investment over a period of time? And I think
7 you assumed an interest rate, looks like, at
8 3-and-a-quarter percent --

9 MR. PALMER: Correct.

10 MR. ROSE: -- which these --
11 (Simultaneous discussion.)

12 MR. PALMER: There's two annualized costs
13 here.

14 MR. ROSE: Okay.

15 MR. PALMER: There's -- this one is these
16 values here, and then this one is this value here for
17 the tank.

18 MR. ROSE: And I guess the question I had,
19 does this assume that the company that's actually
20 installing the unit would finance the proposal over a
21 period of time?

22 MR. PALMER: It does. It does.

23 MR. ROSE: And do you know whether or not
24 that's the way in which these oil and gas companies
25 finance these kinds of replacements?

1 MR. PALMER: I am not certain about that.

2 MR. ROSE: Okay.

3 Thank you, Madam Hearing Officer.

4 I have no further questions.

5 HEARING OFFICER ORTH: Thank you, Mr. Rose.

6 Did I see Mr. Hiser on screen?

7 MR. HISER: You did.

8 CROSS-EXAMINATION

9 BY MR. HISER:

10 MR. HISER: Mr. Palmer, when you were putting
11 this together, why did you choose the standard combustor
12 for a single tank which has the very limited head space
13 and thus requires a larger volume flow in order to avoid
14 popping the thief hatch or pressure relief valve?

15 MR. PALMER: I can't answer that question. It
16 looks like it was a reasonable cost, but perhaps I
17 misinterpreted the data. So --

18 MR. HISER: What would happen --

19 MR. PALMER: I'd be interested to hear what
20 Mr. Meyer would say.

21 MR. HISER: Oh, we could certainly bring back
22 Mr. Meyer to speak to that particular issue on your
23 spreadsheet if that -- if you would like.

24 But I might suggest maybe that the 18,881
25 value that you show there which is for the high volume

1 combustor in lieu of the 10,500 and what difference does
2 that make?

3 MR. PALMER: 18,081 -- I'm sorry.

4 MR. HISER: See that you've got a pink line on
5 row G7, cell G7?

6 MR. PALMER: This one?

7 MR. HISER: Yeah.

8 That's the high volume which we would probably
9 use for that type of small head space. That's a --

10 MR. PALMER: I -- so --

11 MR. HISER: That would be 18,881. Not that
12 \$700 probably makes that much difference.

13 MR. PALMER: Well, I was -- I was pulling the
14 \$8,100 up of --

15 MR. HISER: Okay.

16 MR. PALMER: -- from his table.

17 MR. HISER: Okay.

18 MR. PALMER: But here are your numbers now.

19 MR. HISER: Okay.

20 Madam Hearing Officer, would it be possible,
21 and Ms. Katz, to have this produced as an exhibit so we
22 could take a look at it?

23 MS. KATZ: Absolutely.

24 HEARING OFFICER ORTH: Thank you.

25 MR. PALMER: This is -- and again this is just

1 the same spreadsheet that we've been using and that I
2 think Mr. Meyer actually manipulated, as well. So it's
3 our Exhibit 100.

4 MR. HISER: 100? Okay.

5 MR. PALMER: Yeah. So --

6 MR. HISER: Great.

7 MR. PALMER: Hopefully user-friendly.

8 MR. CURTIS: Can I ask a quick question?

9 Sorry.

10 CROSS-EXAMINATION

11 BY MR. CURTIS:

12 MR. CURTIS: I just want to clarify something
13 for -- for myself.

14 So in your rebuttal testimony I seem to
15 remember a figure of around 13,000 per ton for a two ton
16 per year tank, and that was the basis for adjusting to
17 the three ton per year threshold for those tanks.

18 Can you just help us understand what the
19 difference is and why it's looking so different now that
20 we've increased the costs?

21 MR. PALMER: That was for two tons per year
22 which we did not include in here. That's from the CTG,
23 the two ton per year value.

24 MR. CURTIS: So I believe before you said
25 there was a spread between the four ton and the two ton

1 of something like 9 to 13? So you --

2 MR. PALMER: Well, it's -- the cost per ton
3 was linear, assuming that the combustor cost was fixed.
4 And so here's the original. I re -- redisplayed it. So
5 it's 13,020 -- 60 -- 13,260 and 6,630. So this is just
6 twice that.

7 MR. CURTIS: At the risk of asking stupid
8 questions on the record, I'm going to ask anyway.

9 My understanding of Adam's -- Mr. Meyer's
10 testimony was that the costs would increase. And so
11 what -- going down to your table below, how are we going
12 from -- how are we going down from your original number?
13 So for example, in cell B35.

14 MR. PALMER: We were assuming a smaller system
15 for a smaller single tank. But perhaps --

16 (Simultaneous discussion.)

17 MR. CURTIS: I'm just trying to understand
18 the -- the comparison here.

19 MR. PALMER: One big issue was that Mr. --
20 that we couldn't quite understand was that Mr. Meyer had
21 included a high retrofit cost for the tank, storage
22 vessel retrofit of \$70,000, whereas he also had on there
23 a tank replacement. And so we said, well, why retrofit
24 the tank when you can replace it for less? So that's
25 what's going on here. And perhaps we misinterpreted

1 his -- what he meant by tank replacement versus tank
2 retrofit.

3 MR. CURTIS: I -- I'm certainly not an expert
4 on this. I'm just trying to understand my very visceral
5 reaction that if we are trying to account for increased
6 costs that Mr. Meyer has projected, that we wouldn't see
7 a dramatic reduction in cost per ton, and so I'm trying
8 to understand why that's happening.

9 MR. PALMER: What we were trying to look at
10 was a single tank situation that Mr. Meyer -- the
11 smaller single tank situations which he seemed to imply
12 represented a lot of the low-emitting tanks.

13 MS. KATZ: And, Brian, that's what this is
14 doing. This is showing that. It's attempting to show
15 that single tank situation, which is why it's not
16 comparable to what we had in that original spreadsheet.

17 Right?

18 MR. PALMER: Yes.

19 MR. CURTIS: Okay. Well, we would appreciate
20 the opportunity to review it.

21 Thanks for answering those questions.

22 MR. PALMER: Sure.

23 HEARING OFFICER ORTH: Thank you.

24 If you would stop screen sharing for just a
25 moment, I'll see if there are any other parties with

1 questions.

2 I don't see anyone else.

3 I will turn then to the Board for questions.

4 While I'm doing that, if you're an attendee on
5 this platform with a question, please reach out through
6 the chat.

7 EXAMINATION

8 BY THE BOARD:

9 HEARING OFFICER ORTH: Madam Chair?

10 CHAIR SUINA: Thank you, Madam Hearing
11 Officer.

12 From the discussion I heard, it sounds like
13 we'll have more discussion on this spreadsheet. So I'll
14 wait to have my questions after that further discussion.
15 Thank you.

16 HEARING OFFICER ORTH: All right. Thank you.
17 Vice-Chair Trujillo Davis.

18 VICE-CHAIR TRUJILLO DAVIS: I'm in agreeance.
19 I think there will be more discussion once we get a
20 chance to look at that a little bit further.

21 But I also want to note that I appreciate you
22 putting the numbers together for the single tank example
23 just to kind of expand on that argument for us. So
24 thank you very much.

25 HEARING OFFICER ORTH: Thank you.

1 Member Cates?

2 Member Bitzer?

3 MEMBER BITZER: No. I have no questions.

4 Thank you.

5 HEARING OFFICER ORTH: Thank you.

6 Member Garcia?

7 MEMBER GARCIA: One quick question for

8 clarification. This might be for Ms. Kuehn.

9 You were saying you agreed about the use of a
10 storage measurement system for new storage tanks.

11 Is that the same as auto gauge?

12 MS. BISBEY-KUEHN: That is correct.

13 MEMBER GARCIA: Okay. Thank you.

14 HEARING OFFICER ORTH: Thank you.

15 And Member Honker.

16 MEMBER HONKER: No questions. Thank you.

17 HEARING OFFICER ORTH: All right. Thank you.

18 Ms. Katz, any follow-up?

19 MS. KATZ: No. No, Madam Hearing Officer, no
20 follow-up.

21 HEARING OFFICER ORTH: All right. Thank you,
22 Ms. Kuehn and Mr. Palmer.

23 Let -- oh, Mr. Rose.

24 MR. ROSE: Yes, Madam Hearing Officer.

25 I -- yesterday we discussed a case in the

1 Court of Appeals that we didn't have the citation for,
2 which I now have, and I failed to recall that in fact
3 you were one of the -- represented one of the parties in
4 the litigation. That's a SouthWest Organizing Project
5 case. And I have the cite just in case folks wanted to
6 look at it. It's at 482 Pacific 3rd 1273, that's 2020.
7 And Ms. Katz was -- I think, filed an amicus, as did I.

8 So that was the court case I was referring to.
9 I just wanted to make it clear for the record.

10 HEARING OFFICER ORTH: Thank you very much.

11 Is there anything further on this topic?

12 Subject to Mr. Hiser's question of
13 Mr. Smitherman.

14 MR. HISER: Yeah. We've got Mr. Smitherman's
15 testimony, and if the -- if you will indulge us, we are
16 going to have Mr. Meyer take a brief look at what
17 Mr. Palmer just presented, and we might have just a
18 direct response on a couple of those line items, just to
19 what the difference of interpretation was.

20 HEARING OFFICER ORTH: All right.

21 Is it time, then, to move to pig receiving and
22 launching -- pig launching and receiving?

23 MS. KATZ: Yes. That is -- works for the
24 Department, if it works for others.

25 MR. HISER: It should work for NMOGA.

1 MS. KATZ: I just need a moment here. Sorry.

2 And the Department will be calling Ms. Kuehn

3 and Mr. Palmer again.

4 ELIZABETH BISBEY-KUEHN and BRIAN PALMER

5 (Relating to Topic Order 32)

6 having been first duly sworn or affirmed, were

7 examined and testified as follows:

8 DIRECT EXAMINATION

9 BY MS. KATZ:

10 MS. KATZ: This -- this section -- this

11 testimony relates to Section 20.2.50.121, pig launching

12 and receiving. The Department's testimony -- written

13 testimony appears at NMED Exhibit 32 beginning on page

14 116 and NMED Rebuttal Exhibit 1 beginning on page 79.

15 And the witnesses have adopted this testimony

16 already, and I don't believe there are any corrections

17 that need to be made.

18 So if Ms. Kuehn can have sharing privileges to

19 share the PowerPoint.

20 Ms. Kuehn, if you would begin with discussing

21 the equipment and processes that are the subject of this

22 section of the rule.

23 MS. BISBEY-KUEHN: Yes. Thank you.

24 Good afternoon, Members of the Board.

25 Today we'll be discussing Section 121, which

1 covers pig launching and receiving operations.

2 As we heard several times over the last two
3 weeks, natural gas passing through gathering pipelines
4 contains volatile organic compounds. And changes in
5 temperature and pressure may result in development of
6 natural gas condensates in a liquid phase in the
7 pipeline, and those condensates can accumulate in
8 low-elevation segments of the gathering pipelines,
9 impeding the flow of natural gas.

10 To maintain gas flow, operators insert a
11 device called a pig into the pipeline which is swept
12 along the pipeline by the pressure of the existing gas
13 flow. Condensate formed in the pipeline is pushed in
14 front of the pig until it reaches a receiver. The pig
15 is then isolated in a pipeline segment, and condensate
16 and liquids are drained out of the pipeline. The pig is
17 then reinserted and swept along the next segment.

18 And emissions occur at the pig launcher and
19 receiver when the pipeline is opened to insert or
20 extract the pig. And emissions from pigging operations
21 depend on factors such as the launcher or receiver
22 volume, pipeline pressure, the amount of liquid trapped
23 in the pig receiver barrel prior to depressurization,
24 the frequency of pigging, and the gas composition.

25 MS. KATZ: And can you discuss the actions

1 that are available for controlling emissions from pig
2 launching and receiving?

3 MS. BISBEY-KUEHN: Yes. There are a number of
4 control options to control emissions, including process
5 modifications, add-on controls, such as a flare,
6 enclosed combustor or thermal oxidizer, or by using a
7 vapor recovery unit to collect the vapors and route them
8 back into the process.

9 And process modifications identified by EPA to
10 minimize emissions during these events include
11 installing pig ball valves, receiver barrel design,
12 installing these in pig ramps, routing the high-pressure
13 systems to lower-pressure lines, barrel pump-down
14 systems, and enhanced liquid containment.

15 MS. KATZ: Thank you.

16 And can you -- and can you summarize the
17 emission standards in the rule that -- the requirements
18 for pig launching and receiving?

19 MS. BISBEY-KUEHN: Yes. So owners and
20 operators of affected facilities required to comply --
21 are required to comply with best management practices
22 and emission limits. Owners and operators of pigging
23 operations with a potential to emit equal to or greater
24 than one ton per year of VOC are required to capture and
25 reduce VOC emissions by at least 95 percent. Owners and

1 operators must employ best management practices and
2 equipment modifications during pigging operations to
3 prevent or reduce emissions.

4 MS. KATZ: Thank you.

5 And turning to Mr. Palmer.

6 Mr. Palmer, can you discuss the basis for the
7 proposed requirements in Section 121 and the estimated
8 emissions reductions and costs?

9 MR. PALMER: Yes, I can. The proposed
10 requirements for pig launching and receiving are based
11 on Pennsylvania General Permits 5 and 5A, Ohio's General
12 Permit 21.1, and also EPA guidance on pig launching and
13 receiving.

14 The Pennsylvania General Permits requires best
15 management practices for all pigging operations and
16 95 percent control of emissions from pigging operations
17 with emissions equal to or above 2.7 ton per year of VOC
18 after the application of best management practices.

19 Ohio General Permit 21.1 limits VOCs emissions
20 from each discrete pig launcher or receiver to less than
21 .27 tons per month, averaged over a rolling 12-month
22 period, which is equivalent to less than 3.24 tons per
23 year. The Ohio General Permits require the use of an
24 add-on control device to control emissions if needed to
25 comply with the VOC emission limitations.

1 And then the EPA Guidance provides best
2 management practices recommended in EPA's fact sheet
3 number 505, which is entitled Recover Gas from Pipeline
4 Pigging Operations.

5 Okay. For the pigging facilities identified
6 in the NMED equipment inventory, the NMED estimates an
7 overall emission reduction of 22.9 tons of allowable VOC
8 as a result of the rule. However, the NMED equipment
9 inventory does not list all pigging facilities. So
10 greater emission reductions are expected as a result of
11 the rule.

12 Also, comparably in the emissions inventory,
13 pigging operations are not a -- I believe, a separate
14 line item under a separate source category code, and so
15 the pigging operations emissions in the inventory are
16 probably accounted for as fugitive emissions.

17 Implementation costs of a skid-mounted flare
18 are estimated to be \$21,000 with operating costs of
19 about \$3,000 per year. And this is from values
20 calculated by the USEPA in the Gas STAR Program's fact
21 sheet for installing flares, and that's from 2011.

22 MS. KATZ: Thank you, Mr. Palmer.

23 And, Ms. Kuehn, can you walk through the
24 provisions of the rule and summarize those that discuss
25 the revisions that the Department made based on

1 stakeholder comments?

2 MS. BISBEY-KUEHN: Yes. So before you is the
3 proposed Section 121. It follows the similar framework
4 for other sections.

5 We have applicability in Paragraph A. We
6 received comments from NMOGA, Kinder Morgan and CDG.
7 They propose provisions that would apply to individual
8 pig launching and receiver -- receivers with a PTE equal
9 to or greater than one ton per year. The stakeholders,
10 NMOGA in particular, also proposed requirements only
11 apply to pig launchers and receivers located within the
12 property boundary.

13 The listed facilities in CDG further requested
14 revisions specifying that those be under common
15 ownership and control at those facilities.

16 And NMED reviewed the basis for those
17 proposals and agreed with those revisions for the
18 reasons outlined in their direct and rebuttal testimony.

19 Paragraph B identifies the emission standards
20 and requirements for pig launcher and receiver
21 operations. Paragraph (1) establishes that owners and
22 operators of affected pigging and launching and
23 receiving operations must comply with the requirement
24 within two years of the effective date of this part.

25 The -- NMOGA requested an extension to the

1 compliance deadline of three years but did not justify
2 that -- that request, and -- but the Department did
3 agree that a two-year timeline to comply was
4 appropriate.

5 We've also amended this section to state that
6 if a combustion control device is used, that the
7 combustion device have a minimum design combustion
8 efficiency of 98 percent.

9 Paragraph B.(2) through D outline the emission
10 requirements or the best practice management practices.
11 I won't go into a great -- great detail on these
12 requirements. I'll speak to them briefly.

13 They're required to employ best management
14 practices to minimize the liquid present in the chambers
15 and to minimize those emissions before they have an
16 opportunity to be vented to the atmosphere. They're
17 required to employ a method to reduce or prevent
18 emissions, such as installing a liquid ramp or drain,
19 routing high-pressure chamber to a low-pressure line or
20 vessel or use of a ball valve type of chamber or using
21 multiple chambers.

22 They're also required to recover and dispose
23 of liquid in a manner that minimizes emissions to the
24 extent practicable. And to ensure material collected is
25 done in a manner compliant with state law.

1 Paragraph B.(3) has an off ramp for the
2 requirements of this rule, if the individual pipeline
3 pig launching and receiving operation has actual annual
4 VOC emissions of less than one ton per year.

5 And the Paragraph B.(4) requires owners and
6 operators using a control device to comply with this
7 section to comply with the control device requirements
8 that are established in Section 115.

9 The monitoring requirements again outline the
10 type of monitoring that must be conducted to determine
11 compliance with the emission standards of this part.

12 One agreement that the Department has made was
13 to strike the monitoring of the type and volume of
14 liquid cleared. We did not think that was necessary to
15 monitor that specific parameter.

16 We do require the owner or operator of an
17 affected facility to inspect the equipment for leaks
18 using either an AVO, a Reference Method 21 or optical
19 gas imaging on either a monthly basis if those
20 operations at a site occur on a monthly basis or more or
21 prior to the commencement of an operation less frequent
22 than monthly.

23 So these modifications were made also by NMOGA
24 and Kinder Morgan, and the Department agreed that an AVO
25 is an appropriate screening tool to check for -- for

1 those leaks. And agreed that the monitoring frequency
2 should be staggered to account for those facilities that
3 have less frequent pigging activities.

