STATE OF NEW MEXICO

DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

OIL CONSERVATION COMMISSION

APPLICATION OF OIL CONSERVATION DIVISION TO ADOPT 19.15.27 NMAC AND D19.15.28 NMAC, AND TO AMEND 19.15.7 NMAC, 19.15.18 NMAC, AND 19.15.19 NMAC; STATEWIDE

CASE NO. 21528

REPORTER'S VIRTUAL TRANSCRIPT OF PROCEEDINGS

DAY 8

January 13, 2021

8:30 a.m.

Hearing Officer Felicia Orth

Chairwoman Sandoval

Commissioner Engler

Commissioner Kessler

REPORTED BY: PAUL BACA, CCR #112
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500 4th Street, NW, Suite 105
Albuquerque, New Mexico 87102

Attorneys Present:

Eric Ames EMNRD

Michael Feldewert NMOGA

Adam Rankin NMOGA

Ari Biernoff Commission of Public Lands and others

Tannis Fox Climate Advocates and others

David Baake Climate Advocates

Elizabeth Paranhos Environmental Defense Fund

Chris Moander AG Office

Sally Malave AG Office

Also Present:

Dylan Rose-Coss Tech Support

John Garcia Tech Support

Florene Davidson OCC Support

I N D E X

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HEARING OFFICER ORTH: Mr. Feldewert?

MR. FELDEWERT: Certainly. If I may have the ability to share the screen, Mr. Coss?

Madam Chair, I think you had -- I know you had a question yesterday about Part 28, and then related to 28.8E2, where it says the operator shall install equipment to measure the volume of natural gas vented or flared from a natural gas system.

I believe you had asked me whether there were -- to check with my client to see whether the midstream operators, the gathering operators, would require any modification to this provision.

I have checked. And because of the nature of their facilities, though not quite as complicated as it is for upstream operators, they felt like they will be able to meet this requirement.

CHAIRWOMAN SANDOVAL: Okay. That's helpful, thank you.

MR. FELDEWERT: You bet. You bet.

With that, Madam Hearing Officer, we would like for call our next witness, Yolanda Perez.

HEARING OFFICER ORTH: Thank you.

If we could have Ms. Perez on the screen.

Your sound is good.

Would you raise your right hand, please?

(Witness sworn.)
HEARING OFFICER ORTH: Thank you.
Please go ahead, Mr. Feldewert.
MR. FELDEWERT: Thank you.

YOLANDA PEREZ,
after having been first duly sworn under oath,
was questioned and testified as follows:

EXAMINATION

BY MR. FELDEWERT:

Q. Would you, for the record, please state your name, identify by whom you're employed, and in what capacity?

A. My name is Yolanda Perez. I work for Occidental Oil and Gas as a senior regulatory consultant of regulatory affairs.

Q. Ms. Perez, how long have you been working in the oil and gas industry?

A. In June it will be 45 years.

Q. And --

A. I've been around a while.

Q. How many different states have you been involved with in your career?

A. In my career, I have worked in regulatory issues in 11 states and, of course, federal issues as well.

HEARING OFFICER ORTH: Mr. Feldewert, I'm sorry to interrupt. There is one person I did not do a sound check with, and that's our court reporter.

Let us make sure we have either Paul or Irene on the line.

(Discussion off the record.)

Q. (By Mr. Feldewert) Ms. Perez, how long have you been involved with New Mexico regulatory issues?

A. 22 years.

Q. And what do you intend to cover with the commission here today?

A. I intend to cover the reporting obligations in the gas capture section.

Q. Just at a high level, with respect to the reporting obligations and the gas capture reporting, what do you intend -- what, essentially, do NMOGA's changes seek to accomplish?

A. They seek to accomplish clarification on a lot of the sections. Mainly, the clarification of the -- on the C 129s, which has already been covered by some others. But also the enhancements that NMOGA is proposing to the C 129, the change in -- or proposing that the C 115 continue to be utilized for

monthly reporting versus the C 115B, and the gas stream line and the gas capture -- the lost gas and gas capture compilations.

Q. Okay. If I turn to what has been marked as NMOGA Exhibit L1 through L2, does that accurately reflect your working experience?

A. Yes, it does.

Q. Okay. It indicates, Ms. Perez, that you were actually involved in field operations for a period of time?

A. Yes. I was a pumper for UniCal, or a field operator, whatever the term, for 13 years.

Q. And as a result, are you familiar with the impacts that reporting obligations can have at the field level?

A. I am.

Q. When you -- it indicates in here that you moved to regulatory reporting, permitting, and compliance sometime in the '90s.

Is that correct?

A. That's correct.

Q. And what did that entail?

A. Well, permitting, regulatory compliance, mainly, and some input of production records.

Q. And then when did you begin your

involvement in New Mexico?

A. Oh, 1998 is when I became involved, where my role expanded to New Mexico, when I started working for ConocoPhillips.

Q. And what were your responsibilities beginning in 1998 with respect to New Mexico?

A. It was also regulatory permitting, compliance, and also working -- that was my first introduction to NMOGA, New Mexico Oil and Gas Association, to work through the issues and the forms and the New Mexico regulations.

Q. Did you also manage regulatory compliance issues for the company?

A. I did. I managed regulatory compliance issues, not only for ConocoPhillips, but for Quantum Resources, and I worked closely with the regulatory group here at Oxy on compliance.

Q. And does that involve monitoring and -- and training other employees?

A. Yes, it does.

Q. Have you served, Ms. Perez, on various advisory panels for New Mexico agencies on oil and gas regulatory issues?

A. I have. And I was on the NMOCD industry advisory panel. I was a member of that, the state

land office.

In the past I was on the industry advisory panel. I have been a member of that.

I participated in the methane advisory panel, mainly on the venting and flaring topic.

I was the -- one of the industry reps on the initial gas capture group that was formed by the OCD, along with other stakeholders, which was the BLM, state land office, and NMED.

And then I worked with the BLM on several rules and policies.

Q. And are you familiar with the rule that has been proposed and published by the division for public comment and review?

A. I am.

Q. And are you familiar with NMOGA's proposed modifications to that rule?

A. Yes, sir.

Q. Okay. Then I want to go to NMOGA's Exhibit A. I think we used that, which is in the small white notebook.

And I'm going to want to go to the -- the Part 28.8G1.

What is involved there with NMOGA's proposed modifications to that particular portion of

this -- of the proposed rule?

A. I'm sorry, Mr. Feldewert. Did you say 28.8G1, or was it 28.7G1?

Q. I'm in NMOGA Exhibit A, 27 -- Part 27.8G1. I'm sorry about that.

A. That's okay.

What NMOGA's proposals are there in G1 was already covered by Mr. Smitherman and accepted by the division on a single event.

And then when we get to G1B3 -- no, B7. Is that where we're going next?

Q. Certainly. So we're in Part 28 -- Part 27.8G3. I believe it is Roman numeral -- Subpart B, and then Roman numeral 7, which is on page 17 in the small white notebook.

I see the addition of some categories there.

A. Yes.

Q. What are you seeking to accomplish there?

A. NMOGA's proposal to ex- -- to bring in the categories from G2, was to have some consistency in reporting of the C 129 events at the time of the event.

And I think that would help -- you know, have the -- you know, data available to the division

on which category these events would fall under.

So we just brought the NMOGA's proposed categories from G2 and brought them into the C 129 process.

And that would also ensure consistency amongst operators filing the C 129s, and give the division the transparency that they would like for the cause of the event at the time of the event.

Q. Now if I look at NMOGA's Exhibit L4 -- and we'll leave this up for a minute.

But if we will turn to the large notebook and we look at NMOGA's Exhibit L4.

A. Yes.

Q. Does that contain a list of the categories that we see here on the screen in NMOGA Exhibit A?

A. Yes. It is the NMOGA proposed categories that are listed in Exhibit L4.

Q. Okay. And you mentioned your proposal is to report under these categories used initially in the C 129?

A. Yes. They will then be able to tie those events to the C 115 -- the NMOGA proposed C 115 reporting, monthly report, by having them also on the C 129.

Q. Okay. Now, I'm going to switch over to

NMOGA's exhibits here.

I'm going to skip down to L4, which I believe is where you are.

When I look at L4, I see you call this disposition -- C 115 disposition codes?

A. Yes. The other intent of bringing in those to the C 129 is that by NMOGA's proposal to utilize the existent C 115 for reporting, NMOGA took a first stab at just, you know, creating some non-transport disposition codes, based on the single character that NMOCD currently uses for their C 115s, and used some letters that are currently being used, and brought -- you know, to identify the -- whether it's a vent, where the event is a vented event or a flared event. And so we utilized codes for those.

And so by -- also, by including these in the C 129, would align with the C 115 reporting. And this is our attempt to not need the C 115B and stick with the current C 115 reporting.

Q. This is an upstream issue only.

Right, Ms. Perez?

A. Yes, it is.

Q. When I look at Exhibit L4, I see on this -- it says vent code and a column that says

flare code.

Is that what you see for characters?

A. Yes.

Q. And I want to bring up on the screen, then, an example, I believe, of a C 115.

Did you provide this to me?

A. Yes, I did.

Q. Okay. And is this from an actual filing by Oxy?

A. It is. I blanked out the -- the property and the API numbers to protect the innocent.

But that's okay.

Q. But is this an example of a document that you would see in the division -- in the public record in the division's log -- in the division's files?

A. Yes, it is.

Q. Okay.

A. You can query this information from their website.

Q. Okay. And when you talked about using the disposition codes that we saw on prior -- on Exhibit L4, where would that be utilized?

A. On this example, you know, as folks may know, the C 115s are reported -- will start from the

pool and then it goes to a property level, and then it breaks it down after that.

You see underneath, that there is a column called -- that's labeled DIS, for disposition.

Q. All right.

A. And then down -- down there, there is a Code F. And that's the flare code that -- back in 2015, as part of the initial gas capture, that's when we initiated the flare code, the F code, and broke out vented and flared volumes that should be reported separately. They started to be reported separately in November of 2015 production.

And so this is where you see that disposition for -- for flared and vented volumes under the DIS column.

Q. Okay. And right now, this particular DIS -- in the DIS column, you see that F next to December 30, 2020?

A. Correct. Yes.

Q. Now if you go to the right, you go to gas, other, and it shows 62?

A. That's the volume of gas flared for this property.

Q. Okay. And if I go back to the NMOGA Exhibit L4 --

A. Yes.

Q. -- I see -- on the right-hand side, I see a -- the F, second from the bottom?

A. Yes.

Q. Okay. Would you explain, then, where -- where would these other codes go that we see here on your proposed column?

A. They would go in that same -- in that same disposition column based on -- you know from our proposal, they would go in that same disposition column as the current MV code.

Q. So if you had a volume, for example, that was flared because of an emergency, what would go in that -- that column?

A. The disposition code would be E, as -- as we proposed it.

Q. Okay. And so going back to the sample monthly report --

A. Yes.

Q. -- is that an F that we see under DIS -- the DIS column, we would see an E in that scenario?

A. Yes.

Q. And then there would be a volume associated with it?

A. Yes.

Q. Okay. All right.

A. And the only time you'll see an F or any non-transport disposition code in that column is if there is a volume.

If there is no volume, or there is no flare or vent volume, you will not see a disposition code with zero or anything. It will just be blank. It won't be there.

Q. There was some concern discussed about changing this form due to its -- due to the fact that I believe it's utilized by the taxation and revenue department and state land office to track production volumes?

A. Yes, I heard that concern from Madam Chair.

Q. When the division required you to begin tracking volumes using -- in this case it was an F disposition code, when did you say that occurred?

A. Back in 2015.

Q. Okay. Was there any problem implementing that process with respect to the use of this form by the taxation and revenue department and the state land office?

A. No, there wasn't anything brought up at that time, when we introduced the F code.

Q. And does the introduction of these codes, to track vented and flared volumes, does that impact the aspect of this report that is utilized by the taxation and revenue department and the state land office?

A. No, sir, it's not. Because it will still -- what the -- the tax and rev focuses on is volumes. And so that -- that's not going to change anything in this report.

And the state land office utilizes it -- you know, they get their information also, their production information and all they need here too.

So it will all still be here, including the -- the venting and flared volumes for the different categories, as proposed by NMOGA.

Q. So if NMOGA's proposal is adopted, the -- using the C 115, you would still have the same columns that you see now, right?

A. Yes.

Q. Okay. And we would still have, then, a disposition column?

A. Yes.

Q. And instead of -- and then when it comes down to disposition, am I correct that you may -- rather than just having F, you may have, for

example, in addition to that, E, if it's flared for an emergency?

A. Yes.

Q. Or J, if it's a nonscheduled maintenance or malfunction?

A. Yes.

Q. On down the line, similarly for each one of these letters?

A. Yes. That's our proposal.

Q. And that would disclose the volume that was flared or vented on that C 115?

A. Correct.

Q. And the division would have it.

Is that correct?

A. Yes.

Q. And the state land office would have that information?

A. Yes, sir.

Q. Okay. If I turn to your next exhibit -- or let me ask you, Ms. Perez.

Is there anything else we wanted to cover here?

A. No. Again, these are just codes that we worked with, based on what were already existing on the non-transported disposition codes, captured that

same format, and came up with these.

We were running out of letters, so that's why we don't want more categories.

No, I'm just kidding.

Q. Is -- this type of disposition code reporting, would that be compatible with operator -- existing upstream operator accounting systems?

A. I'm sorry. Would you reask that question?

Q. Certainly. Would -- utilizing these various code letters, would that be compatible with operator accounting systems?

A. Yes. It's -- after tech support gets them implemented. But yes, those would be compatible.

Q. Okay. And if I turn to the next exhibit, Exhibit L5, does this help illustrate the benefit that would occur from your proposal, to enhance the C 129 and then use the existing form C 115 for upstream operators?

A. Yes. The C 129 would include the report of measured or estimated volumes, as does the -- the C 115. And it would cause -- the C 129 will include the cause and nature of the venting and flaring.