4 Paragraph C.(2) requires that the monitoring
5 be performed using the methodologies outlined in 116 as
6 applicable and at the frequency required as outlined in
7 C.(1) above. Again Section 116 are the leak detection
8 and repair requirements under a different part of the
9 rule.

10 And then Paragraphs (3) and (4) again point to
11 both the control device monitoring requirements that are
12 established in Section 115 and then the general
13 monitoring requirements that are found in the general
14 provisions of Section 112.

15 Paragraph D outlines the recordkeeping
16 requirements. These ensure that information is recorded
17 in order to determine compliance with the monitoring as
18 outlined by Paragraph C.

19 So the recordkeeping requirements are for
20 owners and operators subject to this section to identify
21 the location, date and time of the pigging event, to
22 utilize data to estimate the actual emissions to the
23 atmosphere and document that information that was used
24 to estimate the potential to emit, and to record the
25 date and time of any monitoring and the results of the

1 monitoring, and to document the type of control device
2 and its make and model, and to comply with the generic,
3 general recordkeeping provisions of 112.

4 We did not receive any comments on Paragraph
5 E.

6 That concludes this overview of our direct and
7 rebuttal.

8 MS. KATZ: Thank you, Ms. Kuehn.

9 That's all the Department has at this time.

10 HEARING OFFICER ORTH: All right. Thank you
11 very much, Ms. Kuehn and Mr. Palmer, Ms. Katz.

12 Are there any parties -- excuse me -- any
13 parties with questions of the Department panel?

14 I'm not seeing any screens.

15 I'll go to the Board for their questions.

16 While I'm doing that, please reach out through
17 the chat if you're an attendee with a question.

18 EXAMINATION

19 BY THE BOARD:

20 HEARING OFFICER ORTH: Madam Chair?

21 CHAIR SUINA: Thank you, Madam Hearing
22 Officer. No questions at this time. Thank you.

23 HEARING OFFICER ORTH: Thank you.

24 Vice-Chair Trujillo Davis?

25 VICE-CHAIR TRUJILLO DAVIS: Yes. Just a

1 couple to clarify. I -- and I fully admit here I
2 only -- I know just enough about pigging to get myself
3 in trouble. So I'm really just looking for some
4 clarification on things.

5 So I know pig launchers and pig receivers can
6 be located on and off facilities. I know there's plenty
7 of them out in the middle of pastures somewhere.

8 So is the Department proposing that pig
9 launchers and receivers located on a location have
10 permanently installed equipment? And then pig launchers
11 and receivers that are located off of location could
12 have like a temporary equipment used when they're --
13 those events are occurring? Like --

14 MS. BISBEY-KUEHN: Thank you, Vice-Chair
15 Trujillo Davis.

16 As -- so this section of the rule would only
17 apply to within the property boundary of a -- of an
18 existing facility. And so the remote location would not
19 be subject to this -- to this section, unless it was
20 located within the property boundary of an existing
21 site, and those are, you know, tank batteries, well
22 sites, gas plants, compressor stations.

23 VICE-CHAIR TRUJILLO DAVIS: Okay. Thank you
24 for clarifying that for me. I appreciate it.

25 I don't have any more questions.

1 HEARING OFFICER ORTH: Thank you.

2 Member Cates?

3 MEMBER CATES: No questions here. Thank you.

4 HEARING OFFICER ORTH: Member Bitzer?

5 MEMBER BITZER: I know a lot about pigging

6 out, but I have no questions. Thank you.

7 HEARING OFFICER ORTH: Thank you.

8 Member Garcia?

9 MEMBER GARCIA: No questions. Thank you.

10 HEARING OFFICER ORTH: Thank you.

11 And Member Honker.

12 MEMBER HONKER: Just one.

13 And I'm looking at Section B.(3), I think.

14 It's the exemption for the -- the requirement cease to

15 apply if the annual VOC emissions of the launcher or

16 receiver operation are less than one ton per year.

17 I'm just curious how that is calculated.

18 MS. BISBEY-KUEHN: Thank you, Member Bitzer.

19 That would be calculated by estimating the

20 length of the pipeline and then the quantity of natural

21 gas, the concentration of VOC within the gas, and then

22 the expected venting of that emission stream to the

23 atmosphere.

24 MEMBER HONKER: Okay. Thanks.

25 HEARING OFFICER ORTH: Thank you.

1 Any follow-up, Ms. Katz?

2 MS. KATZ: No, nothing from me. Thank you.

3 HEARING OFFICER ORTH: All right. Thank you
4 very much, Ms. Kuehn, Mr. Palmer and Ms. Katz.

5 I believe we turn now to Ms. Nolting and
6 Kinder Morgan.

7 Is that true, Ms. Gutierrez?

8 MS. GUTIERREZ: We are prepared to present.

9 HEARING OFFICER ORTH: Thank you.

10 LESLIE NOLTING

11 (Relating to Topic Order 32)

12 having been first duly sworn or affirmed, was
13 examined and testified as follows:

14 DIRECT EXAMINATION

15 BY MS. GUTIERREZ:

16 MS. GUTIERREZ: May I please have screen
17 sharing permissions?

18 Thank you.

19 Good afternoon.

20 For the record, my name is Ana Gutierrez with
21 Hogan Lovells on behalf of Kinder Morgan.

22 This testimony is going to relate to Kinder
23 Morgan direct technical testimony, Exhibit 8, which I
24 believe is in the record, and we confirmed there are no
25 revisions.

1 Q. Ms. Nolting, I believe this is your last
2 presentation before the Board, but for one last -- for
3 good measure, can you please introduce yourself for the
4 record.

5 A. Yes. I am Leslie Nolting. I'm an EHS manager
6 for Kinder Morgan, focused on air permitting and
7 compliance.

8 Q. And did you submit written direct technical
9 testimony at Exhibit 8 regarding pig launching and
10 receiving?

11 A. Yes, I did.

12 Q. Do you have any changes to that testimony?
13 And if not, do you adopt it in full?

14 A. I don't have any changes to that testimony,
15 and I do adopt it in full.

16 Q. Thank you.

17 And could you please summarize for the Board
18 and the parties your testimony regarding pig launching
19 and receiving?

20 A. Yes.

21 Good afternoon, Madam Chair and Members of the
22 Board.

23 I had originally planned to discuss the topics
24 shown on this screen. However, because the Department
25 has incorporated changes to the proposed rules that

1 address our concerns, I'll limit my testimony to
2 expressing Kinder Morgan's support for the Department's
3 September 16th draft language.

4 Specifically, the Department has revised
5 Paragraph C.(1) to make clear that sites that conduct
6 pig launching and receiving operations less frequently
7 than once a month, monitoring will be tied to the
8 frequency of the pig launching and receiving activities
9 themselves.

10 This addresses our concern that the rules may
11 have required monthly monitoring at pigging sites, which
12 would not have made sense in the context of our
13 operations, because we conduct pigging operations very
14 infrequently.

15 With that, Mr. Brindley and myself are
16 available for questions from the Board or other parties.

17 HEARING OFFICER ORTH: Thank you very much,
18 Ms. Nolting.

19 If you're a party, please turn on your camera
20 to question Ms. Nolting or Mr. Brindley.

21 I'm not seeing anyone.

22 I'll turn to the Board.

23 If you're an attendee and have a question,
24 please reach out through chat.

25

1 EXAMINATION

2 BY THE BOARD:

3 HEARING OFFICER ORTH: Madam Chair.

4 CHAIR SUINA: Thank you, Madam Hearing
5 Officer.

6 And thank you, Ms. Nolting, for your
7 testimony, over these last few days, as well.

8 I have no questions at this time. Thank you.

9 HEARING OFFICER ORTH: Thank you.

10 Vice-Chair Trujillo Davis?

11 VICE-CHAIR TRUJILLO DAVIS: Yes. Just one.

12 I'm curious. How often do you conduct pigging
13 operations?

14 MS. NOLTING: It -- it depends. I think for
15 our typical sites in New Mexico, it's around once per
16 year. We just don't get a lot of liquids in our -- in
17 our lines. Right? So we just don't have to do it as
18 often.

19 VICE-CHAIR TRUJILLO DAVIS: Yeah. That's kind
20 of what I was thinking, that there was a standard of how
21 much liquids could be in the gas as it came from the
22 operator and entered your system, so to kind of cut down
23 on those liquids? Was I -- okay.

24 MS. NOLTING: Yeah. That's correct. Yeah.
25 We have kind of tariff specifications that we -- that

1 our gas has to meet before it even comes into our lines.

2 So yeah.

3 VICE-CHAIR TRUJILLO DAVIS: Okay. Thank you
4 for that. I appreciate it.

5 No more questions.

6 HEARING OFFICER ORTH: Thank you.

7 Member Cates?

8 MEMBER CATES: No questions. Thank you.

9 HEARING OFFICER ORTH: Thank you.

10 Member Bitzer?

11 MEMBER BITZER: No questions. Thank you.

12 HEARING OFFICER ORTH: Member Garcia.

13 MEMBER GARCIA: No questions. Thank you.

14 HEARING OFFICER ORTH: And Member Honker.

15 MEMBER HONKER: No questions. Thank you.

16 HEARING OFFICER ORTH: All right. Thank you.

17 Any follow-up, Ms. Gutierrez?

18 MS. GUTIERREZ: None from me. Thank you.

19 Thank you very much.

20 HEARING OFFICER ORTH: All right. Thank you,
21 Ms. Gutierrez and Ms. Nolting and Mr. Brindley for being
22 available.

23 Do we move now to GCA witness Jones? Is that
24 what I understand?

25 MR. COLCLASURE: Madam Hearing Officer, this

1 is Chris Colclasure.

2 Mr. Jones is a witness for the Commercial
3 Disposal Group, not the -- not the GCA.

4 HEARING OFFICER ORTH: I'm very sorry. Yes.

5 MR. COLCLASURE: He is available. We are not
6 seeking any additional changes to the Department's
7 September 16th version of the regulation. We do
8 appreciate the changes that the Department has made. As
9 a formality, we think we need to adopt Mr. Jones'
10 written testimony so it is part of the record.

11 Can we do that just based on no objections
12 from the parties, or do you need him to come on screen,
13 I can ask him the questions to admit it?

14 HEARING OFFICER ORTH: Yeah. I'm sorry. The
15 Board's rules require that all testimony be taken under
16 oath. So I do need him to adopt it under oath.

17 Remind me his first name, please.

18 MR. COLCLASURE: Greg Jones.

19 HEARING OFFICER ORTH: Greg. All right. I'm
20 about to panelize him.

21 It's not letting me panelize him. Hmm.

22 He may have to sign back on. The button is
23 gray. It's not letting me do it.

24 MR. COLCLASURE: Would he have audio
25 capability? That may be enough.

1 HEARING OFFICER ORTH: Oh. I'll unmute him.

2 Thank you for that.

3 Mr. Jones, can you hear me?

4 MR. JONES: Yes, ma'am.

5 HEARING OFFICER ORTH: Terrific. I can hear
6 you, as well.

7 Have I already sworn you in?

8 MR. JONES: No, ma'am.

9 HEARING OFFICER ORTH: Okay.

10 If you would, please, raise your right hand.

11 Do you swear or affirm to tell the truth?

12 MR. JONES: Yes, ma'am.

13 HEARING OFFICER ORTH: Thank you.

14 Go ahead, Mr. Colclasure.

15 GREG JONES

16 (Relating to Topic Order 32)

17 having been first duly sworn or affirmed, was
18 examined and testified as follows:

19 DIRECT EXAMINATION

20 BY MR. COLCLASURE:

21 Q. Mr. Jones, can you state your name and
22 employer?

23 A. Yes. My name is Greg Jones, G-R-E-G
24 J-O-N-E-S. I am currently an air compliance specialist
25 for 3 Bear Delaware Operating.

1 Q. Did you submit written direct and rebuttal
2 testimony in this case?

3 A. Yes, sir, I did.

4 Q. And is your testimony attached to the
5 Commercial Disposal Group's notice of intent to present
6 direct testimony as Exhibit E and notice of intent to
7 present direct rebuttal -- excuse me -- rebuttal
8 testimony as Exhibit D?

9 A. Yes, sir, it is.

10 Q. Do you have any changes to your written
11 testimony?

12 A. No, sir, I do not.

13 Q. If I asked you the same questions today, would
14 you give the same answers today?

15 A. Yes, sir.

16 Q. Would you like to adopt your written testimony
17 as your testimony in this hearing?

18 A. Yes, sir.

19 MR. COLCLASURE: And, Madam Hearing Officer,
20 unless any parties are going to seek any revisions to
21 the Department's latest draft, I don't think Mr. Jones
22 needs to testify, but we can make him available for
23 cross-examination based on his written testimony and
24 available for questions from the Board.

25 HEARING OFFICER ORTH: Thank you very much.

1 No. I don't think he needs to go through it. Thank you
2 for offering.

3 Let me ask any parties with questions of
4 Mr. Jones to turn on their camera.

5 I don't see anyone.

6 I'll turn to the Board.

7 If you're an attendee with a question, please
8 reach out through the chat.

9 Madam Chair.

10 CHAIR SUINA: Thank you, Madam Hearing
11 Officer. No questions at this time. Thank you.

12 HEARING OFFICER ORTH: Thank you.

13 Vice-Chair?

14 VICE-CHAIR TRUJILLO DAVIS: No questions.
15 Thank you very much.

16 HEARING OFFICER ORTH: Thank you.

17 Member Cates?

18 MEMBER CATES: No questions. Thank you.

19 HEARING OFFICER ORTH: Thank you.

20 Member Bitzer?

21 MEMBER BITZER: No questions.

22 HEARING OFFICER ORTH: Thank you.

23 Member Garcia.

24 MEMBER GARCIA: No questions. Thank you.

25 HEARING OFFICER ORTH: And Member Honker.

1 MEMBER HONKER: No questions.

2 HEARING OFFICER ORTH: Thank you.

3 Thank you very much, Mr. Jones, and
4 Mr. Colclasure.

5 MR. COLCLASURE: Thank you, Madam Hearing
6 Officer.

7 MR. JONES: Thank you.

8 MR. COLCLASURE: I think I actually neglected
9 to say that we ask the Board to adopt his written
10 testimony in the hearing, just to put that on the
11 record. We are moving it into adoption in the record.

12 HEARING OFFICER ORTH: All right. Thank you.
13 It's admitted.

14 MR. COLCLASURE: Thank you.

15 HEARING OFFICER ORTH: All right. Do we move,
16 then, to Ms. Textor and then back to the Department? Is
17 that a correct read of the plan here?

18 Mr. Curtis?

19 MR. CURTIS: I believe so, yes.

20 HEARING OFFICER ORTH: All right. I panelized
21 Ms. Textor.

22 MR. CURTIS: Excellent. Thank you very much.

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MARISE TEXTOR

(Relating to Topic Order 32)

having been first duly sworn or affirmed, was
examined and testified as follows:

DIRECT EXAMINATION

BY MR. CURTIS:

Q. Good afternoon, Ms. Textor.

Are you there with us?

A. Yes, I am.

Can you hear me?

Q. Yes, very well. Thank you.

Could we please give Ms. Textor screen sharing
capabilities?

Ms. Textor, can you please state your name for
the record?

A. Yes. It's Marise Textor.

Q. What has been your involvement in the
proceeding?

A. I was asked by NMOGA to testify regarding
glycol dehydrates and pig launching and receiving.

Q. And you have previously testified and adopted
your testimony in this matter, correct?

A. Yes.

Q. Excellent.

Well, we just wanted to run through a few of

1 the points that you wanted to cover on pigging and
2 launching. If you could share your screen, and we'll
3 begin.

4 As you heard Ms. Kuehn and the other parties
5 testify, many of the changes that were advocated by
6 NMOGA previously have been adopted, and so to the extent
7 we can to expedite the hearing, we'll rely on those
8 statements that have been made to reflect those changes.

9 But let's go ahead and start on slide 4, I
10 believe.

11 A. Oops. There we go. I'm sorry. I've got the
12 wrong one up.

13 Q. Oh, that's okay.

14 A. Give me another second.

15 Okay. Now I have the right one up. Go back
16 to full screen. There we go.

17 Okay. Thank you. I'm sorry.

18 Q. Excellent.

19 Let's go ahead and please share your testimony
20 as it relates to this slide.

21 A. Yes. So we believe that pig launching and
22 receiving should be deleted entirely from the rule. And
23 EPA did not include controlling emissions from pig
24 launching and receiving in several different rules and
25 documents.

1 The first one is the Control Techniques
2 Guidelines that were issued in 2016 in the Obama
3 administration which recommends control techniques for
4 significant sources of ozone in ozone nonattainment
5 areas. So this would not be a control that would be
6 required under the -- under those Control Techniques
7 Guidelines.

8 Secondly, EPA proposed a Federal
9 Implementation Plan for oil and gas sources on the U&O
10 tribal reservation in the Uintah Basin ozone
11 nonattainment area in 2020. They've not finalized that
12 rule yet, but the proposal does not include controls for
13 pig launching and receiving. Of course, the final rule
14 would not include controls that would be more stringent
15 than the proposal.

16 And then lastly, pig launching and receiving
17 controls have not been included in the New Source
18 Performance Standards for crude oil and natural gas
19 facilities, the Quad 0 and Quad 0a rules.

20 So we also believe that NMED has not fully
21 vetted the challenges of controlling these emissions in
22 New Mexico with remote sites that often lack
23 infrastructure.

24 And then these are relatively --

25 Q. Ms. Textor --

1 A. -- low quantity emissions -- yes?

2 Q. If I could interrupt just for a moment.

3 The latest changes that Mr. -- Ms. Kuehn
4 testified to in terms of the applicability language of
5 the rule, is it correct that those concerns have been
6 addressed with those changes, or are we seeking further
7 revision?

8 A. So the changes do the on site pigging only,
9 but those on site could still be relatively remote and
10 not have the full infrastructure. For example, there
11 might not be an on site combustion device to route these
12 to. So that might be needed to be brought in as a
13 portable device.

14 Q. Thank you for clarifying.

15 A. So it addresses this in part, but not fully, I
16 don't believe.

17 Q. Okay.

18 A. So these are relatively low quantity
19 emissions, and controlling them they would likely be
20 routed to a combustion device of some kind that would
21 increase NOx emissions, and that would be directionally
22 the wrong thing to do in New Mexico with its
23 NOx-sensitive ozone regime, as we heard several days ago
24 in the testimony of -- I forget his last name, but Ralph
25 from Ramboll on behalf of NMED, and -- and then Dennis

1 from Alpine on behalf of NMOGA.