And then the C 115 would -- by category, would include that information. And we would be reporting on the C 129 by the event, and then we

would report monthly on the C 115.

And then the -- so the C 115B is asking for the same things. But then you know, it's also duplicative of -- as per our proposal, so we would prefer to utilize the C- -- the current C 115.

Q. And then would the -- under your proposal, would the C 115B still be utilized by gathering systems?

A. It will. Because currently, the gas gathered in the midstream, our midstream partners don't have a way to report any -- they don't currently report anything monthly to the division. And so we feel that the C 115B could be used exclusively for the midstream Part 28 operators.

Q. And if it was used exclusively for midstream, would that allow the division to design it for midstream operators?

A. Yes, it would.

Q. Okay. Anything else on this topic, Ms. Perez?

A. No, sir.

Q. Okay. Then I want to go to Subpart G1D in NMOGA's Exhibit A.

A. Okay.

Q. We see a language change here.

Now, Ms. Perez, do we also have a similar language change in Part 28? I think it's F1D?

A. Yes, we do.

Q. Okay. When you and others at NMOGA looked at this provision, what was the concern? What -- was there confusion that arose?

A. There was. We -- we became concerned, because this was -- the reporting of releases, as defined in G1, was -- were also required in Part 29.

And so our concern was that -- do we report both? I think the division has clarified that they want only one on the C 129.

But I think the division would -- I would like to know that the division would like me to update Part 29, to conform to the requirements they now have in Part 27, so that operators have certainty of compliance with not having to report them also on the C 141.

Q. With the language that was crafted by the division, was it clear that operators only had to report gas releases using the C 129?

A. No. It didn't specify not to follow the C 141. So...

Q. And so does NMOGA's proposed modification, in your opinion, make it clear to operators that you

don't have to file a C 141 where you file a C 129 for gas releases?

A. It does. And that the C 141 would be utilized for the liquid releases.

Q. Okay. Now, I believe there's also a corresponding change later in this rule that was done for the same reason.

Isn't that right, Ms. Perez?

A. That's correct. It was in the alarm section.

Q. Okay. So if I go down just real quick to -- I think it is 27.9B3 on page 22 of NMOGA Exhibit A.

I'm trying to find it. It shows up under what used to be Subpart 3D, as in David.

I'm sorry -- 3 -- Subpart 3C, as in Cindy?

A. That's right. That's right.

Q. Okay. I see that NMOGA has proposed to strike "or form C 141."

A. Yes. Because the events would be -- the gas release events would be filed on a C 129.

Q. Okay. All right.

Then I want to switch topics here, again, Ms. Perez, unless we -- is there anything else we need to cover there?

A. No, sir.

Q. Okay. Then let's go to the Part 28, which is Exhibit B. And I believe there was a change that was unique to Part 28 in Subpart 28.8F2.

Let me see if I can get there.

On page 12 of NMOGA's Exhibit B.

A. Yes.

Q. What change was that, Ms. Perez, and why was it done?

A. We -- we just changed that to be a monthly reporting of natural gas volumes for the midstream operators, because it would be more than just the vented and flared volumes. It would also include a gas gathered volume.

Because the division and the midstream operators would need their gas gathered volume to be able to calculate their -- their lost gas and their gas capture percentage.

Q. Okay. And this was -- so this was a change purely for clarification?

A. Yes.

Q. Okay. All right.

Now, we also had some proposed changes here to the time lines for the reporting. I believe that the division has, likewise, made a similar --

agreed with this change?

A. Yes. We made this change in Part 28 and in Part 27.

And the division has accepted those modifications.

Q. Okay. All right.

And I want to ask you more detail about -- we see a change here in Part 28F2, and also in Part 27G2.

Before the date January of 2022 it says, "unless otherwise approved by the division, beginning January of 2022, the operator shall submit a form C 115B monthly."

Do you see that?

A. Yes.

Q. Okay. Would you explain -- since you're familiar with these systems, Ms. Perez, would you explain why NMOGA has proposed this change to allow some discretion here by the division on the implementation date?

A. Yes. There is going to be some challenges with the implementation of any of the reporting, whether that be the C 115B for the midstream Part 28 operators or on the C 115 for the -- on NMOGA's proposed C 115, because our production accounting

systems have some challenges with implementing changes.

Q. Have operators been able to even start the implementation of those changes yet?

A. No. We work with third-party vendors on our systems. They don't even begin any changes until the rule is final.

So we can kind of speculate and provide some information on what might be expected. But until the rule is final, there's been -- we can't begin at this time with our systems.

Q. Have you -- have you been in touch with contractors about what is going to be necessary and how long it's going to take to implement the changes once the commission finalizes the rule?

A. I have been, through our production accounting. I have reached out to our production accounting folks that reach out to the contractors or the third-party vendors, and we've had some conversations around the -- the time -- time line of implementing changes.

Q. And what -- what do you understand, in terms of the time frame, it's going to take to implement the changes once the commission identifies what's going to be required?

A. It could be anywhere from 12 to 18 months.
Q. That seems like a long period of time.
A. Yes. There's a lot of moving pieces.
Q. Okay. Would you -- I want to talk about that in a minute. Okay?
A. Okay.
Q. But before we get to that point, when you're dealing with monthly production volume accounting, Ms. Perez, what is the standard that operators must follow?
I think Commissioner Sandoval asked, What's the bar? I mean, what do you have to -- how much -- what's the certainty that's required when you are dealing with monthly production volume accounting?
A. The certainty that's required is one, accuracy. As we saw on the detailed C 115 report, this is the production reporting that we are used to utilizing for the purposes of paying royalties and the purposes of taxes. Taxes.
So those -- so that is our -- what we consider the accurate volumes for that type of reporting.
Q. Okay. And how much -- how do you arrive at the accuracy that's reported?

A. We arrive at the accuracy that's required by utilizing volumes that can be accurately measured and estimated.

Q. Okay. Now, you have mentioned the time frame involved to implement the changes that would be required once the commission finalizes the rule.

Can you -- is there an exhibit that helps illustrate the -- as you put it, all the various moving parts that are involved and why this is so difficult to implement these types of changes?

A. Yes. It's Exhibit L6.

Q. Okay. I'm going to put that up on the screen.

Would you first orient us to this exhibit, and then walk us through it and explain why this is not -- you can't just push a button, why this isn't easy to do?

A. Yes. I guess when I reached out to our production accounting group, and I said, Can you send me a diagram of, you know, how these systems, you know, interact? And this is what I got.

So this is an illustration of how complex the systems are -- the systems are.

But it starts from the field, the field data capture section, and then it feeds -- and

another system that's usually -- for Oxy, there's a -- and other companies, there's at least three systems.

So there's a field data capture system, and then an allocation system that then feeds into the production revenue accounting system.

So this is the illustration of that type of complexity.

But the main purpose of these systems is proper programming, to ensure accurate accounting of volumes, sales volumes, beneficial use, venting and flaring, for production reporting to the state and federal agencies, as well as for calculation of severance tax and royalty payments.

Most operators have a similar form of data collection and reporting.

These systems are also used for revenue reporting, for financial reporting, expense allocation, joint interest billing, engineering, economic evaluation, reserves calculations and property tax calculation, among other things.

So all of these systems have to play a big part in all of the -- the evaluations and analysis, as well as production reporting for the company.

It -- I want to start with the first

column of the -- the wells are -- when the well comes online, our new facility is initially set up by our production accounting group. So that's where the -- the meters, the tanks, the vessels, any meter for allocation or sales or vented and flared meters, those are all set up.

And then they tie them to a field operator pumper route. And that's how the setup initially starts for the information to exist in the field data capture section, so that then it can be the -- we can start collecting information.

So that's called the eBIN -- for the purposes of this line, it's eBIN. And eBIN is the system where the pumper --

Q. I hate to interrupt you.

A. Yes, sir.

Q. Can you spell that acronym?

A. It's eBIN. It's a little e-B-I-N.

Q. I'm sorry to interrupt you. Go ahead.

A. That's okay.

So eBIN is the system where the pumper will mainly enter any vented or flared events, as -- as the meters can't determine what that is, so they have to manually enter the information.

And so the production data may be fed to

the system by automation, but most requires manual intervention.

This will vary from company to company. But some companies are likely -- could be almost 100 percent automated, while others are 100 percent manual. So it just depends on the company.

This means that, you know, the changes, even that we're proposing or that the division is proposing, means that every company must train all of their field operators to -- you know, for the reporting categories, to make sure that they are entered properly in this field data capture system called eBIN.

And for -- as an example, for Oxy, that would include at least 341 operators. So that's, you know, why we know it's important for the simplicity and clear definitions and descriptions are essential for accurate reporting.

So eBIN. And then there's ProCount. And that's the system that's used for allocation.

That system then feeds S-A-P, referred to as SAP. And SAP stands for systems applications and products and data processing, products and data processing. And that's the commonly-used system for production and revenue accounting.

What I'd like to point out about all three of these systems is that these are -- as I've mentioned before, these are third-party systems, and there's a wide range of changes that require a formal process. Any wide changes require formal process by those third parties that requires a level of approvals for them to even start -- begin to make any changes.

And then the rule would have to be finalized. The final rule would be reviewed and analyzed and understood by the third parties, to begin discussion with customers.

The venders -- I keep going back and forth. The vendors, third parties, that's the same thing. They have multiple customers in New Mexico, and each operator may require different setups, depending on their current setup, to report.

And then next would come the programming revisions and updates. And then the setup for each customer would have to be piloted and tested prior to rollout.

And like I've mentioned, this could take a -- this process could take 12 to 18 months to complete.

Once it's completed -- once it's

completed, the new C 115 report can be generated to satisfy the division's required reporting.

And in the interim reporting, while this is going on and we're trying to get these systems updated and implemented, the division has also put in D2 that they would, beginning in July of 2021, that they would want a quarterly report submitted in a format specified by the division.

So we could then continue that type of reporting until we can get our systems implemented. And that was why we added, "unless otherwise approved by the division," Mr. Feldewert.

Q. All right. So that's the purpose for it. In other words, let me step back, Ms. Perez.

A. Yes, sir.

Q. Operators are going to try to get this done, right, get their systems set up to accomplish this?

A. We are, yes. And even through that process, and after we -- NMOGA has never pushed back on enhanced reporting to the division. We would, you know, just want the division to consider the difficulties and challenges in doing that.

But we have always supported enhanced

reporting to the division, NMOGA has.

Q. And all NMOGA's language seeks to do is provide an opportunity, that if we're getting up against this deadline and you're unable to get the vendors to accomplish what's necessary, that you can approach the division and get some relief from this January 2022 requirement, which is now roughly a year from now.

Right, Ms. Perez?

A. Yes, sir. Less than a year from now.

But -- yes. Yes. But again, this is going to be a challenge, no matter if it's the C 115 or the C 115B.

Q. And I think it's also important here -- or it is important, Ms. Perez, the fact that we -- you know, we're not going to know what has to be done until the commission is able to actually enact the rule, correct?

A. That's correct.

Q. Okay. All right.

Anything else on this topic, Ms. Perez?

A. Also, I'm pretty sure that the division would also need to modify their systems as well. So I think they're going to need some time for the systems to be modified on both the operator and the

division.

Q. Okay. And on this reporting, we've talked about -- Ms. Perez, you were here -- witnesses have talked about the reporting categories and why NMOGA has proposed to strike certain reported categories.

You've been here for that testimony?

A. Yes, I have.

Q. Okay. I want to ask you.

One category, that has not been addressed by other witnesses in any detail, is NMOGA's proposal to strike the "other not described above category" that we see both in Part 27G2 and in Part 28.8F2.

Can you explain --

A. Yes.

Q. Can you explain NMOGA's concern with that category, and why it has proposed to have it stricken?

A. Yes, sir. Our concern with that one is the uncertainty of what would go in that category.

NMOGA felt that with the categories that we did -- did not strike, or do categorize all the events appropriately, we couldn't think of any other ones that were needed. And we were concerned that the "other" category might be a -- a catchall for

events that may be emissions and not waste.

And so we struck "other" for that purpose.

Q. Now, are you familiar with the accounting that is to occur for the gas loss and gas capture percentage?

A. Yes. And that was another reason, because the loss -- that category would be counted against the operator on their gas capture percentage.

Q. So the language proposed by the division did not have any other categories, correct?

A. No, sir, it did not.

Q. What -- based on your reading of the rule and involvement, what did you understand the purpose of the gas loss calculation and the gas capture obligation to be? What was -- what did you understand the focus to be when this was being developed?

A. Well, as has been discussed by others, this was a NMOGA effort. And it was always our -- our understanding that the purpose of the rule was to reduce waste and not address emissions issues.

So that was what we felt the purpose of the rule was.

Q. And what did you understand as the focus of the 98 percent benchmark that everyone's going to

try to reach over the next five years?

What did you understand the focus of that 98 percent to be?

A. NMOGA understood the 98 percent capture was focused on waste categories, or are focused on the potential of waste categories. And so those are -- that was our understanding.

Q. Okay. And if the -- if that's the focus, is it important to examine the categories that go into the equation, to arrive at that gas capture percentage?

A. Yes. That -- that was the purpose for the categories that we kept, because we do feel those categories are focused on potential waste.

Q. Okay.

A. I said "we" -- NMOGA's proposed.

Q. And if I look at Exhibit L4, what you've just described, are these the categories you've discussed as the reporting categories under G2 and then F2, to the extent they're applicable to midstream operators?

A. Yes. These would not be applicable to midstream, because these are -- oh, the categories.

Q. Sorry, the categories.

A. Yes.

Q. Okay.

A. Yes, these are the categories.

Q. And how would you describe these categories? What's their focus?

A. The focus of the -- of these categories are surface waste. And they would be -- you know, we could accurately measure or estimate these volumes on these categories.

Q. And do these categories include all the potential sources of surface waste, as you understand that term is defined?

A. Yes. Yes, they do.

Q. Okay. All right.

And I want to move to the mechanics of arriving at the gas capture percentage. Okay?