2 Also, the applicability threshold of one ton
3 per year is substantially lower than the threshold in
4 the Pennsylvania and Ohio rules that this was based on.
5 Those are three or approximately three tons per year.
6 And furthermore, the Pennsylvania rule does not include
7 liquid pigging operations which the NMOGA proposal does
8 include.

9 And then lastly, the NMED cost estimate
10 significantly underestimates the cost to control the
11 emissions. The cost that was presented by the
12 Department a few moments ago is from a 2011 paper that
13 is out of date. We obtained a current cost estimate
14 from one vendor for a portable flare, and it was three
15 times higher than the cost estimate in that 2011 paper.

16 Also, the NMED written testimony provided --
17 it represented those costs as a best management
18 practice, but that's not how it's defined in that EPA
19 paper. The EPA paper really identifies a more isolated
20 situation where that particular control scheme could be
21 used.

22 And in particular, it talks about
23 describing -- it describes routing the pigging emissions
24 to a low-pressure storage tank and then controlling the
25 tank emissions, and it relies on additional equipment,

1 including a compressor, a pump and gathering lines,
2 which may not be available at the site, and would
3 provide -- that would further increase the cost.

4 And then lastly, in the absence of
5 electricity, if the site is remote and does not have
6 electricity, engines would be needed to drive the
7 compressor and the pump, which would emit more
8 ozone-forming NOx.

9 So for all of those reasons, we believe that
10 pig launching and receiving should be deleted entirely
11 from the rule.

12 Q. Thank you, Ms. Textor.

13 Can we proceed to slide 8?

14 A. Yes.

15 Q. As we're passing through that, I'll note that
16 those are many of the changes that we proposed and that
17 NMED has adopted. We appreciate that.

18 Go ahead and proceed with this -- it appears
19 that NMOGA would request additional time to implement
20 this rule if it is retained; is that correct?

21 A. Yes. That's correct. The rule in its current
22 version from the Department provides two years for
23 compliance, and NMOGA requests that that be increased to
24 three years.

25 There's a lot of things that have to be done

1 in the time frame between a final rule and when
2 compliance could actually occur. So there may be
3 capital investment at many of the locations, and capital
4 investment would require folding it into budgeting and
5 funding mechanisms, detailed engineering design,
6 management of change, procuring equipment, contracting
7 to install the equipment, construction, developing
8 procedures, conducting training, and finally startup.

9 And even if the site is going to rely on a
10 portable combustion device, many of those steps would be
11 needed. And then all of that will have to be done
12 concurrent with implementing other requirements of the
13 rule and competing with ongoing labor and supply chain
14 restrictions that have resulted in the wake of COVID-19.

15 Q. Thank you.

16 Let's proceed to slide 9.

17 A. Okay. NMOGA also requests that the emission
18 standards not require installing controls if
19 supplemental fuel would be needed to achieve
20 destruction. So these are fairly short duration and
21 variable emissions, because you're depressuring a small
22 volume of equipment to the control device, and so
23 supplemental fuel would be needed in some cases.

24 And with this being a small volume of
25 equipment and then that flow rate dwindling off as it

1 depressures, you know, that's what would create the need
2 for the supplemental fuel.

3 The addition of supplemental fuel poses
4 several problems. It increases the cost which was not
5 accounted for in the Department's cost evaluation. It
6 would increase VOC emissions because of the combustion
7 efficiency of the supplemental fuel. It would increase
8 NOx emissions that are directionally the wrong way to go
9 due to the need to combust the supplemental fuel.

10 And it's possible, considering the small
11 amount of emissions being controlled, that there would
12 actually be no benefit to air quality at all, or even an
13 increase in ozone, considering the NOx emissions and
14 added VOC emissions.

15 So we request that the controls not be
16 required if the situation requires installing --
17 requires including supplemental fuel.

18 Q. Thank you, Ms. Textor.

19 Let's proceed to slide 10.

20 MS. KATZ: And can I just -- on that slide, I
21 just have to say that the -- that -- I don't believe
22 that that language was proposed before, and --

23 MR. CURTIS: That's correct.

24 MS. KATZ: -- we're seeing that for the first
25 time, and it could have been proposed before. So --

1 MR. CURTIS: That's correct. We've included
2 our rebuttal and surrebuttal in one for economy of time,
3 and so your observations is valid.

4 MS. KATZ: And what is this surrebuttal to?

5 MR. CURTIS: To the revisions made on
6 September 7th.

7 MS. KATZ: Okay. Can you identify -- could
8 you identify how that proposal is actually surrebuttal
9 and wasn't -- couldn't have been proposed before?

10 MR. CURTIS: I think it's upon further
11 reflection in light of the changes that have been made
12 on the September 7th. We continue to evaluate the
13 proposal, and we've identified additional ways to
14 improve it.

15 MS. KATZ: Okay. Well, I will just note that
16 the Department hasn't seen that before.

17 Q. (BY MR. CURTIS) Go ahead and proceed,
18 Ms. Textor.

19 A. Okay. And then we also request that any
20 portable control devices that are needed to comply with
21 the pigging launching and receiving requirements do not
22 have to meet the requirements in Section 115 for control
23 devices.

24 So portable devices may not have all of the
25 monitoring capability that can be installed on fixed

1 equipment in order to meet the monitoring requirements
2 of Section 115, and it's not obvious if the portable
3 devices would be able to be altered accordingly. And
4 especially in cases where rental portable devices are
5 used, the rental company would likely not want their
6 equipment to be altered to add that monitoring
7 capability.

8 So in lieu of requiring portable devices to
9 meet the requirements of Section 115, we request that
10 they be installed consistent with manufacturer's
11 specifications.

12 Q. Thank you, Ms. Textor.

13 I believe that concludes all of the
14 information that we've not already covered through
15 other -- our other witnesses.

16 Is there anything further?

17 A. That was all that I had.

18 Q. Excellent.

19 Thank you for your testimony.

20 At this time we can make Ms. Textor available
21 for additional questions.

22 HEARING OFFICER ORTH: Thank you, Mr. Curtis
23 and Ms. Textor.

24 If you're a party with a question, please turn
25 on your camera.

1 No? All right.

2 I will turn then to the Board for their
3 questions.

4 While I'm doing that, if you're an attendee on
5 the platform with a question, please reach out through
6 the chat.

7 EXAMINATION

8 BY THE BOARD:

9 HEARING OFFICER ORTH: Madam Chair?

10 CHAIR SUINA: Thank you, Madam Hearing
11 Officer.

12 I don't have any questions at this time.

13 HEARING OFFICER ORTH: Okay. Thank you.

14 Vice-Chair Trujillo Davis?

15 VICE-CHAIR TRUJILLO DAVIS: Yes. I have a
16 couple of questions.

17 So currently for most pigging events, don't
18 operators have some rental fees associated with them?

19 MS. TEXTOR: Rental fees for the equipment?
20 The control device? Or rental fees for what?

21 VICE-CHAIR TRUJILLO DAVIS: No. I'm sorry. I
22 should be more specific.

23 I know at this time they don't have any rental
24 fees for control devices, but they rent back trucks and
25 other things to -- for the events; is that right?

1 MS. TEXTOR: That may be the case, or maybe
2 they have other equipment that is not rental.

3 VICE-CHAIR TRUJILLO DAVIS: Okay. I was just
4 trying to understand if there had been any comparison
5 costs between the cost of a pigging event now, today,
6 without the rule, and then the cost of a pigging event
7 at -- if this rule were to come into effect with these
8 standards.

9 MS. TEXTOR: I believe the cost if these rules
10 came -- became standard, these proposed rules became
11 final, would be incremental to existing cost.

12 VICE-CHAIR TRUJILLO DAVIS: Okay. Thank you
13 for your testimony. I think that there's a lot of
14 valuable points in here for consideration. So thank
15 you.

16 HEARING OFFICER ORTH: Member Cates?

17 MS. TEXTOR: Thank you.

18 MEMBER CATES: No questions. Thank you.

19 HEARING OFFICER ORTH: Member Bitzer?

20 No questions? All right.

21 Member Garcia?

22 MEMBER GARCIA: No questions. Thank you.

23 HEARING OFFICER ORTH: And Member Honker.

24 MEMBER HONKER: No questions. Thank you.

25 HEARING OFFICER ORTH: All right. Thank you.

1 MEMBER BITZER: Madam Chair, I missed the
2 button.

3 No questions.

4 HEARING OFFICER ORTH: That's all right.
5 Thank you.

6 Any -- any follow-up, Mr. Curtis?

7 MR. CURTIS: No, Madam Hearing Officer. Thank
8 you.

9 HEARING OFFICER ORTH: All right. Thank you.
10 Thank you, Ms. Textor and Mr. Curtis.

11 Ms. Katz, do we go back to the Department?

12 We don't have Mr. Smitherman so --

13 MS. KATZ: I believe so.

14 And I guess I would just ask that since we
15 just saw these new proposals, that the Department have
16 the opportunity to review those and to potentially
17 put -- respond at a different time to those.

18 HEARING OFFICER ORTH: Yes.

19 MS. KATZ: Thank you.

20 HEARING OFFICER ORTH: I will always support
21 that sort of thing.

22 I see Ms. Kuehn on the screen.

23 MS. KATZ: Thank you.

24 I don't know if Mr. Palmer is available. Give
25 him a minute.

1 MR. PALMER: I'm here.

2 MS. KATZ: All right.

3 ELIZABETH BISBEY-KUEHN and BRIAN PALMER

4 (Relating to Topic Order 32 continued)

5 having been first duly sworn or affirmed, were

6 examined and testified as follows:

7 DIRECT EXAMINATION

8 BY MS. KATZ:

9 MS. KATZ: Ms. Kuehn, does the -- does the
10 rule prescribe the type of control device that must be
11 used?

12 MS. BISBEY-KUEHN: No. The rule does not
13 prescribe the specific type of control device that must
14 be used. It provides a suite of options.

15 MS. KATZ: Okay.

16 Mr. Palmer, do other states require emissions
17 reductions associated with pig launching and receiving?

18 MR. PALMER: Yes. As described in my direct
19 and rebuttal testimony, these states require control --
20 controls and emission reductions from pigging.

21 Pennsylvania's GP-5A is applicable to sources
22 located at unconventional natural gas well sites and
23 remote pigging stations. And Pennsylvania's GP-5 is
24 applicable to sources located at natural gas compression
25 stations, processing plants and also transmission

1 stations. The best management practices required in the
2 Pennsylvania General Permits are required for all
3 pigging operations.

4 The same best management practices are also
5 recommended in EPA's fact sheet number 505, and also a
6 September, 2019 EPA Enforcement Alert, which was EPA
7 Publication Number 325-F-19-001, which we submitted as
8 NMED Exhibit 88.

9 The VOC emission limits in Pennsylvania GP-5
10 and GP-5A apply to pigging operations that still have
11 emissions equal to or greater than 2.7 tons per year
12 after employing best management practices. The
13 Pennsylvania emission limit requires the owner or
14 operator to control -- to control VOC emissions from all
15 pigging operations by at least 95 percent with a control
16 device. And we submitted this as NMED Exhibit 37 and
17 38.

18 Ohio has similar emission limits for pigging
19 operations in its General Permits. Both General Permits
20 limit VOC emissions from one discrete pig launcher or
21 receiver to less than .27 tons per month averaged over
22 the rolling 12-month period. And as I stated earlier,
23 that's equivalent to 3.24 tons per year. And the Ohio
24 General Permits require the use of add-on control device
25 to control the emissions if needed to comply with those

1 VOC emission limits. And we included this in our
2 Exhibit 86 at page 4.

3 MS. KATZ: Thank you.

4 And has -- and has Colorado also recently
5 proposed regulations for pigging operations?

6 MR. PALMER: Actually, they have not.
7 However, they are including pig launching in their -- in
8 their emission inventories that facilities are required
9 to complete.

10 MS. KATZ: Okay.

11 Ms. Kuehn, has Colorado proposed -- recently
12 proposed regulations for pig launching and receiving?

13 MS. BISBEY-KUEHN: Yes.

14 MS. KATZ: Ms. Kuehn, did NMOGA request the
15 one ton per year threshold?

16 MS. BISBEY-KUEHN: Yes.

17 MS. KATZ: And did the Department, in fact,
18 accept most of the industry parties' requested revisions
19 in order to address their specific concerns?

20 MS. BISBEY-KUEHN: Yes.

21 MS. KATZ: Okay. Thank you.

22 That is all I have.

23 HEARING OFFICER ORTH: All right. Thank you
24 very much.

25 Let's see here.

1 Ms. Witherspoon, have you joined us on screen
2 to ask questions of the Department on this topic?

3 Oops. I'm trying to unmute her, but it's not
4 letting me. She may be having trouble connecting.

5 Let me ask if there are any other parties with
6 questions of the Department panel, please turn on your
7 screen.

8 No.

9 I'll turn then to the Board for their
10 questions.

11 If you're an attendee on this platform, please
12 reach out through the chat with any questions.

13 EXAMINATION

14 BY THE BOARD:

15 HEARING OFFICER ORTH: Madam Chair?

16 CHAIR SUINA: Thank you, Madam Hearing
17 Officer.

18 And thank you, Ms. Kuehn and Mr. Palmer.

19 So just so I'm clear that we'll continue --
20 the Department will continue to look at some of the
21 latest information we heard today and then continue to
22 do an analysis or some due diligence regarding some
23 of -- and respond to some of those proposals; is that
24 correct?

25 MS. BISBEY-KUEHN: Yes, Chair Suina. Yes.

1 The Department will do that.

2 CHAIR SUINA: Okay. All right.

3 Thank you. That's all I have for now.

4 HEARING OFFICER ORTH: Thank you.

5 Vice-Chair Trujillo Davis?

6 VICE-CHAIR TRUJILLO DAVIS: I don't have any
7 more questions at this time. Thank you.

8 HEARING OFFICER ORTH: Okay. Thank you.

9 Member Cates?

10 MEMBER CATES: No questions here. Thank you.

11 HEARING OFFICER ORTH: Member Bitzer?

12 MEMBER BITZER: No questions. Thank you.

13 HEARING OFFICER ORTH: Thank you.

14 Member Garcia?

15 MEMBER GARCIA: No questions. Thank you.

16 HEARING OFFICER ORTH: And Member Honker.

17 MEMBER HONKER: No questions. Thank you.

18 HEARING OFFICER ORTH: So we're very nearly
19 finished with another topic, some of which are just --

20 MS. KATZ: Can I just do -- I'm sorry.

21 HEARING OFFICER ORTH: Ms. Katz. Sorry.

22 MS. KATZ: That's great.

23 Can I -- I just had one quick follow-up, I'm
24 sorry, for Ms. Kuehn.

25

1 FURTHER DIRECT EXAMINATION

2 BY MS. KATZ:

3 MS. KATZ: Ms. Kuehn, regarding Chair Suina's
4 question to you, the -- will the Department follow up on
5 the new proposals that we've just seen from NMOGA?

6 MS. BISBEY-KUEHN: Yes. We will -- and that
7 will be limited to only those new items that were --
8 that were brought up.

9 MS. KATZ: And do we stand on our existing
10 testimony relating to the previous issues that were
11 raised in the prefiled testimony?

12 MS. BISBEY-KUEHN: Yes, we do.

13 MS. KATZ: Thank you.

14 MR. CURTIS: I did -- this is Mr. Curtis.

15 I did just want to clarify one thing. Those
16 changes are reflected in NMOGA Exhibit 47 that we
17 submitted on September 7th. And so just for the
18 Department's reference, you can see those in that
19 document.

20 Thank you.

21 HEARING OFFICER ORTH: Thank you.

22 MS. KATZ: It would be helpful if you would
23 point that out in the testimony when that's filed.
24 Otherwise we don't know.

25 MR. CURTIS: Thank you.

1 HEARING OFFICER ORTH: All right. Thank you,
2 Ms. Katz, Ms. Kuehn, Mr. Palmer.

3 I think -- let me see if I can get to
4 Ms. Witherspoon. She appeared briefly. I had panelized
5 her when she reconnected.

6 Ms. Witherspoon, can you hear me?

7 MS. WITHERSPOON: I can.

8 HEARING OFFICER ORTH: Great.

9 Were you joining us for pig launching and
10 receiving or for another topic?

11 MS. WITHERSPOON: I was just joining because I
12 haven't been around for a while.

13 HEARING OFFICER ORTH: All right.

14 MS. WITHERSPOON: And then my -- then my
15 computer locked up.

16 HEARING OFFICER ORTH: Okay. I'm glad -- I'm
17 glad you're on the platform. Thank you.

18 And I believe, then, that we move to well
19 workovers.

20 Is that true, Ms. Katz?

21 MS. KATZ: Yes, I believe so. If the other
22 parties are good with that, we can go to that, or to
23 either that or natural gas well liquid unloading. But
24 I'm fine to go with well workovers. So I guess maybe
25 ask other parties.

1 HEARING OFFICER ORTH: All right. Is there
2 anyone who has a preference otherwise? Just turn on
3 your camera.

4 I think we're on well workovers now, Ms. Katz.
5 We have a little less -- oh, there's Mr. Hiser.

6 MR. HISER: I was wondering if you wanted to
7 sneak in Mr. Meyer's just brief discussion of that one
8 spreadsheet and the disagreement on the one line, if
9 that would make sense before we get a whole new topic,
10 assuming that's okay with Ms. Katz.

11 MS. KATZ: That's fine with me. That makes
12 sense.

13 MR. HISER: All right.

14 HEARING OFFICER ORTH: Thank you.

15 MR. HISER: Mr. Meyer should be available on
16 the panel site.

17 MR. MEYER: Can you hear me?

18 MR. HISER: Yes. Welcome back, Mr. Meyer.

19 MR. MEYER: Thank you.

20 MR. HISER: Madam Hearing Officer, if you
21 could share the screen.

22 She says you should be able to share,
23 Mr. Meyer.

24 MR. MEYER: Okay.

25

1 ADAM MEYER

2 (Relating to Topic Order 34 continued)

3 having been first duly sworn or affirmed, was
4 examined and testified further as follows:

5 DIRECT EXAMINATION

6 BY MR. HISER:

7 Q. So this is essentially the spreadsheet that we
8 saw earlier from Mr. Palmer, correct?

9 A. Correct.

10 Q. And so it reflects in the column C the 18,100
11 which is the Valor estimate for the combustor, and then
12 you have a -- there was a discussion about what was
13 included in the area that was previously called storage
14 vessel retrofit, and then Mr. Palmer said we were
15 replacing the tank, and so we understood he used the
16 tank replacement cost.

17 Did you go back into the EPA CTG and review
18 what the CTG said was covered by the storage vessel
19 retrofit?

20 A. I did. And what it said was that the storage
21 vessel retrofit, as they called it, that -- in 2012
22 year, the 68,000, was associated with new piping, new
23 headers, basically to bring the tank vapors to the
24 control device.

25 Q. So that's the air pollution control piping

1 basically that would be required.

2 A. Right. Which makes sense, because the
3 installation of that, even though it is just pipe, you
4 have to support it, you have to, you know, bring in
5 crews and cranes possibly to lift it in place, that type
6 of thing.

7 Q. And so I know that you've added a value here
8 which reflects 101,736.

9 Is that the value from the 2012 expanded to
10 2019 and then to which you've added the cost of a new
11 tank and its installation?

12 A. Correct. I added the 18,000 which was in my
13 original direct testimony for the tank itself. Of
14 course, that cost has gone up recently since then,
15 honestly. But then the 15,000 is actually installation
16 of the tank. You can get a bigger crane, right, and the
17 crews associated with that.

18 One point of clarification, Mr. Hiser, was
19 that the 18,100 value is for a 60-inch combustor, which
20 actually, believe it or not, flows less than a 48-inch
21 high-volume. The cost of a 48-inch high-volume is
22 29,000. So I count this in here because it is on the
23 low end, it is -- you know, there may be sites that can
24 get away with the 60. So it seemed like a reasonable
25 number.

1 Q. And so if you make those substitutions to put
2 back into this -- the cost of the piping, what does that
3 show in the dollar per ton costs?

4 A. So that going down to the three tons per year,
5 we're at just over \$9,000.

6 Q. Okay.

7 With that, I think -- I know that you did a
8 little bit of work, but I think that's what the impact
9 would be, but I think that's beyond the scope really
10 of --

11 A. Yeah.

12 Q. -- what the Department testified to.

13 And so I thank you for that clarification,
14 would make you available to the Department if they have
15 any questions or to the Board, or any of the other
16 parties, as well.

17 Thank you, Madam Hearing Officer.

18 HEARING OFFICER ORTH: Thank you, Mr. Hiser
19 and Mr. Meyer.

20 If you are a party with questions, please turn
21 on your screen. Let's see here.

22 I'm not seeing anyone.

23 MS. KATZ: The Department just thanks
24 Mr. Meyer for his clarification.

25 HEARING OFFICER ORTH: Oh, okay. Thank you,

1 Ms. Katz.

2 Well, I will go to the Board, then.

3 And while I'm doing that, if you're an
4 attendee on this platform with a question, please reach
5 out through chat.

6 Madam Chair.

7 CHAIR SUINA: Yes, Madam Hearing Officer.

8 I also echo Ms. Katz' comment and thank you
9 for the clarification, Mr. Meyer.

10 I have no further questions.

11 HEARING OFFICER ORTH: Thank you.

12 Vice-Chair?

13 VICE-CHAIR TRUJILLO DAVIS: I don't have any
14 questions either.

15 And I appreciate everybody contributing to our
16 questions and getting them answered, and I realize it's
17 a big lift from everybody. So thank you very much.

18 HEARING OFFICER ORTH: Thank you.

19 Member Cates?

20 MEMBER CATES: Yeah. So do I. So thank you.

21 And no questions here. Thank you.

22 HEARING OFFICER ORTH: Thank you.

23 Member Bitzer?

24 MEMBER BITZER: No questions. Thank you.

25 HEARING OFFICER ORTH: Thank you.

1 Member Garcia?

2 MEMBER GARCIA: No questions. Thank you.

3 HEARING OFFICER ORTH: And Member Honker.

4 All right. No questions.

5 Thank you very much, Mr. Hiser and Mr. Meyer.

6 MR. MEYER: Thank you.

7 HEARING OFFICER ORTH: We have about 20
8 minutes before I would take a break before the five
9 o'clock public comment.

10 Ms. Katz, can we do a little bit of the well
11 workovers?

12 MS. KATZ: Yes, we certainly can. I think we
13 can get the Department's piece in for sure.

14 I don't know -- I'm not exactly sure -- yeah.
15 We'd have to ask -- I believe that IPANM has -- or
16 maybe -- yeah.

17 MR. HISER: We did. This is an IPANM lead
18 item and not a NMOGA lead item.

19 MS. KATZ: Yes. So I guess I would ask for
20 Mr. Rose to weigh in on timing.

21 MR. ROSE: Timing is fine. Our witness is
22 available any time from here until the end -- the end of
23 the day. So we're in good shape.

24 MS. KATZ: Okay.

25 And we -- and we don't have Mr. Smitherman so

1 it's the same issue. We'll have to follow up with that
2 tomorrow. Okay.

3 ELIZABETH BISBEY-KUEHN and BRIAN PALMER

4 (Relating to Topic Order 35)

5 having been first duly sworn or affirmed, were
6 examined and testified as follows:

7 DIRECT EXAMINATION

8 BY MS. KATZ:

9 MS. KATZ: This is again Ms. Kuehn and
10 Mr. Palmer. This is -- relates to Section 20.2.50.124
11 of the rule, covering well workovers. The testimony
12 related to this section is in NMED Exhibit 32 beginning
13 on page 148 and NMED Rebuttal Exhibit 1 beginning on
14 page 96.

15 The witnesses have adopted the testimony, and
16 there are no corrections.

17 So I will ask Ms. Kuehn to please provide an
18 overview of the operations that are covered by this
19 section of the rule.

20 MS. BISBEY-KUEHN: Yes. Good afternoon,
21 everyone.

22 We're discussing Section 124, as Ms. Katz
23 indicated.

24 The repair or stimulation of an existing
25 well -- or well workovers are required for the repair or

1 stimulation of an existing well for restoring,
2 prolonging or enhancing the production of hydrocarbons.
3 They're performed on completed wells that have produced
4 reservoir fluids, water, oil, and/or natural gas. And
5 these wells have to be prepared before the workover
6 operations can begin.

7 If the well is still producing or has
8 pressure, the well needs to be blown down or vented
9 before it is safe to remove the tubing head and install
10 the blowout preventers. The well pressure can be
11 decreased by venting to the atmosphere or by opening the
12 casing to the sales line or the suction of a well site
13 compressor.

14 Workovers are typically of short duration,
15 that only last a few days or weeks at the most. After
16 the well is prepared, blown down and the blowout
17 preventer installed, the workover operations can begin.
18 For the safety of the workers, the well is usually
19 allowed to vent to atmosphere via a tank for the
20 duration of the workover. Since these operations are
21 typically performed during daylight hours, the well is
22 shut in or returned to the sales line at the end of the
23 day.

24 MS. KATZ: Can you discuss what the control
25 options are for controlling emissions from well

1 workovers?

2 MS. BISBEY-KUEHN: Yes. Best management
3 practices are the best means of reducing emissions
4 during well workovers. These include reducing the
5 wellhead pressure before blowdown to minimize the volume
6 of natural gas vented, monitoring manual venting at the
7 well until the venting is complete, and routing natural
8 gas to the sales line when possible.

9 MS. KATZ: And can you discuss the emission
10 standards that are proposed in this section of the rule
11 for well workovers?

12 MS. BISBEY-KUEHN: Yes. The owner or operator
13 of an oil or gas well must use the following best
14 management practices during a workover event to minimize
15 emissions consistent with the well site condition and
16 good engineering practices: These include reducing
17 wellhead pressure before the blowdown to minimize the
18 volume of gas vented, monitoring the manual venting at
19 the well until the venting is complete, and routing
20 natural gas to the sales line if possible.

21 MS. KATZ: Can you summarize the requirements
22 of the rule?

23 MS. BISBEY-KUEHN: Yes. During a well
24 workover, the owners or operators must monitor wellhead
25 pressure, the natural gas venting flow rate, and elapsed

1 time in order to calculate the volume and mass of VOC
2 vented during the workover event. The owner or operator
3 must record the identification, the location, date, and
4 pressure, and flow rate, the duration of the event, and
5 the best management practices used, and the VOC
6 emissions that are released.

7 If venting cannot be avoided, the operator
8 must notify residents located within a quarter mile of
9 the well at least three days before the workover event
10 by certified mail or by other means of notice if that
11 notification can be documented. And when a workover is
12 required due to routine or emergency situations to
13 restore production due to a malfunction or upset, the
14 owner or operator must notify residents within
15 one-quarter mile at least 24 hours before the event.

16 And in addition, the owner or operator must
17 comply with the general requirements of Section 112.

18 MS. KATZ: Thank you.

19 And, Mr. Palmer, can you please discuss the
20 basis for the proposed requirements and the estimated
21 emissions reductions and costs?

22 MR. PALMER: Sure. The basis for the proposed
23 requirements for workover operations are Colorado
24 Regulation 7 and also Wyoming's Permitting Guidance.

25 Colorado Regulation 7 requires owners and

1 operators to use best management practices to minimize
2 emissions associated with downhole -- downhole well
3 maintenance, as well as well liquids unloading, well
4 plugging -- and well plugging unless emitting is
5 necessary for safety reasons. It also requires
6 operators to be on site and to minimize those emissions
7 during the workover event to the maximum extent
8 practicable.

9 Wyoming's Permitting Guidance requires
10 minimizing emissions to the extent practicable during
11 manual and automated blowdown and venting episodes
12 associated with liquids unloading, wellbore
13 depressurization in preparation for maintenance or
14 repair, and other well operations. The guidance also
15 requires personnel to remain on site to ensure minimal
16 gas venting occurs and requires that operators estimate
17 VOC emissions from well workovers.

18 As far as estimated emission reductions and
19 cost estimates, emission estimates for workover
20 operations are not currently available in the modeling
21 emissions inventory or found in the NMED equipment data.
22 Therefore, we do not have an estimate of emission
23 reductions for well workovers.

24 As far as costs, the rule is proposing certain
25 best management practices that must be used when

1 conducting well workover operations, but it does not
2 require the use of emission control devices. It is
3 expected that these practices will require personnel to
4 manage the well during the workover operation, but no
5 capital costs are anticipated.

6 So the costs associated with well workover
7 best management practices are expected to be minimal as
8 personnel will already be on site conducting the well
9 workover and any additional training may be incorporated
10 into existing personnel training programs.

11 MS. KATZ: Thank you.

12 And, Ms. Kuehn, can you briefly go through the
13 rule language and the revisions that were made based on
14 stakeholder comments.

15 MS. BISBEY-KUEHN: Yes. As within other
16 sections, we're following the same framework for
17 requirements. The applicability sections identify what
18 workovers are subject to this part. The emission
19 standards identify the best management practices that
20 must be followed. And this is a -- this rule or this
21 section of the rule is -- relies on best management
22 practices to minimize emissions.

23 We did hear from stakeholders that they wanted
24 the insertion of good operational practices, which we
25 added, in addition to good engineering practices. The

1 emission standards section requires, of course, those
2 BMPs before you -- to reduce emissions.

3 The monitoring requirements identify the type
4 of monitoring that must be performed. I've all -- I've
5 gone through those requirements in detail so I won't
6 restate those. The owner or operator is required to
7 calculate the estimated volume of mass -- and mass of
8 VOC vented during a workover event. That was a
9 requested change that the Department agreed -- agreed
10 to.

11 The recordkeeping requirements identify what
12 records must be kept to demonstrate compliance with the
13 emission standards, and recordkeeping of the specific
14 monitoring that's required. We've added a -- we've made
15 a number of changes to these that did not change the
16 scope or intent of the rule, but addressed comments that
17 we received that we thought were -- were legitimate.

18 So again we're having recording of the date
19 the workover was performed, the wellhead pressure flow
20 rate of the gas to the extent feasible, the duration of
21 venting to the atmosphere, a description of the best
22 management practices used to minimize VOC emissions,
23 then a calculation of the estimated VOC emissions based
24 on the duration, volume, gas composition, and also
25 recording the method of notification that was provided

1 to the public, and a proof that notification was made.

2 The reporting requirements outline the notices
3 that we've required to be made to the public for a well
4 workover event. So those are -- that's specifically
5 called out in Paragraph E.(2).

6 If it is not feasible to prevent VOC emissions
7 from being emitted to the atmosphere from a workover
8 event, the owner or operator shall provide notice by
9 certified mail or other effective means so long as the
10 notice can be documented to all residents located within
11 a quarter mile of the well of the planned workover event
12 at least three days before the workover event.

13 And we've -- we received a request to add in a
14 provision for those workovers that are responding to
15 upset or malfunction event, and so that is outlined in
16 Paragraph (3). That requires if the workover is needed
17 for routine or emergency maintenance to restore
18 production due to malfunction or upset, that the owner
19 or operator shall notify residents within a quarter mile
20 at least 24 hours before the workover event.

21 That -- that was the last slide on that.
22 There is -- yeah. That was the last slide on that, on
23 that section.

24 MS. KATZ: Thank you.

25 And that's concludes the Department's

1 presentation of the summary of its direct and rebuttal
2 on well workovers.

3 HEARING OFFICER ORTH: All right. Thank you.

4 Let me ask any party with a question to turn
5 on their camera.

6 I'm not seeing anyone.

7 I'll turn to the Board.

8 If you're an attendee with a question, please
9 reach out through chat.

10 Madam Chair?

11 CHAIR SUINA: Thank you, Madam Hearing
12 Officer.

13 I don't have any questions at this point.

14 HEARING OFFICER ORTH: Thank you.

15 Vice-Chair Trujillo Davis?

16 VICE-CHAIR TRUJILLO DAVIS: I don't have any
17 questions either. Thank you.

18 HEARING OFFICER ORTH: Thank you.

19 Member Cates?

20 MEMBER CATES: No questions here. Thanks.

21 HEARING OFFICER ORTH: Member Bitzer?

22 MEMBER BITZER: No questions. Thank you.

23 HEARING OFFICER ORTH: Thank you.

24 Member Garcia?

25 MEMBER GARCIA: No questions. Thank you.

1 HEARING OFFICER ORTH: And Member Honker.

2 MEMBER HONKER: No questions. Thank you.

3 HEARING OFFICER ORTH: All right. Thank you.

4 Thank you very much, Ms. Katz, Ms. Kuehn and
5 Mr. Palmer.

6 I know that we go to IPANM to hear from
7 Mr. Davis. Mr. Janoe did reach out in the chat that
8 Mr. Holderman has some brief surrebuttal, but he's not
9 available right now. So he'll be presenting a little
10 bit tomorrow when he presents on flowback.

11 Let's see. Mr. Rose, I do want to take a
12 break within the next, you know, five minutes or so.

13 MR. ROSE: My -- Mr. Davis' testimony may not
14 take that long, and I suspect there won't be many
15 questions, but I can't predict how that may end. But we
16 can certainly try to get this done.

17 HEARING OFFICER ORTH: All righty. Let's go
18 for it.

19 MR. ROSE: I believe he's on the platform
20 somewhere.

21 MR. DAVIS: I am here.

22 Can you hear me?

23 MR. ROSE: I can hear you, and I can actually
24 see you, too.

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RYAN DAVIS

(Relating to Topic Order 35)

having been first duly sworn or affirmed, was
examined and testified as follows:

DIRECT EXAMINATION

BY MR. ROSE:

Q. Mr. Davis, your testimony has been previously
admitted as -- I believe it's IPANM Exhibit 2 and
Exhibit 10.

Could you briefly summarize your direct and
rebuttal testimony on well workovers?

A. Yes, sir, Mr. Rose.

I believe that Ms. Kuehn did a really good job
of talking through what the well workover purpose is, as
well as the emission source related to well workovers.
So I wasn't going to go into any more detail there. I
would say that's provided in my prefiled written direct
and rebuttal.

Ms. Kuehn also did a very good job of
outlining the changes that were made based on
stakeholder input, and I would like to thank the
Department for those changes. I'd say they address the
majority of our concerns regarding well workover
operations.

The one place that we are -- we still have

1 some concerns on, and this is provided in my testimony,
2 the Department moved to separate the workover operations
3 into what I would say are two categories, kind of the
4 planned workovers, which would be your recompletions,
5 your restimulation type work. This is something that we
6 have to get regulatory approval to move forward with.

7 And going forward with some type of
8 notification there wouldn't really cause much of a delay
9 in terms of performing that workover. So we do -- we do
10 appreciate that new clarification in terms of the two
11 categories. However, we still have some concerns
12 regarding just administrative burden in terms of the
13 notification that's required on the routine workovers.

14 We have -- and this is speaking for -- for
15 Merrion, the company that I work for. We have several
16 wells that are in somewhat densely populated areas.
17 Most of these wells were there first. Housing
18 developments have encroached on these -- these well
19 sites. And just have some concerns about the
20 administrative burden of doing that notification of all
21 residents within a quarter -- quarter mile. In some
22 instances that could be upwards of 150 residents.

23 And then the recordkeeping that's associated
24 with, you know, doing the notification, getting
25 confirmation of that notification, and building the

1 record for each routine well workover that we perform in
2 these areas.

3 So that's really the only issue that we have
4 that's outstanding with well worker -- workovers at this
5 point.

6 Q. Do you have any recommendations for the Board
7 with respect to your remaining issues?

8 A. You know, I think there's a couple things.

9 I would say it's -- it's standard practice for
10 most operators to notify the adjacent residents. We
11 usually put up signs at the entrance of the well sites
12 with, you know, notification that we are working on that
13 well.

14 The quarter mile again just in these urban
15 settings is -- seems like it encompasses a lot of
16 residents for notification purposes. So maybe consider
17 bringing that notification buffer down to something
18 that's a little more reasonable in terms of the number
19 of residents that must be notified.

20 MR. ROSE: Thank you, Mr. Davis.

21 I have no further questions of this witness.

22 HEARING OFFICER ORTH: Thank you very much,
23 Mr. Rose and Mr. Davis.

24 If there's any party with a question, please
25 turn on your camera.

1 I'm not seeing anyone.

2 I'll turn to the Board.

3 If you're an attendee with a question, please
4 reach out through the chat.

5 Madam Chair?

6 CHAIR SUINA: Thank you, Madam Hearing
7 Officer.

8 And I appreciate you sharing those concerns,
9 Mr. Davis, but at this time I don't have any additional
10 questions.

11 HEARING OFFICER ORTH: Thank you.

12 Vice-Chair Trujillo Davis?

13 VICE-CHAIR TRUJILLO DAVIS: I don't have any
14 additional questions either. Thank you.

15 HEARING OFFICER ORTH: Thank you.

16 Member Cates?

17 MEMBER CATES: No questions here. Thank you.

18 HEARING OFFICER ORTH: Member Bitzer?

19 MEMBER BITZER: No questions. Thank you.

20 HEARING OFFICER ORTH: Thank you.

21 Member Garcia?

22 MEMBER GARCIA: No questions. Thank you.

23 HEARING OFFICER ORTH: And Member Honker.

24 MEMBER HONKER: No questions. Thank you.

25 HEARING OFFICER ORTH: All right. Thank you,

1 all, very much, Mr. Rose and Mr. Davis.