A. Okay.

Q. Am I correct in saying that that starts first with calculating the lost gas or potential waste?

A. Yes.

Q. Okay.

A. Yes.

Q. Let me go to -- let's see here.

Let me go to NMOGA's Exhibit A, and I'm going to go up to Subpart G.

Now Subpart G is part of the process of arriving at the gas capture percentage.

Is that correct?

Ms. Perez?

A. I'm sorry, Mr. Feldewert. Where are you?

Q. Subpart -- I'm trying to get to 28 -- 27.8G.

A. Yes, sir.

Q. And we've talked about G2. And these are the -- this is where we start the process of arriving at the lost gas and gas capture percentage, right?

Is that correct?

A. Yes. From the process of reporting, yes.

Q. Okay. And then I want to talk about the changes that NMOGA has proposed to Subpart G3.

What does G3 involve here? What is being done in this section?

A. In this section, it's where the lost gas is being calculated, as well as in NMOGA's proposal, the gas capture percentage.

Q. Okay. And when operators first looked at this language, including yourself, did you understand how it was to be done?

A. It was a little confusing. There were

several of us trying to come up with a formula, as we read through the language. And even though you see a lot of red here, it looks like we made it more complicated. But I think we tried to simplify it.

It was just confusing, as written by the division.

Q. All right. And what did NMOGA attempt to accomplish with these -- the redlines that we see here?

A. Simplicity and clarification.

Q. All right. And would you ex- -- do you have an exhibit that explains the clarification and simplicity that NMOGA sought to accomplish with these changes?

A. Yes. It's Exhibit L7.

Q. Okay. All right.

Why don't you -- I'm going to lay the language up on the screen. And with the help of L7 in the notebook, can you just explain to us what NMOGA's -- how NMOGA approached this, to make it more simple and understandable?

A. Yes. Once we understood what the categories were that would determine what your lost gas volume is, we just focused on adding up those lost gas categories. And that's basically how we

simplified it and made it as what NMOGA feels is more simple for operators to understand and follow.

And we did that in Part 27 and in Part 28. And so that was our approach to simplify this calculation.

Q. Okay. Why don't you walk us through this.

A. Okay. So again, we -- NMOGA's approach was to simply add the categories that would be considered lost gas, which would be the nonscheduled maintenance and malfunction, routine repair and maintenance, insufficient availability of capacity.

And as per NMOGA's proposal, anything in excess of eight hours that is caused by an emergency, unscheduled maintenance or malfunction by a gas gathering system.

By -- in calculating, utilizing what's the addition of what those categories are, then you've got your lost gas volume.

And then --

Q. Go ahead. I'm sorry.

A. I was just going to move into the next one, but go ahead, Mr. Feldewert.

Q. Well, I was going to say, once you have your lost gas volume, that's what would be calculated under 3A.

Is that correct?

A. Yes. Your lost gas volume would be calculated under A.

Q. Okay. And we have -- under NMOGA's proposal, you actually have a formula to illustrate the calculation?

A. Yes, we do. It's lost gas equals nonscheduled maintenance and malfunction plus routine repair and maintenance plus insufficient availability or capacity plus volumes in excess of eight hours for -- that is caused by an emergency -- caused by an emergency, malfunction, or mal- -- or I mean unscheduled maintenance or malfunction of a natural gas gathering system.

Q. And in your opinion, is it helpful to not only have the words, but, where possible, have a formula that operators can see and follow?

A. Yes. I think, for clarity, that it would help, yes.

Q. Okay. And then what is accomplished under the changes to subpart 3B?

A. Well, once you have your lost gas calculated, then we simplify B to just be that -- to calculate your gas capture percentage, you're going to take your produced gas, as reported on your

C 115, minus what you just calculated as your lost gas, and then divide it by a produced gas to come up with your -- your monthly gas capture percentage.

Q. All right. And is this, then -- these monthly calculations, are they then utilized to roll up into your yearly gas capture accounting?

A. Yes. Yes, they are.

Q. And I believe that's done in -- is it, at least for the upstream portion, it's Part 27.9B?

A. Yes. 27 -- yes, that's correct.

Q. And that would -- let's see if I am in the right spot. There we go.

And that would be page 22 of NMOGA Exhibit A?

A. Yes, sir.

Q. And I believe that there's -- of course the same changes are made in Part 28, dealing with the midstream, at 28.10B.

Is that right, Ms. Perez?

A. Yes.

Q. Okay. Now, would you explain -- first off, would you -- now that we've had the monthly figures, how is that then incorporated into the determination of the annual gas capture percentage?

A. So now that you have calculated your lost

gas, and then you get to your annual gas percentage, the only thing left to deduct would be your ALARM credits for your lost gas.

So it would be your produced gas minus, parentheses, lost gas minus ALARM, and then divide it by produced gas.

And we also included a formula here for clarity.

Q. And is this formula and this clarity reflected on NMOGA Exhibit L7 at the bottom?

A. Yes, it is.

Q. Okay. I see a change here, where you adjusted the -- what appears in Subpart B. And I'm looking about halfway through it. And it used to say February 15, and NMOGA has suggested February 28.

Given your reporting experience, can you explain why NMOGA has proposed that change?

A. Because the C 115 reports are due on the 15th of the month. So we felt we needed a little bit of time, once we -- that report has been filed, to then analyze, review it, and then make the certification required by the section of our gas capture percentage.

Q. Okay. Is there anything else we need to

cover here, Ms. Perez?

A. No, sir.

Q. Okay. I believe there's one last topic, and it relates to NMOGA's proposal to use -- for upstream operators to use the existing form C 115, rather than a new form C 115B.

Right, Ms. Perez?

A. That's correct.

Q. And if we look at NMOGA Exhibit A, and we go all the way to the beginning, the very first page involves a different portion of the rules that are being modified here by the division.

And if we're not in Part 27 or Part 28, we're in Part 19.15.7.25.

Do you see that up on the screen?

A. Yes, sir.

Q. Okay. And there's one change that is being proposed here by NMOGA.

Can you please identify it and explain why?

A. Yes. Since -- with NMOGA's proposal utilizing the C 115 in this Provision A, then the operator shall file form C 115B, would only be required as per Part 28 and not Part 27.

Q. Ms. Perez, based on your experience, does

NMOGA's proposed modifications streamline for operators the monthly calculation of lost gas in the gas capture percentage?

A. Yes, it does.

Q. And in your opinion, does it provide the operators with the language and the formula that's easier to understand, but accomplishes what we understand to be the division's goals?

A. Yes.

Q. And do they likewise -- NMOGA's modifications -- clarify how you arrive at the annual gas capture reporting percentage?

A. Yes.

Q. And will NMOGA's proposal allow operators to utilize their monthly reports to then roll up and create the -- the annual gas capture report?

A. Yes, and they can always keep up with where they are within their gas capture, to determine compliance, to continue to get permits to drill, and how to file their gas management plan, so that it all ties together.

Q. Okay. And in your opinion, do NMOGA's proposed modifications focus these proposed regulations on the reduction of unnecessary or excessive surface loss without beneficial use?

A. Yes, they do.

Q. And would it, thereby, leave issues related to the emissions control to the New Mexico environment department?

A. Yes, sir.

Q. Ms. Perez, were NMOGA Exhibits L1 through L7 prepared by you or compiled under your direction and supervision?

A. Yes, they were.

MR. FELDEWERT: Madam Hearing Officer, I would move the admission into evidence of NMOGA Exhibits L1 through L7.

HEARING OFFICER ORTH: I will pause for a moment, in the event there are objections to NMOGA Exhibits L1 through L7.

L1 through L7 are admitted.

(Exhibits admitted, L1 - L7.)

MR. FELDEWERT: Madam Hearing Officer, I pass the witness.

HEARING OFFICER ORTH: Thank you very much, Mr. Feldewert.

Mr. Ames, do you have questions of Ms. Perez?

MR. AMES: Yes. I just have a couple of questions for Ms. Perez.

EXAMINATION

BY MR. AMES:

Q. Good morning, Yolanda.

A. Good morning, Mr. Ames.

Q. So, Ms. Perez, you are proposing that the commission adopt a rule to use C 115, the form C 115, rather than the form C 115B that the OCD has proposed.

Is that right?

A. That's correct.

Q. And you are aware that a C 115 is reporting on the basis of taxable property, right?

A. Yes, sir.

Q. And you are aware that some taxable properties have multiple wells on them?

A. Yes, sir.

Q. And I assume, then, you are aware that the F code in the C 115 example that you used doesn't have an API number, because it's being -- because the report is by taxable property not by well.

Is that right?

A. That's correct.

Q. And you're with Oxy, right?

A. Yes, sir, I am.

Q. And you're familiar with the -- well unit?

A. Oh, I've heard it. I can't say that I'm familiar with it.

Q. That is an Oxy property?

A. Yes, sir, I do believe.

Q. Okay. Were you aware -- so I assume, then, even though you are familiar with the unit, but not necessarily the details, you are not aware that that unit, that that taxable property, that single taxable property, has 20 wells on it?

A. Oh, I -- it wouldn't surprise me. I'm used to working with units in the San Juan Basin as well. And there's lots of wells, lots of property, yes, sir.

Q. Specifically since you're familiar with it generally in the San Juan Basin, did you know that NMOGA's operating has the Rosey unit with 564 wells on a single taxable property?

A. I -- I'll take your word for it.

Q. It wouldn't surprise you?

A. No, it wouldn't surprise me.

Q. Yet, your proposed C 115 lumps together all venting and flaring for all the wells on a single taxable property, doesn't it?

A. Yes, sir, it does.

MR. AMES: Thank you.

Nothing further.

THE WITNESS: You're welcome.

HEARING OFFICER ORTH: Thank you, Mr. Ames.

Mr. Biernoff, do you have questions of Ms. Perez?

MR. BIERNOFF: Nothing that hadn't already been covered, Madam Hearing Officer.

Thank you.

HEARING OFFICER ORTH: Thank you.

Ms. Fox or Mr. Baake?

MS. FOX: No questions, Madam Hearing Officer.

Thank you for your testimony, Ms. Perez.

THE WITNESS: Thank you.

HEARING OFFICER ORTH: And, Ms. Paranhos?

MS. PARANHOS: Thank you, Madam Hearing Officer.

I have no questions for this witness.

HEARING OFFICER ORTH: All right. Thank you.

Commissioner Engler, do you have questions for Ms. Perez?

COMMISSIONER ENGLER: Thank you. No, I do not.

HEARING OFFICER ORTH: Thank you.

Commissioner Kessler?

COMMISSIONER KESSLER: I do. Thank you.

HEARING OFFICER ORTH: Okay. Madam Chair?

COMMISSIONER KESSLER: I do have questions.

HEARING OFFICER ORTH: Oh, I'm sorry. Please, go ahead.

EXAMINATION

BY COMMISSIONER KESSLER:

Q. Good morning, Yolanda. It's nice to see you.

A. Good morning. It's nice to see you, Commissioner Kessler.

Q. I'm going to save my C 115 questions for the witness who will be here from the state land office. I'm hoping that he can address the C 115 and the changes that would affect the system.

But are you familiar with how and why the state land office uses C 115 data?

A. I -- yes, I am somewhat aware that they use it also to understand if the state leases are producing and producing a paying quantity -- quantities, and the royalty payment as well.

Q. That's for audit and for royalty payments.

Are you familiar with the OnGuard system that the state land office uses?

A. I am somewhat familiar. I remember the OnGuard system was the one that used to bring all the OCD's tax and rev and state land office together, and then they kind of split that out.

And I think tax and rev does their thing. But I think you still utilize the OnGuard system, to my understanding.

(Discussion off the record.)

Q. (By Commissioner Kessler) Would it surprise you to know that very few updates have been made to the OnGuard system since it was originally conceived?

A. It would not surprise me.

Q. And are you familiar with how challenging or not challenging it might be to make updates to that system?

A. I would assume it's probably just as challenging as it would be for us, is how I kind of explained our challenges with updating the systems.

Q. I wanted to see --

COMMISSIONER KESSLER: Mr. Feldewert, could you bring up the provision -- I believe it's in 27 -- Part 27G, where NMOGA has proposed to -- to

be able to request relief from the division from reporting requirements if they're not able to timely.

Fulfill those requirements?

I can't find it exactly.

MR. FELDEWERT: Certainly. Hold on one second. I believe it's 27...

THE WITNESS: On page 18.

MR. FELDEWERT: Page 18?

THE WITNESS: Yes.

MR. FELDEWERT: I am bringing it up now, Commissioner Kessler. I hopefully have it up on the screen now.

COMMISSIONER KESSLER: There it is. Thank you.

Q. (By Commissioner Kessler) So do I understand that the potential for operators to seek additional time to fulfill reporting requirements, is that what this provision is requesting, Ms. Perez?

A. That's the intent, yes, Commissioner Kessler.

Q. In your knowledge and experience, if an operator needs relief from a division rule, can an operator request a hearing seeking relief?

A. Yes, ma'am.

Q. And is that true regardless of whether there's an explicit provision in the rule -- in the allowing -- or indicating that a hearing would be available?

A. That could be -- it could be true. It could be, I guess implied, yes, ma'am.

Q. So regardless of whether there's expressed authority in the rule for an operator to seek relief, an operator could request a hearing anyway, right?

A. I would hope so, yes, ma'am.

COMMISSIONER KESSLER: Those are all the questions I have.

Thank you.

HEARING OFFICER ORTH: Thank you, Commissioner Kessler.

Madam Chair?

CHAIRWOMAN SANDOVAL: I do have questions.

Thank you.

EXAMINATION

BY CHAIRWOMAN SANDOVAL:

Q. I'll ask my normal questions to start off with.

Do you support the rule?

A. I support the intent of the rule. Yes, I do.

Q. In your experience in previous rule makings, do you feel like this has been a collaborative process?

A. I do feel it has been a collaborative process. I would hope that that collaboration continues to implementation of the rule.