2 Let's break until 5:00. We'll return for
3 public comment.

4 Thank you.

5 (Proceedings in recess from 4:43 p.m. to
6 5:00 p.m.)

7 HEARING OFFICER ORTH: Let's come back from
8 the break, please.

9 We are in day nine of the hearing in EIB 21-27
10 and have reached the five o'clock public comment period.

11 Several of you have reached out to the Board
12 administrator, Pam Jones, and I will call on you
13 expressly, Anni and Athena Hanna, Catherine Brijalba,
14 Sandra West, April Perkins and Jim Williams.

15 If you're on the platform and did not reach
16 out to the administrator, I am still happy to accept
17 your comment. Simply reach out through the chat with
18 your name. Chat is enabled for everyone.

19 Comment, like all testimony before the Board,
20 is taken under oath. It is received by audio, not
21 video, and it is limited to five minutes.

22 So let me look for Anni and Athena Hanna.

23 I'm not seeing the Hannas.

24 Catherine Brijalba. Let me look -- oh, there,
25 Ms. Brijalba.

1 Ms. Brijalba, I've unmuted you.
2 Can you hear me?
3 Ms. Brijalba?
4 She may have stepped away.
5 Okay. Ms. Brijalba?
6 No. All right.
7 Let me move to Sandra West.
8 I'm not seeing Sandra West.
9 I'm striking out here.
10 Let me look to April Perkins.
11 I'm not seeing April Perkins.
12 And let me look for Jim Williams.
13 No, I'm not seeing Jim Williams either.
14 And I don't see anyone reaching out through
15 the chat.
16 I will try Ms. Brijalba -- oh, there's Anni
17 Hanna.
18 Ms. Hanna, I've unmuted you.
19 Can you hear me?
20 MS. HANNA: Yes, I can.
21 HEARING OFFICER ORTH: All right. Thank you.
22 Would you spell your name, please.
23 MS. HANNA: Yes. Anni spelled A-N-N-I, Hanna,
24 H-A-N-N-A.
25 HEARING OFFICER ORTH: Thank you.

1 And if you would raise your right hand.

2 Do you swear or affirm to tell the truth?

3 MS. HANNA: I do.

4 ANNI HANNA

5 having been first duly sworn or affirmed, gave

6 public comment as follows:

7 PUBLIC COMMENT

8 HEARING OFFICER ORTH: All right. I'm going

9 to start your five minutes now.

10 MS. HANNA: Hi.

11 My name is Anni, and I'm a mom, and I'm very
12 concerned about climate change and my children having a
13 future.

14 And thank you for the opportunity to comment
15 today.

16 I live in Albuquerque, and I'm a teacher and a
17 photographer, and I love going out to explore our
18 beautiful New Mexico landscapes. And I want my
19 grandchildren to still be able to have a flowing Rio
20 Grande River, through healthy bosques and healthy
21 forests in the Sandias. And this means we must solve
22 climate by drawing down carbon emission dioxides now.

23 And this is why I'm asking the Environmental
24 Improvement Board to strengthen the New Mexico
25 Environment Department's proposed ozone rules, to

1 protect those living closest to development. It's a
2 huge number. 130,000 New Mexicans live within a half
3 mile of oil and gas development.

4 As a mother, I ask you why are we not doing
5 everything for these families to protect their air, to
6 protect children from asthma. We want the strongest
7 rules possible to protect frontline communities who are
8 often indigenous and people of color. Health and
9 well-being should always come first.

10 As you know and as you are aware, we can see a
11 methane cloud over New Mexico from outer space. NASA
12 has seen that. And I think we can do much better in New
13 Mexico. We need to see the global implications of New
14 Mexico's methane leaks on the climate crisis.

15 And methane is a greenhouse gas that's
16 84 percent more potent greenhouse gas than carbon
17 dioxide in a 20-year time frame, and we cannot afford to
18 leave methane fueling the climate crisis for the next 10
19 years. Our methane emissions could trigger catastrophic
20 tipping points, such as massive arctic ice melting from
21 which there is no recovery.

22 As a mom, I find it hard to sleep at night,
23 already seeing the effects of climate change this summer
24 from extreme weather events, wildfire and permanent
25 drought in the Southwest.

1 Thank you. You have the power to enact the
2 strongest rules possible and to help curb emissions.
3 And thank you for taking actions to protect the next
4 generation.

5 Thank you.

6 HEARING OFFICER ORTH: Thank you very much --
7 oh, I'm sorry.

8 Were you done?

9 MS. HANNA: I am done. And my daughter also
10 has something, but she can sign in herself with a raised
11 hand.

12 HEARING OFFICER ORTH: Well, okay. Or if
13 you'd like to put her on right now, yes.

14 If you --

15 MS. HANNA: Yes.

16 HEARING OFFICER ORTH: -- would raise your
17 hand.

18 Do you swear or affirm to tell the truth?

19 MISS HANNA: I do.

20 HEARING OFFICER ORTH: Thank you very much.

21

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23

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25

1 ATHENA HANNA

2 having been first duly sworn or affirmed, gave
3 public comment as follows:

4 PUBLIC COMMENT

5 HEARING OFFICER ORTH: Athena is a lovely
6 name.

7 MISS HANNA: Thank you.

8 Hi.

9 My name is Athena, and I'm 10 years old.

10 Every kid deserves clean air to -- air to --
11 clean air to breathe. This is why I'm asking the
12 Environmental Improvement Board to strengthen the New
13 Mexico Environment Department's proposed ozone rules.

14 I went down to Carlsbad with my family and saw
15 oil and gas drilling sites. After just one hour, the --
16 of being there, my throat burned, and my eyes stung. In
17 Artesia, the oil refinery, I could smell the strong
18 smell of chemicals in the air. I can only imagine how
19 hard it is for kids who live next to the oil and gas
20 pollution every day. Their throats must burn every
21 single day.

22 I've met a family member who lives next to oil
23 and gas fracking south of Carlsbad, New Mexico. Their
24 daughter is my age, but she is frequently -- has
25 nosebleeds and headaches. How is that fair? Why would

1 we allow this to happen to children? Why are we not
2 making sure they have the healthiest places to live and
3 play? I want all kids to be healthy and safe from
4 pollution in New Mexico. I also want the strictest
5 rules to help protect our earth.

6 I often talk about this, but when the ice caps
7 melt, there is no going back. You can't refreeze ice
8 caps. So we need to do everything we can today to stop
9 methane and carbon dioxide emissions before this
10 happens. Please do the right thing for children in New
11 Mexico and for our earth.

12 Thank you.

13 HEARING OFFICER ORTH: Thank you very much,
14 Miss Hanna. And thank you to your mother.

15 Let me go back to Catherine Brijalba.

16 Ms. Brijalba, can you hear me?

17 MS. BRIJALBA: Yes, ma'am, I can.

18 Can you hear me?

19 HEARING OFFICER ORTH: Yes.

20 MS. BRIJALBA: Okay.

21 HEARING OFFICER ORTH: That's terrific.

22 If you would please spell your name.

23 MS. BRIJALBA: Yes. My last name is Brijalba,
24 B-R-I-J-A-L-B-as-in-boy-A, and my first name is
25 Catherine, C-A-T-H-E-R-I-N-E.

1 HEARING OFFICER ORTH: Thank you very much.

2 If you would raise your right hand.

3 Do you swear or affirm to tell the truth?

4 MS. BRIJALBA: Yes, I do.

5 HEARING OFFICER ORTH: Thank you.

6 CATHERINE BRIJALBA

7 having been first duly sworn or affirmed, gave

8 public comment as follows:

9 PUBLIC COMMENT

10 HEARING OFFICER ORTH: I'll start your five
11 minutes now.

12 MS. BRIJALBA: Yes.

13 The oil and gas industry is so important to
14 families in the southeastern corner of New Mexico for
15 the funding of our public schools. Growing up -- excuse
16 me. Growing up a daughter of somebody who worked in the
17 oil and gas industry at an early age, I learned how
18 important it was for our family that this industry
19 continue. I see how the fluctuation of the industry has
20 impacted not only families, but our local school
21 districts and our -- and how we rely on the funds
22 generated to keep our day-to-day operations going.

23 My mother, who is an educator, has been an
24 educator for 30 years, and myself going on 10 years of
25 teaching. I know that I have been able to provide my

1 students in Lea County what they need due to the oil and
2 gas industry.

3 I know that we rely on other industries and
4 other funding to help provide for our students, but for
5 families in our Lea County area, this industry is very,
6 very important, not only for maintaining facilities,
7 infrastructures, being able to provide the latest
8 technology, being able to recruit and retain
9 professional -- and staff, as well as provide
10 professional development for our schools and our
11 communities. It is just so hard with -- without the
12 funding of the oil and gas industry.

13 We understand that there is -- that many
14 people may not see things this way, but having been
15 raised in this industry, not only in West Texas, but now
16 calling New Mexico my home, this industry is so
17 important, and I understand that most of our state, even
18 though many people may not agree, it's the southeastern,
19 the southern part of the state that actually funds even
20 the northern part of our state.

21 And so without this industry, our state would
22 definitely struggle, and our families would definitely
23 not see the educational opportunities for their
24 children.

25 Thank you so much.

1 HEARING OFFICER ORTH: Thank you,
2 Ms. Brijalba.

3 Let's see. Let me look again for Sandra West,
4 just go through the list again.

5 Oh, I see Ms. West.

6 Ms. West, can you hear me?

7 MS. WEST: I can.

8 HEARING OFFICER ORTH: All right.

9 If you would please spell your name for the
10 transcript.

11 MS. WEST: S-A-N-D-R-A W-E-S-T.

12 HEARING OFFICER ORTH: Thank you.

13 And raise your right hand.

14 Do you swear or affirm to tell the truth?

15 MS. WEST: I do.

16 HEARING OFFICER ORTH: Thank you.

17 SANDRA WEST

18 having been first duly sworn or affirmed, gave
19 public comment as follows:

20 PUBLIC COMMENT

21 HEARING OFFICER ORTH: I'll start your five
22 minutes now.

23 MS. WEST: Thank you.

24 I'd like to start by thanking the Board for
25 the opportunity to provide comment.

1 I, too, am in support of Governor Michelle
2 Lujan Grisham's call for nation-leading oil and gas
3 pollution rules. Thus, I am also here to urge you to
4 strengthen the NMED's proposed ozone precursor rules to
5 protect those living closest to the development.

6 A lot of the stats you've already heard so I
7 don't have to repeat those as much. You understand that
8 there are a lot of people living near that space, and by
9 strengthening the rules we'll also reduce our greenhouse
10 gas emissions and help reduce the severity of climate
11 change for all of us that we -- that live on this rock
12 called earth, including those of us in New Mexico.

13 So I was born and raised in New Mexico, and I
14 really love this state. I am lucky enough to be able to
15 say that I don't have a story with asthma. I did not
16 grow up within the half-mile range of oil and gas
17 development, and I am lucky to not be one of the
18 statistics of emergency room visits for children with
19 respiratory issues, statistics that are strongly
20 correlated to industries that generate air pollutants
21 and, yes, strongly correlated to oil and gas activities.

22 As a New Mexican, I also want to be proud of
23 the efforts our residents and government, this Board
24 included, are taking to build a (unintelligible and/or
25 inaudible) future for our state. I study the potential

1 impacts of climate change, and I understand the urgency
2 and potential for this Board to play a key role.

3 I'm happy to actually have this moment to say
4 thank you to the NMED for already joining the proximity
5 proposal to require more frequent inspections to find
6 and fix leaks. So thank you so much. It is a great
7 step. And I think there are more -- or two other key
8 steps that I'd like to request.

9 And I'd like to request them because if you
10 strengthen these rules, you're laying the foundation for
11 our future where NASA's next methane map of the region
12 will be used to show the drastic improvement from the
13 methane cloud that was covering about 2,500 square miles
14 in 2014.

15 It will be a future where New Mexico's methane
16 pollution was reduced by up to a million metric tons per
17 year, the current estimate, and the equivalent of up to
18 22 coal-fired power plants or 28 million vehicles. It
19 will be a future more equitable and environmentally
20 just, for those most impacted are often historically
21 disadvantaged communities.

22 So how do we get there? Two key things. And
23 I know they've probably been spoken before, but I'm
24 going to say them again because I also support them.

25 To set a strong operator requirement to

1 control pollution during the completion of an oil and
2 gas well, as well as during redevelopment of an existing
3 well.

4 And the second one, to strengthen requirements
5 to cut pollution from pneumatic controllers that are
6 used in oil and gas production, the second largest
7 source of oil and gas methane emissions in New Mexico.

8 I also agree that NMED should require
9 companies to inspect pneumatics for leaks and accelerate
10 the timeline to retrofit and improve the equipment.

11 On behalf of all who are and may be impacted,
12 please heed this request.

13 Thank you for listening.

14 HEARING OFFICER ORTH: Thank you, Ms. West.

15 I just looked again for Mr. Williams and don't
16 see him.

17 Let me look again for Ms. Perkins.

18 Oh, I have one caller.

19 Is this you, Ms. Perkins?

20 MS. PERKINS: Yes. This is April Perkins.

21 HEARING OFFICER ORTH: Hello.

22 If you would spell your name for the
23 transcript.

24 MS. PERKINS: A-P-R-I-L P-E-R-K-I-N-S.

25 HEARING OFFICER ORTH: All right.

1 If you would raise your right hand.

2 Do you swear or affirm to tell the truth?

3 MS. PERKINS: I affirm to tell the truth.

4 HEARING OFFICER ORTH: Thank you.

5 APRIL PERKINS

6 having been first duly sworn or affirmed, gave
7 public comment as follows:

8 PUBLIC COMMENT

9 HEARING OFFICER ORTH: I'm going to start your
10 five minutes now.

11 MS. PERKINS: Okay. So I was a little late.

12 What is it I am -- you would like me to
13 discuss?

14 I know this is about oil and gas. I read
15 something about asthma.

16 HEARING OFFICER ORTH: So this is a rulemaking
17 hearing meant to address ozone precursor air pollutants.
18 If you have a comment on the proposed rules, this is the
19 time to offer it.

20 MS. PERKINS: Oh, okay.

21 I don't know what the proposed rule is. I
22 just personally suffer from asthma, and, you know,
23 anything that would make it easier, you know, to breathe
24 would always be nice. And it would be nice to have some
25 attention taken away from oil and gas because I feel

1 there's so much attention given to those people. So it
2 would be nice to have some attention given to the rest
3 of us.

4 So that's my comment.

5 HEARING OFFICER ORTH: Thank you very much,
6 Ms. Perkins.

7 MS. PERKINS: Thank you.

8 HEARING OFFICER ORTH: All right. Let me look
9 one more time for Mr. Williams.

10 No. Okay.

11 And I don't have anyone else reaching out
12 through the chat to offer public comment.

13 Ms. Witherspoon is with us.

14 Let me ask you if you -- no, I guess not. Oh,
15 yes.

16 Ms. Witherspoon?

17 I'm wondering if you wanted to offer your
18 comment this evening. We have just one more day in
19 the -- in the hearing.

20 Are you with us?

21 I have her on the platform, but she may not be
22 able to -- she may have stepped away.

23 All right. Ms. Katz, are we going to produced
24 water management units?

25 MS. KATZ: We still also have -- let's see.

1 I'm just looking. We still have natural gas well
2 liquids unloading, but --

3 MR. HISER: Maybe that was what we were doing.
4 Did -- was Lou going to do -- Lou has the lead
5 for industry.

6 MS. KATZ: On that one? Yeah.

7 MR. ROSE: And our witness is available. He
8 has a child care-related duty this evening that may take
9 him away for a while, but I think he's available now
10 when we get to that.

11 HEARING OFFICER ORTH: All right. Well, this
12 is a good time as far as I'm concerned.

13 MS. KATZ: Yes. Let's -- it is for us, as
14 well. So -- so we can move to that section. Let me
15 just pull that up.

16 MR. HISER: Madam Hearing Officer?
17 Do you anticipate doing another section after
18 that one? And if so, which one?

19 And we'll -- so we have people available if
20 needed.

21 HEARING OFFICER ORTH: I'm -- I'm happy to do
22 whatever makes the most sense based on the widest
23 witness availability.

24 Ms. Katz, do you -- do you have -- do you have
25 a preference here?

1 MS. KATZ: So I believe after this we would
2 just -- well, we would have produced water management
3 units, and then -- and then there's the environmental
4 NGOs' proposal related to well completions. So --

5 MR. HISER: Our experts on that are not
6 available today, but they're available tomorrow.

7 MS. KATZ: Right.

8 So we could -- we could get through --
9 potentially get through produced water management units
10 tonight if all of the other -- you know, and I know that
11 CDG has witnesses for the -- that section. So I guess
12 Mr. Colclasure might speak to that.

13 MR. COLCLASURE: CDG's witness is available
14 for PWMUs tonight.

15 HEARING OFFICER ORTH: Terrific.

16 MR. HISER: And we're trying to see if ours is
17 for that.

18 HEARING OFFICER ORTH: All right. Thank you,
19 Mr. Hiser.

20 Let's hit -- let's hit this topic.

21 MS. KATZ: Okay.

22

23

24

25

1 ELIZABETH BISBEY-KUEHN and BRIAN PALMER
2 (Relating to Topic Order 28)
3 having been first duly sworn or affirmed, were
4 examined and testified as follows:

5 DIRECT EXAMINATION

6 BY MS. KATZ:

7 MS. KATZ: So this is -- this testimony
8 relates to -- is Section 20.2.50.117 of the rule,
9 natural gas well liquids unloading. The testimony on
10 this section appears in NMED Exhibit 32 beginning at
11 page 91 and NMED Rebuttal Exhibit 1 beginning at page
12 68.