Always want to be helpful.

Q. Thank you.

Are you an expert in either the state land office or the tax and rev systems?

A. No, ma'am, I'm not.

Q. Are you an expert in OCD IT systems?

A. No, ma'am, I'm not.

Q. Okay. I think -- so in some of the questions that Mr. Ames just asked, it sounds like -- so in the C 115 reports, everything is reported by property. That could be between -- it sounds like 20, and in the example of Roxy 500, and some other examples anywhere in between.

How would the division, in the NMOGA proposal, get well-by-well data in the NMOGA proposal?

A. Madam Chair, I'm not sure. Are you saying

that the rule says it's on a well-by-well basis that we need to report?

Q. No. What I'm asking is: In the NMOGA proposal, you're proposing to keep it on a property basis in the original C 115.

So my question is: Would there be a way to get well-by-well reporting data in that proposal, in the NMOGA proposal?

A. I guess if we would add the disposition codes to the well we could, because of the well production data.

Q. But in the way that it's proposed right now, there wouldn't be a way, correct? It would have to be changed? Or is there?

A. Well, we're just -- yes. We're working with the current C 115 makeup, or how it's -- so we would propose to continue to do that. But...

Q. So there wouldn't be a -- so go ahead. I'm sorry.

A. Well, you're asking about on a well-by-well basis. Is the -- is that the intent of the division, to want those on a well-by-well basis?

Q. I can't speak for what the division's intent was. That's how I believe their rule proposal reads right now.

I guess what I'm asking you is, if -- if the commission were to decide to go with NMOGA's proposal, how would -- how would the division ever get well-by-well venting and flaring reporting?

A. They would get the vented and flared reporting just as they do now, with the property. Because what we're going to do with that on the property level, is just then allocating it back to the wells.

Q. But it -- the division would not get well-by-well data reporting, correct?

A. That's correct.

Q. So how would the division be able to ever trend data to see if there are specific wells that are of a particular -- maybe problem, high venting and flaring, something like that?

A. I think that they -- okay. I'm sorry.

The way that -- most facilities are set up with a flare meter at the facility. So the -- there's not necessarily on a single-well basis.

So the facility is the one where the flaring is occurring, and then that's what gets allocated back to the properties that are going back to that facility.

I understand from -- like in some cases,

where there's single-well facilities, that might be -- it might be just attributed to that particular well.

Q. But even if I changed my question to how would the division ever get a facility -- information on a facility to trend and see if that facility was maybe a problem, high venting and flaring volumes continuously, there would really be no way in the data that the division would be getting under NMOGA's proposal, correct?

A. No. It would just be on the property level.

Q. And NMOGA doesn't think there's a problem with that, I take it?

A. Well, I think that you would still have the information. I mean you get it now, right, for vented and flared volumes now. And so you can still look at a property and understand where the flaring is occurring.

So -- and then you're going to get the C 129 that's going to tell you individually what the events are, as per proposal, what's on -- the events that are occurring and what the volumes are.

Q. But the C 129 is only for volumes vented for over 50 MCF, correct?

A. That's correct.

Q. It would not count volumes under 50 MCF, correct?

A. It would not count volumes under 50 MCF, but that doesn't, I don't think, mean that they are not being reported. It's just not required on a C 129.

Q. So let's maybe take that example, then.

How would the division ever be able to audit that information? So for example, maybe -- maybe there is a small event that is under 50 MCF, so the operator claims -- and it comes to the attention of the division.

The division wants to ensure that that is being reported in the monthly data, so they go and they look at the monthly data. And I don't know, it reports 200 MCF for that entire property, which may be 500 wells.

How would the division ever be able to audit and/or validate that that venting that happened that was under 50 MCF actually got rolled up into that 200 number?

Would there be a way?

A. The only way that you would get that is by aggregating the C 129s for that property. And then

if there's anything that's not -- you know, that's over that, that's on the C 115, that would be the way you would know of those events being reported.

Q. So basically, there would have to be a lot of work on the division's end to try to riddle together all of that information and, hopefully, find a way to audit that, is what I heard, correct?

A. Well, it's just that the -- I guess that the -- I'm not sure.

Q. Okay. I think that's probably enough. Thank you.

So you testified -- I think Mr. Feldewert asked some questions regarding my question yesterday to Mr. Smith about what -- what are the levels of data that are needed for production reporting?

You -- and I wrote in quotes -- certain -- the certainty required for the system is accuracy.

And then you also said accuracy in the measurement and estimated volumes reported.

I guess I'm still quite unclear. What -- what does that mean? Is there a percentage? Is it -- it has to be 99.9 percent accurate? Is it 90 percent accurate? Is it 95?

Is -- and still, can you please help clarify? I don't understand where we're referring

to certainty and accuracy, and there's never a clarification as to what either certainty or accuracy means in that context.

Can you please clarify?

A. Well, especially with sales volumes, for example, there is an API standard of accuracy that the meters have to meet.

And then -- so but with the -- we understand that the -- with the high-pressure volumes, that those are -- are volumes that can accurately -- you know, that you can depend on a meter to accurately capture those.

And then we can accurately meter those and estimate those, because they are -- meter those and estimate those, because they are volumes that can go through those meters that they have to do -- the meters have to be accurate for the volume that's going through there.

Q. But there's still a degree of error on meters, is there not?

A. There is a standard, yes, ma'am.

Q. Okay. And it would be safe to say, probably, there is a degree of error on calculations and estimations, correct?

A. There is a standard that provides what

that degree can be. And we can't be less -- you know, go over that standard, over that standard for -- as per API standards.

Q. Is there a standard for your production accounting, for your company's production accounting? Is there a standard for that?

A. A standard --

Q. A standard measurement. Again, there were the words "certainty" and "accuracy" thrown out multiple times, and I still am trying to understand what that bar is. It does not seem to be clear to me.

A. Well, to us, the bar is that we want to ensure accurate -- because we pay royalties on these volumes. And then you know, we pay taxes on these volumes. So we, as a company, want to ensure that those are accurate volumes, because we want to -- you know, that's our obligation.

Q. Well, do you pay taxes and royalty right now on vented and flared gas?

A. Not to my knowledge.

Q. Okay. So maybe that -- could the accuracy or certainty be different for that? Because what you equated earlier is on taxes and royalties, but these aren't being paid taxes and royalties on.

So is there a different standard?

A. No, there's not, because -- as long as it can be accurately measured and estimated.

Q. Would it surprise you to learn that OCD gets requests from operators, probably on a weekly basis, to make edits to their C 115 reports because they have inaccurately reported things?

A. That doesn't surprise me.

Q. Would you be shocked to hear that even large -- what might be termed as majors -- have come to the OCD and asked for years worth of data corrections on every single piece of data that they reported for years?

Would that surprise you?

A. Probably not surprise me.

Q. So some of these standards or requirements for the production accounting system still don't prevent errors, do they?

A. No.

Q. Okay. Thank you.

A. You're welcome.

Q. So I think again, on this production accounting and concerns with the timing -- I don't know where it was. Let's see. I think it's in G2, maybe.