13 And testimony has been adopted, and there are
14 no corrections. So I will have Ms. Kuehn and Mr. Palmer
15 testify.

16 And, Ms. Kuehn, if you could please summarize
17 the operations that are the subject of this section of
18 the rule.

19 MS. BISBEY-KUEHN: Yes.

20 Good evening, Members of the Board.

21 We're discussing Section 117 today, which
22 covers natural gas well liquids unloading.

23 Liquids unloading is used to remove fluids
24 that are in the wellbore of a natural gas well, and
25 managing liquid buildup is fundamental to maintaining

1 production, avoiding early abandonment of wells, and
2 maximizing resource gas recovery.

3 Wells and reservoirs follow a continuum of
4 flow regimes in their economic life as the reservoir
5 depletes, production declines, wellbore velocity goes
6 down, and liquid loading begins to occur in the
7 wellbore. Liquid loading begins when the gas velocity
8 is not sufficient to lift the liquids to the surface.

9 New wells typically have sufficient production
10 rates and flowing velocity so that liquids loading is
11 not an issue. As the reservoir depletes, production
12 rates and velocities decline. Eventually liquids
13 loading begins to be an issue that needs to be
14 addressed. And the time at which liquids loading occurs
15 varies from well to well based on reservoir
16 characteristics.

17 The following techniques can be used to
18 individually or in combination manage liquids and
19 maintain production:

20 Intermitting, which is shutting in the well so
21 that the well is restarted at the production rate and
22 velocity such that when the well is restarted the
23 production rate and the velocity are higher and the well
24 can unload the liquids through normal production route
25 to sales.

1 Velocity strings are -- involve installing a
2 smaller diameter tubing string in the well that
3 increases velocity at a given production rate which
4 drags liquids to the wellbore and prevents liquid
5 loading.

6 Surfactants and foaming agents are also used
7 at the bottom of the well. They create foam with
8 specific gravity which enables liquids to be carried up
9 the wellbore at lower velocities.

10 Eventually a well will reach a point where the
11 reservoir energy is not sufficient to remove liquids.
12 And there is both manual and automated liquid unloading
13 that can be employed to address liquid loading. Common
14 methods are the use of a plunger lift, which consists of
15 a plunger that is dropped down the wellbore when the gas
16 pressure declines. That -- that plunger then has a
17 valve that allows gas and liquids to -- to rise up
18 through the -- the wellbore. That valves then closes,
19 and the plunger is lifted up, and the liquids are
20 expelled.

21 It also includes the use of artificial lift or
22 a pump, and it includes installing wellhead compression.

23 MS. KATZ: And, Ms. Kuehn, can you discuss the
24 emissions from natural gas well liquid unloading and the
25 options for controlling those emissions from those

1 operations?

2 MS. BISBEY-KUEHN: Yes. VOC emissions occur
3 when the well is vented to the atmosphere to unload the
4 fluid or when the liquids are unloaded through
5 atmospheric tanks, and then the tanks vent to the
6 atmosphere.

7 To reduce VOC emissions and the waste of gas
8 during manual or nonautomated liquids unloading
9 activities, operators can monitor the manual liquids
10 unloading events on site within close proximity to the
11 well or via remote telemetry to ensure that the well
12 returns to normal production operation as soon as
13 possible.

14 MS. KATZ: Thank you.

15 And turning to Mr. Palmer, can you discuss the
16 basis for the rule requirements for natural gas well
17 liquid unloading and the estimated emissions reductions
18 and costs.

19 MR. PALMER: Um-hum. Yes. The proposed
20 requirements are based on Colorado Regulation 7,
21 Pennsylvania General Permits 5 and 5A and also Wyoming
22 Permitting Guidance.

23 Under Colorado Regulation 7, owners and
24 operators are required to first use any means of
25 creating differential pressure to attempt to unload the

1 liquids from the well without venting, and then
2 otherwise to use best management practices to minimize
3 hydrocarbon emissions when venting to the atmosphere.
4 The owner and operator is also required to be present on
5 site during any planned well liquids unloading and to
6 estimate emissions from the event.

7 Under Pennsylvania General Permits, the
8 requirements are similar to the Colorado rule, except
9 that control or recovery and/or reuse of emissions is
10 required where it is safe to do so.

11 Under the Wyoming Permitting Guidance, it
12 requires that owners and operators minimize VOC
13 emissions to the extent practicable during manual and
14 automated blowdown/venting episodes. And personnel are
15 also required to remain on site to ensure minimal gas
16 venting and to estimate emissions from the event.

17 And I think the on site stuff probably -- I
18 think in those permits it generally applies to a manual
19 liquids unloading.

20 Go to the next one. Thank you.

21 We estimated emission reductions of 4,272 tons
22 per year of VOC for installing plunger lifts at wells
23 where they are not presently in use. We don't have any
24 estimates available to quantify the reductions expected
25 from implementation of the proposed best management

1 practices.

2 Costs for installing plunger lifts including
3 the capital costs of \$20,000 and operating costs of
4 \$2,400 are based on data from a report completed by ICF
5 International called Economic Analysis of Methane
6 Emission Reduction Potential from Natural Gas Systems,
7 and that was from 2016.

8 MS. KATZ: Thank you.

9 And, Ms. Kuehn, can you walk through the rules
10 and summarize the provisions and discuss the revisions
11 that were made based on stakeholder comments.

12 MS. BISBEY-KUEHN: Yes. Again following the
13 same framework as all the other sections that we've
14 looked at. We received comments from numerous industry
15 stakeholders requesting clarification on compliance
16 deadlines, requesting revisions that specify when liquid
17 unloading operations -- or which liquid unloading
18 operations are subject to the requirements of this
19 section.

20 We have largely agreed with many of the
21 comments that requested those necessary clarifying
22 revisions.

23 Paragraph A was revised to specify that only
24 those operations resulting in venting of natural gas are
25 subject. The second statement that clarifies that

1 liquid unloading that don't result -- don't result in
2 venting are not subject to this part. And that third
3 added sentence establishes the compliance timeline for
4 owners and operators to comply with this part. And
5 we've given two years from the effective date of this
6 part to comply with the emission standards.

7 Paragraph B outlines the emission standards
8 that are required of an owner or operator subject to
9 this section.

10 Paragraph B.(1) establishes a requirement to
11 use best management practices during the life of the
12 well to avoid the need for venting of natural gas
13 associated with liquid unloading.

14 Paragraph (2) identifies the types of best
15 management practices that must be used during venting
16 associated with liquid unloading to minimize emissions
17 to the atmosphere. And those include -- excuse me --
18 reducing wellhead pressure before the blowdown or
19 venting to atmosphere, monitoring manual venting
20 associated with liquid unloading in close proximity to
21 the well or via remote telemetry. And Paragraph (c)
22 requires the closing of vents to the atmosphere and
23 returning the well to normal production operation as
24 soon as practicable.

25 Paragraph B.(3) establishes the methodologies

1 in addition to the best management practices that owners
2 and operators must employ to reduce emissions. Those
3 include use of plunger lift, use of artificial lift, use
4 of a control device, use of an automated control system
5 or other control if approved by the Department. And we
6 are not specifying which methodologies need to be
7 employed. We've left this technology neutral to allow
8 for other -- all other technologies to have an on ramp
9 into this section.

10 We struck the requirement to install an
11 equipment monitoring tag on the -- on the -- on the
12 well.

13 Paragraph C outlines the monitoring
14 requirements. Those include monitoring certain
15 parameters during venting, including the wellhead
16 pressure, the flow rate of the vented gas, the duration
17 of the venting. And then we require owners and
18 operators to calculate the volume and mass of VOC
19 emitted during a venting event.

20 And Paragraph (3) was struck that related to
21 the equipment monitoring tag. New Paragraph (3)
22 references the general monitoring requirements of the
23 general provisions, Subsection 112.

24 The recordkeeping requirements include
25 identifying the unique identification number and the

1 location of the well, the date of the unloading event,
2 record of the wellhead pressure and the flow rate of the
3 vented gas. Again if it's not feasible, we're allowing
4 the use of a maximum potential flow rate to be used in
5 the calculation, the duration of the venting to the
6 storage vessel, tank battery or atmosphere, and a
7 description of the best management practices used to
8 minimize venting before and during a liquid unloading
9 event.

10 We require the documentation of the type of
11 control device or technique used to control VOC
12 emissions during the unloading event, and then a
13 calculation of the VOC emissions vented during the
14 liquid unloading event based on the duration, the
15 calculated volume and composition of the gas.

16 And then the other two again are just general
17 references to the general provisions of Section 112.

18 And this concludes this PowerPoint.

19 MS. KATZ: Thank you.

20 And that is the -- that is all the
21 Department's summary on its direct and rebuttal prefiled
22 testimony.

23 HEARING OFFICER ORTH: Thank you.

24 If you're a party with questions on this
25 topic, please turn on your screen.

1 I see Mr. Hiser.

2 CROSS-EXAMINATION

3 BY MR. HISER:

4 MR. HISER: Good evening, Ms. Kuehn.

5 I just had two questions to help understand
6 how the Department is looking at administering this
7 program, and they have to go with the -- I believe it's
8 the emission standards, which are B.(3), which talks
9 about the methodologies, and there's a list of ones that
10 are available.

11 Is it your intention that the operator would
12 use any one or more of those technologies?

13 MS. BISBEY-KUEHN: That is correct.

14 MR. HISER: And then you talk about additional
15 technologies that may be approved by the Department,
16 which we strongly support.

17 Would you envision that some of those
18 approvals might become generic so that they would be
19 available to any operator without having to repetitively
20 come to the Department for individual approval?

21 MS. BISBEY-KUEHN: Yes.

22 MR. HISER: Thank you.

23 Those are really my very pragmatic questions.
24 Thank you.

25 HEARING OFFICER ORTH: Thank you, Mr. Hiser.

1 Any other parties with questions, turn on your
2 camera.

3 No?

4 In that case, I will go to questions from the
5 Board.

6 While I'm doing that, if you're an attendee
7 and have a question, please reach out through chat.

8 Madam Chair?

9 CHAIR SUINA: Thank you, Madam Hearing
10 Officer.

11 I have no questions at this time.

12 HEARING OFFICER ORTH: Thank you.

13 I believe the Vice-Chair had to step away for
14 a few minutes.

15 Member Cates.

16 MEMBER CATES: Thank you. No comments or no
17 questions.

18 HEARING OFFICER ORTH: Thank you.

19 Member Bitzer?

20 MEMBER BITZER: No questions. Thank you.

21 HEARING OFFICER ORTH: Thank you.

22 Member Garcia?

23 MEMBER GARCIA: No questions. Thank you.

24 HEARING OFFICER ORTH: And Member Honker.

25 MEMBER HONKER: No questions.

1 HEARING OFFICER ORTH: All right. Thank you.

2 Anything further, Ms. Katz?

3 MS. KATZ: No, nothing more from me. Thank
4 you, Ms. -- Madam Hearing Officer.

5 HEARING OFFICER ORTH: All right.

6 So we're going now to IPANM's witness? Is
7 that what we're doing?

8 MS. KATZ: I believe so.

9 MR. ROSE: And Mr. Davis, I think, is on the
10 platform somewhere.

11 HEARING OFFICER ORTH: I see him.

12 MR. DAVIS: I am here.

13 MR. ROSE: I haven't seen him yet.

14 There you are. Welcome back.

15 RYAN DAVIS

16 (Relating to Topic Order 28)

17 having been first duly sworn or affirmed, was
18 examined and testified as follows:

19 DIRECT EXAMINATION

20 BY MR. ROSE:

21 MR. ROSE: Mr. Davis -- and again Mr. Davis'
22 direct testimony is IPANM Exhibit 2, and his rebuttal
23 testimony is IPANM Exhibit 10, and the proposed changes
24 from IPANM to the Department's original proposal is
25 IPANM Exhibit 1.

1 Q. Mr. Davis, could you summarize your direct and
2 rebuttal testimony on this matter?

3 A. Yes, sir. Again I think Ms. Kuehn gave a very
4 good overview of the need for liquids unloading and --
5 and the reason that we have liquid -- liquid unloading
6 events occur, and I -- I would just point the Board to
7 my written direct for more detail on kind of the life
8 cycle of a well and not go through that at this point.

9 But what I -- what I do want to just highlight
10 there, there's -- there's something that Ms. Kuehn said,
11 you know, regarding the velocity of the gas, you know,
12 the -- we refer to this as the critical velocity or the
13 critical rate. So the critical velocity is the point in
14 which a liquid droplet is suspended in gas flow. Any
15 flow below that critical rate leads to a cumulation of
16 liquids in the wellbore.

17 And so the thing I want to note there is the
18 critical rate is dependent upon the flowing pressure as
19 well as the differential pressure. So the primary
20 purpose behind manual liquids unloading or liquids
21 unloading is maximizing that differential pressure to
22 ensure that we can purge the liquids out of the
23 wellbore.

24 The other thing that I wanted to note
25 regarding liquids unloading is this is something that's

1 carried out on gas wells. The primary commodity that
2 we're -- we're producing here is natural gas, and we're
3 removing the liquids that are impeding the flow of
4 natural gas. So I think that's an important designation
5 here.

6 So to jump in to the rule itself, I was really
7 just going to focus on the things where we -- we haven't
8 found complete resolution. I would start off by saying
9 that IPANM is very supportive of the use of best
10 management practices that are listed in Paragraph (1)
11 and (2) under Subsection B.

12 Paragraph (1) covers the best management
13 practices that are carried out by an operator during the
14 life of the well.

15 And then the best management practices that
16 are listed in Paragraph (2) are the best management
17 practices that are carried out during the manual liquids
18 unloading activities, and those reduce the emissions
19 associated with natural gas -- or natural gas liquid
20 unloading events. We believe these are the most
21 effective measures to reducing emissions from the manual
22 liquids unloading.

23 The methodologies that are listed under
24 Paragraph (3) are primarily best management practices
25 that would occur over the life of the well, with the

1 exception of the use of the control device. And I
2 wanted to spend a little time talking about the control
3 device.

4 As I mentioned before, the primary objective
5 with manual liquids unloading is maximizing the
6 differential pressure. And I think it's worth noting at
7 this point that manual liquids unloading is really the
8 last resort. This being a natural gas well, we want to
9 try to maximize the production that we put to sales. So
10 we will try every effort to get this well to unload
11 without having to perform manual liquids unloading, but
12 this is a last resort before we have to bring a -- a
13 swabbing unit out to location.

14 And just for the Board's information, swabbing
15 would be where we actually come -- come out, we would
16 open the tubing, we'd run in with a mechanical device to
17 actually remove those liquids from the well. So when I
18 say last resort, swabbing would be the last last resort,
19 but manual liquids unloading is the last intervention
20 prior to mechanical intervention.

21 So with that, one of the -- the concerns that
22 we have with the use of a control is this would impede
23 our ability to maximize that differential pressure.

24 If we go back and look at how manual liquids
25 unloadings are performed, the flow from the well is

1 directed to a storage tank, and the reason for this is
2 we're purging liquids out of the wellbore, and we need
3 that vessel to capture those liquids. So we'll direct
4 the flow to the storage tank to purge the liquids.

5 And as we've talked on storage tanks, you
6 know, these storage vessels, you know, may have a
7 four-ounce, eight-ounce, up to 16-ounce operating
8 pressure, but not a lot of room there to operate a
9 control device. So we have significant concerns with
10 the use of a control device, because in this instance it
11 poses a safety concern by putting a control device on
12 that storage tank.

13 The other thing that I'd like to point out
14 here that -- that was in my testimony is artificial --
15 the application of artificial lift is an engineered
16 solution for gas well deliquification, and is
17 implemented based on individual well characteristics and
18 well site parameters.

19 So, you know, this isn't a one size fits all.
20 We -- we apply artificial lift based on the
21 gas-to-liquid ratio, pressures, equipment that's
22 available on the site. And one of the things that's
23 worth mentioning, as well, is the misapplication of
24 artificial lift, and plunger lift in particular can lead
25 to more manual liquids unloading, and ultimately

1 emissions from liquids unloading events.

2 In my rebuttal testimony, I highlighted the
3 Department's reference to the EPA greenhouse gas
4 reporting data that indicated 97 percent of the gas
5 wells in the Permian and the San Juan that require
6 manual liquids unloading currently employ plunger lift.
7 And I think this is, you know, an important thing to
8 note, because the large majority of the wells in the
9 state that require manual liquids unloading already have
10 plunger lift installed.

11 As I stated previously, IPANM believes the
12 application of artificial lift is -- including plunger
13 lift, is captured under Paragraph (1), which is --
14 reads -- reads that the owner or operator of a natural
15 gas well shall use best management practices during the
16 life of the well to avoid the need for natural gas
17 venting associated with liquids unloading.

18 And I say this, you know, pointing back to the
19 greenhouse gas reporting data, showing that 97 percent
20 of the gas wells in the state that require manual
21 liquids unloading currently have plunger lift and you --
22 being utilized. And to me this indicates that, you
23 know, plunger lift installation is not the end all be
24 all cure for the emissions associated with liquids
25 unloading.

1 So IPANM originally proposed to strike
2 Paragraph (3) all together, as we felt like this was
3 covered under Paragraph (1). I would mention that if
4 the Department feels strongly about listing those
5 methodologies out of Paragraph (3), that I feel like
6 they're more appropriate to be listed under Paragraph
7 (1), as -- as these are measures that an operator takes
8 through the life of the well and not necessarily
9 something that's employed as a control strategy for
10 manual liquids unloading.

11 That, for the most part, covers the emission
12 standards and where we -- we still think there are --
13 there are room for improvement in the current proposal.
14 The Department did make a lot of good changes, and I
15 want to thank the Department for that.

16 One place that, you know, I feel like we
17 didn't get the change that we were looking for is under
18 the recordkeeping section, (1)(d). This is the
19 recordkeeping requirements for manual liquids unloading,
20 and (1)(d) is the requirement to keep a record of the
21 flow rate to the extent that it's feasible. And if not
22 feasible, the owner or operator shall use the maximum
23 potential flow in the emissions calculations.

24 We had originally asked that that be
25 referenced as the estimated flow rate. Using the

1 maximum potential flow, I think, will overstate these
2 emissions. One of the reasons that we're performing a
3 manual liquid unloading event is the fact that that well
4 is not capable of flowing at its maximum potential. And
5 so we would like to see that be revised to be just an
6 estimation of that flow rate based on pressures and
7 tubing size.

8 And I think that's all I have, Mr. Rose.

9 MR. ROSE: Madam Hearing Officer, I have no
10 further questions of this witness.

11 HEARING OFFICER ORTH: Thank you very much,
12 Mr. Rose and Mr. Davis.

13 If you're a party with a question, please turn
14 on your camera.

15 Not seeing anyone.

16 I'll turn to the Board for questions.

17 If you're an attendee with a question, please
18 reach out through the chat.

19 EXAMINATION

20 BY THE BOARD:

21 HEARING OFFICER ORTH: Madam Chair?

22 CHAIR SUINA: Thank you, Madam Hearing
23 Officer.

24 And thank you again, Mr. Davis, for your
25 testimony.

1 Just so I'm -- I'm clear again, so I think you
2 were referring to the language under B.(3) as the --
3 the -- employ the methodologies to reduce emissions
4 during venting associated with a liquid unloading event.
5 So I just wanted to make sure I heard right or I
6 understand.

7 So were you in your testimony a few minutes
8 ago recommending that this language if it's kept in the
9 proposed rule, that it be relocated under Section A? Is
10 that what I heard?

11 MR. DAVIS: No. It would be still under
12 Section B, but under Paragraph (1).

13 CHAIR SUINA: Oh, okay.

14 MR. DAVIS: I feel like those are -- are best
15 management practices that are carried out during the
16 life of the well.

17 CHAIR SUINA: Okay.

18 And again has that been -- just verifying with
19 me, has that been shared with the Department in a
20 proposal so far, or is it just in the verbal testimony?

21 MR. DAVIS: Just in the verbal. As I have
22 stated, we just originally felt like that was already
23 captured under Paragraph (1), and so we had proposed to
24 strike Paragraph (3) in its entirety.

25 CHAIR SUINA: Okay.

1 I think that's all I have for right now.

2 Thank you, Mr. Davis.

3 MR. DAVIS: Thank you.

4 HEARING OFFICER ORTH: Thank you.

5 Vice-Chair Trujillo Davis?

6 VICE-CHAIR TRUJILLO DAVIS: I don't have any
7 questions at this time.

8 Thank you, Mr. Davis.

9 HEARING OFFICER ORTH: Thank you.

10 Member Cates?

11 MEMBER CATES: No questions here. Thank you.

12 HEARING OFFICER ORTH: Member Bitzer?

13 MEMBER BITZER: No questions. Thank you.

14 HEARING OFFICER ORTH: And Member Garcia?

15 MEMBER GARCIA: Yes. I do have a question.

16 Mr. Davis, you mentioned that what Chair Suina
17 mentioned was part B.(3), those items were already best
18 management practices? Did I hear you say that?

19 MR. DAVIS: They would be the methodologies or
20 best management practices that operators take during the
21 life of the well. I think those two are kind of
22 interchangeable there to some degree.

23 MEMBER GARCIA: Okay.

24 So then I think I heard you say that using --
25 the use of a control device could be a safety hazard.

1 So I'm trying to reconcile those two statements.

2 MR. DAVIS: So we would recommend not listing
3 the use of a control device, because we don't think that
4 that's a technically feasible option for controlling
5 emissions. But if -- if the Department feels that it's
6 necessary to list out plunger lift and artificial lift,
7 as well as the automated control system, that that would
8 be more appropriate under Paragraph (1).

9 MEMBER GARCIA: But you still feel like the
10 use of a control device could be a safety issue.

11 MR. DAVIS: Yes, ma'am.

12 MEMBER GARCIA: Okay.

13 Thank you. That's all. Thank you.

14 MR. DAVIS: Um-hum.

15 HEARING OFFICER ORTH: Thank you.

16 Member Honker?

17 MEMBER HONKER: I have no questions. Thank
18 you.

19 HEARING OFFICER ORTH: All right. Thank you.

20 Mr. Rose, does any of this prompt redirect?

21 MR. ROSE: No, Madam Hearing Officer.

22 HEARING OFFICER ORTH: All right. Thank you
23 very much, Mr. Davis and Mr. Rose.

24 MR. ROSE: Thank you.

25 HEARING OFFICER ORTH: We will hear from

1 Mr. Smitherman on this topic, as well, but it will be
2 tomorrow.

3 Ms. Katz, will there be any follow-up from the
4 Department, or would you wait until after
5 Mr. Smitherman?

6 MS. KATZ: I think I'll do some follow-up just
7 now because I think it will be easier for the Board to
8 have it done right away, after Mr. Davis.

9 HEARING OFFICER ORTH: Terrific.

10 MS. KATZ: All right.

11 ELIZABETH BISBEY-KUEHN

12 (Relating to Topic Order 28 continued)

13 having been first duly sworn or affirmed, was
14 examined and testified further as follows:

15 DIRECT EXAMINATION

16 BY MS. KATZ:

17 MS. KATZ: So I have Ms. Kuehn back up here.

18 Q. Ms. Kuehn, regarding Mr. Davis' suggestions
19 that the list of methodologies in Paragraph B.(3) be
20 moved to Paragraph B.(1), would the Department agree to
21 that revision?

22 A. Yes.

23 Q. Okay.

24 And then with regard to the recordkeeping
25 requirement in Paragraph D.(1)(d), would the Department

1 agree to allow the use of estimated flow rate instead of
2 the maximum potential flow rate?

3 A. Yes.

4 MS. KATZ: Okay. Thank you.

5 That's all I have.

6 HEARING OFFICER ORTH: Thank you, Ms. Kuehn
7 and Ms. Katz.

8 If you're a party with a question, please turn
9 on your camera.

10 Mr. Hiser.

11 MR. HISER: I was just going to let you know,
12 Madam Hearing Officer, that NMOGA probably will not --
13 Mr. Smitherman will not be speaking to this issue. So
14 you can cross NMOGA off the list for this issue.

15 HEARING OFFICER ORTH: Thank you very much.

16 If you're a party with a question, please turn
17 on your camera.

18 No?

19 I'll go to the Board, then.

20 While I'm doing that, if you're an attendee
21 with a question, reach out through chat.

22 Madam Chair?

23 CHAIR SUINA: Madam Hearing Officer, again
24 just appreciate the collaboration as we move through
25 these rules. Thank you, and no further questions.

1 HEARING OFFICER ORTH: Thank you.

2 Vice-Chair Trujillo Davis?

3 VICE-CHAIR TRUJILLO DAVIS: I don't have any
4 questions at this time. Thank you.

5 HEARING OFFICER ORTH: Thank you.

6 Member Cates?

7 He may have stepped away.

8 Member Bitzer?

9 MEMBER BITZER: I have no questions. Thank
10 you.

11 HEARING OFFICER ORTH: Thank you.

12 Member Garcia?

13 MEMBER GARCIA: No questions.

14 HEARING OFFICER ORTH: And Member Honker.

15 MEMBER HONKER: No questions. Thank you.

16 HEARING OFFICER ORTH: Thank you very much.

17 Thank you, Ms. Katz and Ms. Kuehn.

18 Ms. Katz, would you agree with me that if we
19 went as far as we could on produced water management
20 units with the witnesses we have available, that we
21 would be confident of finishing tomorrow without a
22 midnight session?

23 MS. KATZ: I would definitely agree with that,
24 Madam Hearing Officer.

25 HEARING OFFICER ORTH: Terrific.

1 Let's go to produced -- produced water
2 management units.

3 MS. KATZ: Just give me a second to get set up
4 here and for my witnesses to get on screen.

5 ELIZABETH BISBEY-KUEHN and BRIAN PALMER

6 (Relating to Topic Order 36)

7 having been first duly sworn or affirmed, were
8 examined and testified as follows:

9 DIRECT EXAMINATION OF ELIZABETH BISBEY-KUEHN

10 BY MS. KATZ:

11 MS. KATZ: And this testimony will relate to
12 Section 20.2.50.126 of the rule, produced water
13 management units. This testimony appears in NMED
14 Exhibit 32 beginning at page 152 and NMED Rebuttal
15 Exhibit 1 beginning at page 99.

16 Oh, I guess Mr. Palmer isn't on this
17 particular presentation, but we will -- he'll be
18 available if need be.

19 All right. And Ms. Kuehn has adopted her
20 testimony, and there are no corrections on this section.

21 Q. So, Ms. Kuehn, can you please summarize the --
22 the equipment process -- or process that is the subject
23 of this section of the rule.

24 MS. BISBEY-KUEHN: Yes.

25 Good evening, Members of the Board.

1 And we're discussing produced water management
2 units tonight, which -- one second -- which is
3 Section 126, and is -- also there are some specific
4 definitions in Part 50 that I'll refer to later.

5 The majority of oil- and gas-bearing
6 formations also contain naturally occurring water, often
7 referred to as formation or connate water. When oil or
8 gas is extracted, this produced water is also extracted
9 as a by-product. The actual amount of produced water
10 varies widely depending on the location or stage in the
11 lifetime of a particular well.

12 In addition to reflecting the chemical makeup
13 of the geologic formation from which it is extracted,
14 produced water will also contain suspended solids,
15 dissolved solids, varying amounts of oil residues and
16 organic -- organics containing VOCs, and various
17 chemicals used in the production process.

18 Produced water from gas production typically
19 has higher contents of low molecular-weight aromatic
20 hydrocarbons, such as benzene, toluene, ethylbenzene and
21 xylene, than produced water from oil formations.

22 Conventional oil and gas developments
23 typically produce around seven to 10 barrels of water
24 for every barrel of crude oil produced. And
25 unconventional oil and gas developments -- produced

1 water from most unconventional resources, besides coal
2 bed methane, is minimal due to tighter reservoir
3 formations. Producers commonly import water to these
4 operations for on site use in drilling, fracturing and
5 production.

6 Q. And can you discuss the control options for
7 controlling emissions from produced water management
8 units?

9 A. Yes. The VOC emissions from produced water
10 management units can be reduced by treating the produced
11 water to remove hydrocarbons before the water enters the
12 recycling facility or impoundment. The emissions are
13 reduced when produced water is processed through
14 separators and storage vessels, which separates the
15 hydrocarbons from the produced water prior to sending to
16 a produced water management unit.

17 Q. And can you review the provisions of the rule
18 regarding produced water management units and the
19 revisions that were made based on the stakeholder input.

20 A. Yes. And let me just state that there is not
21 a great deal of data in the inventory. In fact, there
22 is very, very little data from the inventory on the
23 amount of emissions produced by these types of
24 facilities. We have application -- we have
25 registrations for several of these types of facilities,

1 and their potential to emit a VOC varies widely,
2 anywhere from low amounts of VOC to -- to up to 50 to 60
3 tons of VOC emissions.

4 The primary purpose of this section is to
5 utilize best management practices to minimize those
6 volatile organic compounds from these types of
7 facilities. We've made several revisions based on
8 stakeholder feedback on the original proposal.

9 We think that this new -- these new
10 requirements will provide good data for us to understand
11 the type and quantity of emissions from these types of
12 facilities. It's also the smallest -- it's the -- it's
13 the -- not the smallest, but it's the most limited kind
14 of section that we have also in this section. So it's
15 only -- it's going to go pretty fast here as I'm walking
16 through the requirements.

17 So the applicability is outlined in Paragraph
18 A. It requires produced water management units, which
19 are specifically defined in this part, to meet the
20 requirements of this section within 180 days after the
21 effective date of this part.

22 Paragraph B identifies the emission standards
23 that must be followed, and they -- those require owners
24 and operators to use best management practices and good
25 operational or engineering practices to minimize

1 emissions of VOCs from produced water management units.
2 There's also a prohibition against the -- the dumping of
3 any untreated produced water to a produced water
4 management unit without first processing and treating
5 the produced water in a separator and/or storage vessel
6 to minimize entrained hydrocarbons.

7 Paragraph C outlines the monitoring
8 requirements. These require the owner or operator to
9 develop a protocol to calculate the VOC emissions from
10 each PWMU. The protocol shall include the produced
11 water throughput monitoring, semiannual sampling and
12 analysis of the liquid composition, hydrocarbon
13 measurement method, identifying representative sample
14 size, and then requirements for chain of custody of
15 that -- of that sample.

16 The monitoring requirements also include the
17 owner or operator to calculate the monthly VOC emissions
18 in tons from each unit with the first month of emission
19 calculations beginning within 180 days of the effective
20 date of this part. They require the monitoring on a
21 monthly basis of the good -- of the best management or
22 good operational or engineering practices implemented to
23 reduce the emissions, to demonstrate their
24 effectiveness.

25 And upon written request by the Department, we

1 will require the owners and operators to sample the PWMU
2 to determine the VOC content of -- of that liquid. And
3 then there is a reference to comply with the general
4 provisions of Section 112.

5 The recordkeeping requirements in Paragraph D
6 require the owner or operator to document the
7 identification number, the location, the best management
8 practices and good operational or engineering practices
9 employed to minimize emissions, the protocol that was
10 developed, and the results of any sampling conducted in
11 accordance with the protocol, and then a record of the
12 annual total VOC emissions from each unit.

13 And then the remaining requirements refer
14 again to sub -- to Section 112.

15 And this concludes an overview of our direct
16 and rebuttal testimony on produced water management
17 units.

18 Q. And not quite, because it looks like we left
19 out the definition associated with this.

20 A. Yeah. And I was -- I can speak to those.

21 Q. Yes. I was just going to ask you to go ahead
22 and cover those. We didn't include this slide. So
23 apologies for that.

24 A. Yes. So produced water management unit is
25 defined in Section 7 as a recycling facility or a

1 permanent pit or pond that is a natural topographical --
2 topographical depression, man-made excavation, or diked
3 area formed primarily of earthen materials, or man-made
4 materials, which is designed to accumulate produced
5 water and has a design storage capacity equal to or
6 greater than 50,000 barrels.

7 Recycling facility means a stationary or
8 portable facility used exclusively for the treatment,
9 reuse or recycling of produced water and does not
10 include oil field equipment such as separators, heater
11 treaters and scrubbers in which produced water may be
12 used.

13 Q. And can you also cover just the definition of
14 produced water, because that is also in the definitions
15 section.

16 A. I will. Yes. Produced water means a liquid
17 that is an incidental byproduct from well completion and
18 the production of oil and gas.

19 Q. And does the red-line that was submitted at
20 NMED Rebuttal Exhibit 23 indicate that there were a few
21 revisions that were made to those definitions based on
22 stakeholder input?

23 A. That's correct.

24 MS. KATZ: Okay. Thank you.

25 That is then, I believe, the Department's

1 presentation of its direct and rebuttal on produced
2 water management units.

3 HEARING OFFICER ORTH: Thank you very much,
4 Ms. Katz and Ms. Kuehn.

5 If you're a party with a question of
6 Ms. Kuehn, please turn on your camera.

7 Mr. de Saillan.

8 MR. DE SAILLAN: Thank you, Madam Hearing
9 Officer.

10 Can you hear me okay?

11 CROSS-EXAMINATION OF ELIZABETH BISBEY-KUEHN:

12 BY MR. DE SAILLAN:

13 Q. Good evening, Ms. Kuehn.

14 Just for the record, my name is Charles de
15 Saillan, and I'm an attorney representing the New Mexico
16 Environmental Law Center.

17 And I just have a couple of questions for you
18 regarding best management practices.

19 I was wondering if you could sort of list what
20 some of those best management practices are for -- for
21 produced water management units.

22 A. They are separate -- using separators and
23 storage vessels to -- to separate the oil from the
24 produced water prior to dumping. But we will have some
25 surrebuttal testimony on the specific use of the term

1 "dumping," and we are prepared to substitute that with
2 another term.

3 So I will say that it's -- it's processing the
4 produced water through the use of a separator or -- or a
5 storage vessel in order to separate the hydrocarbons
6 from the produced water prior to it being processed in
7 the produced water management unit.

8 Q. Okay.

9 And is that -- is that specified in the
10 regulation somewhere?

11 A. There's a prohibition against -- I don't want
12 to use the term "dumping," but there's a prohibition
13 against processing that produced water without it first
14 being processed via a separator or a storage vessel.

15 Q. Okay.

16 So then it's clear in the regulations as you
17 interpret them that when you use the term "best
18 management practices" it's clear what that means, and
19 therefore the regulation will be readily enforceable.

20 MS. KATZ: And I would just direct you to
21 Subparagraph B.(2) that contains that specific language.

22 MR. DE SAILLAN: Okay. Very good.

23 That's all the questions I have. Thank you
24 very much.

25 HEARING OFFICER ORTH: All right. Thank you.

1 Did I see Mr. Hiser?

2 MR. HISER: Madam Hearing Officer, I think,
3 actually, Mr. de Saillan and the answer just answered my
4 question. So I'm good. Thank you.

5 HEARING OFFICER ORTH: Thank you.

6 I don't see any other party on screen.

7 I'll turn to the Board for their questions.

8 If you're an attendee with a question, reach
9 out through chat.

10 EXAMINATION

11 BY THE BOARD:

12 HEARING OFFICER ORTH: Madam Chair?

13 CHAIR SUINA: Yes, Madam Hearing Officer. I
14 just have a quick follow-up to Mr. de Saillan's
15 questions.

16 So is there also going to be some additional
17 language changes -- I think you referred to it as part
18 of your testimony -- to clarify some of the confusion;
19 is that correct?

20 MS. BISBEY-KUEHN: Madam Chair, yes, that is
21 correct.

22 CHAIR SUINA: Okay.

23 All right. Thank you so much. I just wanted
24 to make sure I was clear on that. Thank you.

25 HEARING OFFICER ORTH: Vice-Chair Trujillo

1 Davis?

2 VICE-CHAIR TRUJILLO DAVIS: Yes. Thank you.

3 I'm wondering, the definition for produced
4 water management unit includes impoundments, or ponds.

5 Does that include ponds used for treatment for
6 hydraulic fracturing later?

7 MS. BISBEY-KUEHN: It would potentially if it
8 was -- I'm sorry. Madam Vice-Chair, yes. It may if it
9 exceeded that capacity.

10 VICE-CHAIR TRUJILLO DAVIS: Okay.

11 So I guess what I'm really wondering about is
12 the NMED and OCD have worked really, really hard over
13 the last few years to put in stipulations in other rules
14 to encourage produced water recycling and water
15 management. And I'm concerned that this could
16 potentially harm those efforts and we would then turn to
17 using more freshwater sources.

18 So I'm not really sure what my question is.
19 It's more I'm expressing my concern for that, and maybe
20 I'm not reading the rule exactly right.

21 MS. BISBEY-KUEHN: Madam Chair, yes,
22 Vice-Chair. We are acutely aware of the need to not
23 disincentivize the use of freshwater instead of produced
24 water in fracturing of wells. And so we have tailored
25 this requirement to prohibit the use of -- or the

1 treat -- the acceptance of that material without it
2 first being separated and handled through a storage
3 vessel, which should reduce those hydrocarbons and not
4 disincentivize the use of -- of freshwater.

5 VICE-CHAIR TRUJILLO DAVIS: Okay. I think I
6 understand what -- how you structured that.

7 So thank you. I don't have any more questions
8 at this time.

9 HEARING OFFICER ORTH: Thank you.

10 Member Cates?

11 Member Bitzer?

12 MEMBER BITZER: No questions at this time.

13 Thank you.

14 HEARING OFFICER ORTH: Thank you.

15 Member Garcia?

16 MEMBER GARCIA: No questions. Thank you.

17 HEARING OFFICER ORTH: And Member Honker.

18 MEMBER HONKER: I would just echo Vice-Chair
19 Trujillo Davis' concern with not disincentivizing
20 recycling of produced water.

21 No questions. Thank you.

22 HEARING OFFICER ORTH: Thank you, Member
23 Honker.

24 Ms. Katz, any follow-up?

25 MS. KATZ: Just one quick follow-up.

1 REDIRECT EXAMINATION OF ELIZABETH BISBEY-KUEHN

2 BY MS. KATZ:

3 Q. Ms. Kuehn, did the Department work closely
4 with the Oil Conservation Division in developing the
5 rule language related to produced water management units
6 as well as with the interested stakeholders to address
7 the concerns raised by Vice-Chair Trujillo Davis and
8 Member Honker regarding disincentivizing the use of
9 recycled water?

10 A. Yes.

11 MS. KATZ: Thank you.

12 That's all that I have.

13 HEARING OFFICER ORTH: Thank you, Ms. Katz and
14 Ms. Kuehn.

15 I believe at this point we go to NMOGA and
16 Mr. Nichols.

17 I did make Mr. Nichols a panelist a little bit
18 ago.

19 Mr. Curtis?

20 MR. CURTIS: Thank you, Madam Hearing Officer.

21 Mr. Nichols, are you with us?

22 Do you still see him on the platform, Madam
23 Hearing Officer?

24 HEARING OFFICER ORTH: Let me see here.

25 It was Ken, right?

1 MR. CURTIS: Yes. Ken Nichols.

2 HEARING OFFICER ORTH: Okay. So he's no
3 longer a panelist. Oh, I see him back in the attendees.
4 I'll make him a panelist again.

5 Mr. Nichols, can you hear me?

6 MR. NICHOLS: There we go.

7 Can you hear me now?

8 HEARING OFFICER ORTH: Yes. And you're also
9 welcome to turn on your video if you have bandwidth.

10 MR. NICHOLS: All right.

11 I apologize. I'm multitasking here.

12 HEARING OFFICER ORTH: All right.

13 If you would spell your name for the
14 transcript, please.

15 MR. NICHOLS: K-E-N N-I-C-H-O-L-S.

16 HEARING OFFICER ORTH: And I think I need to
17 swear you, right?

18 MR. NICHOLS: Yes.

19 HEARING OFFICER ORTH: If you would raise your
20 right hand.

21 Do you swear or affirm to tell the truth?

22 MR. NICHOLS: I do.

23 HEARING OFFICER ORTH: Thank you very much.

24 Go ahead, Mr. Curtis.

25 MR. CURTIS: Thank you very much.

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KEN NICHOLS

(Relating to Topic Order 36)

having been first duly sworn or affirmed, was
examined and testified as follows:

DIRECT EXAMINATION

BY MR. CURTIS:

Q. Good evening, Mr. Nichols.

Can you tell us -- the Board a little bit
about your involvement in this proceeding?

A. Yes. I've been asked to talk a little bit
about produced water recycling operations and the
potential impact of the proposed rule to those
operations.

Q. And is NMOGA Exhibit 33, which is previously
admitted, an accurate copy of your resume?

A. Yes.

Q. And can you please just briefly state your
qualifications as they relate to your participation in
this hearing?

A. Yes. I went to school at University of
Illinois, studying civil engineering, focused on
water -- water resources, environmental engineering.

I am now a professional engineer in Texas and
a Class D water operator, and I'm serving as a regional
water team lead for Tetra Tech and also as geologic

1 carbon sequestration lead.

2 I have over 24 years of experience with most
3 of that related to water management and a significant
4 part of that related to water management for oil and
5 gas.

6 Q. Thank you.

7 And is Exhibit A5 and 44 -- do they reflect
8 your direct and rebuttal testimony filed in this matter?

9 A. Yes.

10 Q. And do you have any changes to that testimony
11 as filed?

12 A. No.

13 Q. I believe we have prepared a presentation to
14 share with the Board.

15 A. Yes.

16 Q. Based on the testimony that's been offered
17 thus far, I think many of the issues that we had planned
18 to share have been addressed and covered very well by
19 the other parties.

20 So, Ken, if it would be all right, I'd like to
21 ask you just a question or two, and then I'd like you to
22 display the last slide of your presentation and just
23 talk a little bit about some of your recommendations
24 based on the September 7th language that the Department
25 provided, September 7th and then September 16th.

1 So can you just talk briefly a little bit
2 about the importance of reuse of produced water and how
3 that interplays with the rule that we're looking at
4 today?

5 A. Yes. Especially, I think, in Southeast New
6 Mexico it's critically important that we recycle as much
7 water as practical. I think it's important that we made
8 significant progress in the last several years,
9 recycling a larger and larger percent of the water
10 that's used. And I think if we put too many
11 restrictions on that, we could reduce the amount that's
12 recycled in the future.

13 Q. Thank you.

14 And do you believe that the Department's
15 current proposal to not allow dumping of untreated
16 produced water to a produced water management unit
17 without first processing and treating the produced water
18 in a separator and/or storage vessel to minimize
19 entrained hydrocarbons addresses that concern and
20 provides a good balance of allowing recycling of
21 produced water and reduced emissions?

22 A. Yes. I think if -- if the water can be
23 processed in some way prior to being stored in the
24 produced water pond, that should have a significantly
25 positive effect on potential emissions.

1 Q. And it will allow the continued recycling of
2 produced water?

3 A. Yes, I believe so.

4 Q. Excellent.

5 If you wouldn't mind, if we can share your
6 very last slide. I believe you had some recommendations
7 based on the language that was filed on September 16.

8 A. Yes. Let me see here. I'll share -- let's
9 see if this shows up.

10 Okay. Can you see my screen?

11 Q. Yes, sir.

12 A. I -- when I was looking through the proposed
13 language, I just had a couple minor comments.

14 The first one as shown on the screen, I
15 thought that the use of the term "best" as far as
16 management practices might be subjective, and would
17 suggest that we use an industry standard practice or
18 something similar, just to provide some flexibility for
19 operators to apply technologies to their specific
20 situation.

21 Q. And did you hear the testimony of Ms. Kuehn
22 earlier that more or less the requirements outlined in
23 B.(2) to use a -- to treat the produced water in a
24 separator and/or storage vessel would be consistent with
25 the use of best management practices?

1 A. Yeah. I think there's a variety of different
2 ways of treating the water, but I think if we can go
3 through some preliminary treatment like that, that that
4 should have a good -- good impact on potential
5 emissions.

6 Q. Thank you.

7 Can you speak a little bit to your second
8 recommendation there and what the basis for that is?

9 A. Yes. The other thing I noted, using the word
10 "minimize" related to the entrained hydrocarbons I
11 thought might be a little bit difficult to -- to
12 actually measure, you know, as far as how we would
13 actually minimize the concentrations. It might be
14 better to just use appropriate technology for the
15 purpose of removing entrained hydrocarbons. That would
16 eliminate the potential of trying to hit a zero target
17 or something that might be impractical.

18 Q. Thank you, Mr. Nichols, for sharing that
19 testimony.

20 Did you have anything to add to your testimony
21 up to this point?

22 A. No, I don't believe so.

23 MR. CURTIS: With that, Madam Hearing Officer,
24 I would make Mr. Nichols available for any other
25 questions.

1 HEARING OFFICER ORTH: Thank you very much.
2 If you're a party with a question, please turn
3 on your camera.

4 I don't see anyone.
5 I'll go to the Board.

6 While I'm going to the Board, if you're an
7 attendee with a question, please reach out through the
8 chat.

9 Madam Chair?

10 CHAIR SUINA: I don't have any questions at
11 this time. Thank you, Madam Hearing Officer.

12 HEARING OFFICER ORTH: Thank you.

13 Vice-Chair Trujillo Davis.

14 VICE-CHAIR TRUJILLO DAVIS: I don't have any
15 questions either.

16 Thank you for your testimony, Mr. Nichols.

17 HEARING OFFICER ORTH: Thank you.

18 Member Cates?

19 Member Bitzer?

20 MEMBER BITZER: No questions. Thank you.

21 HEARING OFFICER ORTH: Member Garcia?

22 MEMBER GARCIA: No questions. Thank you.

23 HEARING OFFICER ORTH: And Member Honker.

24 MEMBER HONKER: No questions. Thank you.

25 HEARING OFFICER ORTH: Thank you.

1 Thank you very much, Mr. Nichols, for your
2 testimony.

3 And, Mr. Curtis, I believe at this point we go
4 to Ms. Campsie or Ms. Cooper; is that correct?

5 MS. SHPALL: Yes. Ms. Cooper.

6 HEARING OFFICER ORTH: I see you, Ms. Shpall,
7 and I see -- okay. And I see Ms. Cooper.

8 Please go ahead.

9 MS. SHPALL: Excellent.

10 JILL COOPER

11 (Relating to Topic Order 36)

12 having been first duly sworn or affirmed, was
13 examined and testified as follows:

14 DIRECT EXAMINATION

15 BY MS. SHPALL:

16 MS. SHPALL: So Ms. Cooper's testimony has
17 been introduced into the record, her direct Appendix C,
18 her rebuttal Appendix E.

19 Q. Ms. Cooper, please state your name and
20 employer and position for the record.

21 A. Jill Cooper. I'm a senior principal at
22 Geosyntec Consultants.

23 HEARING OFFICER ORTH: It's hard to hear you,
24 Ms. Cooper.

25 Can you --

1 MS. COOPER: Okay. I will speak up. Sorry
2 about that.

3 HEARING OFFICER ORTH: Thank you.

4 Q. (BY MS. SHPALL) And, Ms. Cooper, the
5 Department made some revisions to Section 126 and
6 various definitions in Section 7.

7 What's your opinion about the revised rebuttal
8 regulation, and do you have any recommended changes to
9 the most recent draft of those regulations?

10 A. Yeah. Overall we really appreciate the
11 Department's efforts they've taken in listening to and
12 engaging with stakeholders on modifications to this
13 section and the regulation as a whole.

14 We agree with the current language in
15 Section 7, the definitions DD, HH and II that were
16 brought up by the Department earlier, and change -- the
17 changes to Section 126 with two minor requests. We have
18 shared these requests with the Department and appreciate
19 the Department's willingness to consider our first point
20 already in their testimony.

21 First, in Section 126B.(2), the term "dumping"
22 is used when discussing the transfer of produced water
23 into a produced water management unit. The term
24 "dumping" suggests the water is being spilled or
25 released into the environment. Operators of produced

1 water management units are not doing anything like that.

2 We would recommend using a more common
3 industry term such as "transfer." This change clarifies
4 the rule and aligns the language of the regulation with
5 the term commonly used when managing produced water.

6 The second minor change request we have is in
7 Section 126C.(1). We ask that the term "sample" be
8 added before the phrase "and chain of custody
9 requirements." The rule as drafted could be misread as
10 a requirement to keep a chain of custody for every
11 gallon in the produced water management unit.

12 We understand the Department intends for
13 operators to keep a chain of custody for water samples
14 which is consistent with industry practice.

15 Thank you very much.

16 Q. Ms. Cooper, do you have anything else you'd
17 like to add about this section of the regulation?

18 A. Other than we thank the Department's
19 cooperation in working with us. Thank you.

20 MS. SHPALL: Thank you.

21 Ms. Cooper is available for cross-examination.

22 HEARING OFFICER ORTH: Thank you very much,
23 Ms. Shpall and Ms. Cooper.

24 If you're a party with a question, please turn
25 on your camera.

1 I don't see anyone.

2 I'll go to the Board then for their questions.

3 If you're an attendee with a question, please
4 reach out through the chat.

5 Madam Chair, any questions?

6 CHAIR SUINA: Thank you for your testimony,
7 Ms. Cooper, and for those clarifications.

8 At this point I don't have any other
9 questions.

10 HEARING OFFICER ORTH: Thank you.

11 Vice-Chair Trujillo Davis?

12 VICE-CHAIR TRUJILLO DAVIS: I echo those
13 sentiments, and I don't have any other questions. Thank
14 you.

15 HEARING OFFICER ORTH: All right. Thank you.
16 Member Bitzer?

17 MEMBER BITZER: Pretty straightforward. No
18 questions. Thank you.

19 HEARING OFFICER ORTH: Member Garcia?

20 MEMBER GARCIA: No questions. Thank you.

21 HEARING OFFICER ORTH: And Member Honker.

22 MEMBER HONKER: No questions. Thank you.

23 HEARING OFFICER ORTH: Thank you.

24 Thank you very much again, Ms. Cooper and
25 Ms. Shpall.

1 MS. SHPALL: Thank you.

2 MS. COOPER: Thank you.

3 HEARING OFFICER ORTH: Ms. Katz? I believe
4 we're going to hear a little more from the Department at
5 this point, right?

6 MS. KATZ: Yes. I will bring Ms. Kuehn back
7 up.

8 ELIZABETH BISBEY-KUEHN

9 (Relating to Topic Order 36 continued)

10 having been first duly sworn or affirmed, was
11 examined and testified further as follows:

12 DIRECT EXAMINATION

13 BY MS. KATZ:

14 Q. And, Ms. Kuehn, what is the Department's
15 response to the suggestions that were proposed and shown
16 by Mr. Nichols in his testimony?

17 A. Those are acceptable changes to the -- to the
18 proposal.

19 MS. KATZ: Okay. Thank you.

20 And I believe that's all we have at this point
21 in response.

22 HEARING OFFICER ORTH: Thank you very much,
23 Ms. Katz and Ms. Kuehn.

24 Again if you're a party with a question,
25 please turn on your camera.

1 Turn to the Board.

2 EXAMINATION

3 BY THE BOARD:

4 HEARING OFFICER ORTH: Madam Chair?

5 CHAIR SUINA: Thank you, Madam Hearing
6 Officer.

7 Just so I'm clear, so the recommendations by
8 Ms. Cooper is the -- were those already addressed?

9 Sorry if I missed it. It's been a long day.
10 Thank you.

11 MS. BISBEY-KUEHN: (Nods head.)

12 MS. KATZ: I didn't ask that, and I should
13 have. I'm sorry. I meant to ask.

14 Do you also accept the recommendations
15 proposed by Ms. Cooper?

16 MS. BISBEY-KUEHN: Yes, we do.

17 CHAIR SUINA: Thank you, Madam Hearing
18 Officer.

19 And thank you for that clarification,
20 Ms. Katz.

21 And thank you, Ms. Kuehn, as well.

22 MS. KATZ: It's been a long two weeks.

23 CHAIR SUINA: It's been a long day. Yeah.

24 HEARING OFFICER ORTH: Thank you.

25 Vice-Chair Trujillo Davis?

1 VICE-CHAIR TRUJILLO DAVIS: No. I'm good.

2 Thank you.

3 HEARING OFFICER ORTH: All right.

4 Member Bitzer?

5 MEMBER BITZER: Ditto. Good, as well. Thank
6 you.

7 HEARING OFFICER ORTH: Thank you.

8 Member Garcia.

9 She said no questions.

10 And Member Honker.

11 MEMBER HONKER: Just thanks to the Department
12 and the other stakeholders for working together so well.

13 No questions.

14 HEARING OFFICER ORTH: Thank you so much.

15 Thank you, Ms. Katz and Ms. Kuehn, again.

16 So I'm delighted that we got to this point
17 where we feel confident that we'll finish tomorrow on
18 this rulemaking hearing.

19 Let me encourage all counsel to review those
20 places where we know we have some witnesses to go back
21 to. I know we'll be hearing on a couple of topics from
22 Mr. Alexander and Mr. Smitherman in particular. That's
23 not a complete list. And also, please if you would
24 review those exhibits that you want to make sure are in
25 the record if they haven't already been admitted.

1 And is there anything else we can do this
2 evening?

3 Remember, also, counsel, one more thing.
4 Sorry. We will have a discussion about the posthearing
5 process. I don't accept verbal closing arguments. So
6 if you have closing argument to make, I'm going to ask
7 you to put that in writing. But that's not how we're
8 going to end this hearing.

9 Ms. Katz, anything else to mention before we
10 tackle our last day?

11 MS. KATZ: I don't believe so. I mean, maybe
12 perhaps if the other counsel are able to just send
13 around their understanding of what we still have left, I
14 am not quite keeping track of that at the moment
15 anymore. So that could be helpful.

16 HEARING OFFICER ORTH: All right. Thank you
17 for that. I have some notes, but they may not be
18 complete.

19 Mr. Hiser?

20 MR. HISER: Yes.

21 I was wondering, Ms. Katz, whether we wanted
22 to put into the record Mr. -- Mr. Palmer's and
23 Mr. Meyer's one-page spreadsheets on that cost
24 calculation just so that that was more readily
25 accessible.

1 MS. KATZ: Yes. I think we should, and so I
2 am -- I can send our -- Mr. Palmer's version out this
3 evening.

4 MR. HISER: We'll circulate it, as well, and
5 move it tomorrow, unless there's, you know, any
6 objections from someone. Thank you.

7 MS. KATZ: Sounds good.

8 HEARING OFFICER ORTH: Anything else from
9 anyone else?

10 No? Terrific.

11 Well, let's start with public comment at 9:00,
12 then.

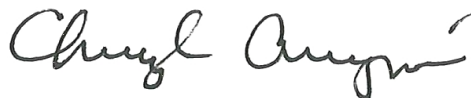
13 Thank you, all.

14 Have a good evening.

15 (Proceedings adjourned at 6:28 p.m.)
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25

1 STATE OF NEW MEXICO)
2) ss.
3 COUNTY OF BERNALILLO)
4
5

6 I, CHERYL ARREGUIN, the officer before whom the
7 foregoing proceedings was taken, do hereby certify that
8 I personally recorded the proceedings by machine
9 shorthand; that said transcript is a true record of the
10 proceedings; that I am neither attorney nor counsel for,
11 nor related to or employed by any of the parties to the
12 action in which this proceeding is taken, and that I am
13 not a relative or employee of any attorney or counsel
14 employed by the parties hereto or financially interested
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