A. Yes, ma'am.

Q. Where the first two reports are quarterly and then monthly after that?

A. That's right.

Q. And I think what we've heard multiple times from multiple witnesses, as well as yourself, that there is needed flexibility in that reporting time frame because of how complex it is to change the production accounting reporting systems?

A. Yes, ma'am.

Q. Are there other mechanisms to track and maintain data, other than production accounting systems?

A. Manually.

Q. Okay. So there is. So yes?

A. Manually, yes.

Q. On something such as a spreadsheet, maybe? Is that correct?

A. That would be the manual process, I would assume.

Q. When there have been other changes in regulations, you referred to being involved in BLM, Quad-OA, other state rules, greenhouse gas, whatever they may be.

Would it be fairly common that maybe at

the beginning of that reporting things are tracked by a spreadsheet, up until systems can catch up and get into place?

Would that be common?

A. I -- I mean, I would like -- I was involved in introducing the F code, and we didn't have any issues with that introduction. Of course it was one code.

I don't think that the division had issues with implementation of that code.

And I can't speak -- I didn't speak about Quad-O or EPA. I don't know anything about that reporting.

I'm not an airhead, so I'm not involved in that.

Q. Okay. Thank you for the clarification.

But there are other methods, as you said, manual, potentially a spreadsheet, that are available to track and help report data, correct?

A. If that's the way the division -- whatever the division asks. Because again, we don't know the format in which the division is going to specify the quarterly reports. So we're going to have to come up with something.

Q. Okay. Thank you.

That's -- oh, let's see. I think I had one more question.

And I didn't write down where this was. But -- so in G3 -- no, 2L, I think is the "other not described above." That's the category I think you propose to remove?

A. Yes, ma'am.

Q. I asked Mr. Smitherman if providing a more detailed description in that category might help, something such as any venting and flaring not described in A through G above.

Would that help with clarification or no?

A. No, ma'am. I think that's what it already says, "other not described above."

I think there would need to be some other bounds or parameters set around what "other" would encompass.

Q. Okay. So you think that there's absolutely no way, once maybe this rule -- assuming it goes through this process, gets implemented, there's no way that some sort of venting or flaring could come up that wouldn't fit in the other categories?

You think there is zero percent chance that venting and flaring would be constituted as

waste that would not fit in any of these other categories, and so there's absolutely zero need for it.

Is that what you're telling me?

A. Yes, ma'am.

Q. So there's a zero realm of possibility that there could be anything outside of those other categories?

A. We did talk about each one. We did talk about each one of these categories and tried to think of anything that would be -- that would not fit under the prior categories. And, Madam Chair, we couldn't think of any.

Q. Could it be possible, in an operational sense, that something -- once you actually are -- you know, have to implement this, something could come up that was totally unexpected and not thought of before, that not having this category would cause a problem and you would be forced to fit a square peg in a round hole in another category?

A. No. I think that the -- really, the concern with "other" is that it would count against the lost gas calculation.

So there's something that, once we -- if we did have to file something under "other," and

that it would -- you know, there would be a process to determine whether that was lost gas, or not constituted as waste, maybe.

But we just didn't want that uncertainty.

Q. So maybe, for example -- or maybe tell me how you -- you would assume you would manage this situation. Let's just say the rule's implemented as is, three months in, some sort of situation happens, a venting and flaring event that did constitute waste, that does not fit in Category A through G, how would Oxy handle that?

A. I think that we would -- again, we thought about it and thought about it, and just determined if there were other categories that we could think of, and we couldn't think of anything.

So I don't know that we would have a situation like that.

Q. But if you did, how would you manage it? If -- if -- if something happened that did not fit in one of these boxes, that Oxy constituted as waste, how would it get reported? Would it just not get reported, or would you put it in another category, which may be less appropriate? Like how would that get managed?

A. No. And let's say we would report.

Again, I think if there were some parameters around "other" we could support leaving it in, like only for any -- any volumes that are associated with high pressure. Maybe it would be above 15 PSIG or something like that, we would support leaving "other" in, to encompass those types of situations.

Q. So now you're saying there is a possibility there could be other situations, but there needs to be parameters around it to confine it, correct?

A. No, ma'am. I'm not saying that there's other -- there's a possibility of other situations.

I'm just saying that if you feel the "other" category needs to be there, we could put parameters around it.

Q. And those parameters would be to limit it to high pressure, like NMOGA is proposing in the venting category already, in the venting definition, I think?

A. Yes, ma'am.

Q. Okay.

CHAIRWOMAN SANDOVAL: I think that's all I have. Thank you.

HEARING OFFICER ORTH: All right. Thank you, Madam Chair.

Mr. Feldewert, do you have followup with Ms. Perez?

MR. FELDEWERT: I'm sorry. I'm having a hard time hearing you.

HEARING OFFICER ORTH: Do you have followup with Ms. Perez?

MR. FELDEWERT: I do. I do have a couple of questions.

FURTHER EXAMINATION

BY MR. FELDEWERT:

Q. Ms. Perez, I'm going to look at -- on the screen I have 27.8G2.

And you got a question from Commissioner Kessler about the language otherwise -- "unless otherwise approved by the division."

Do you recall that?

A. Yes, sir.

Q. Okay. And she astutely pointed out that operators could always request a hearing for an exception, correct?

A. Yes, sir.

Q. Okay. If you have language like we see here, "unless otherwise approved by the division," does that allow the division, in your experience, to grant relief administratively, if good cause exists,

rather than having -- requiring a hearing?

A. Yes. Yes, it does.

Q. Okay. Now you got a number of questions from Ms. Sandoval about the reporting that's contemplated under this rule for waste events, vented and flared volumes. Okay?

I want to ask you.

A. Okay.

Q. She said -- made the suggestion that there's a contemplation that there would be reporting under this rule for a vented or flared event on a well basis.

Do you recall that?

A. Yes, sir.

Q. Is there -- did you -- do NMOGA or yourself understand, in reading that rule, that it contemplated reporting on a well basis?

A. No, sir, it did not. It just said monthly reporting of vented and flared gas, and there was -- and NMOGA's read -- or interpreted it to mean it was on a well basis, or interpreted to mean it was on a well basis.

Q. And isn't it true, Ms. Perez, that facilities where venting and flaring would occur, particularly the high pressure, does not always --

does not occur -- always occur on a particular well?

MR. AMES: Objection, leading question. Counsel is testifying again.

HEARING OFFICER ORTH: Mr. Feldewert, if you would watch that, please, and rephrase.

Q. (By Mr. Feldewert) Ms. Perez, does high-pressure venting and flaring occur in a particular well?

A. It -- it could. But it mainly -- for most of the operations, it occurs at facilities. And as I understand it, there is a lot of operations operating in the northwest that would have single-well facilities. But it's usually at a facility that could either -- you know, is for multiple wells or a single well.

Q. And is it common for wells -- the production from wells to be sent to a central facility?

A. Yes, it is.

Q. And at these -- is it -- do -- does the flaring occur at these facilities when required?

A. Yes. Yes, it does.

Q. And does that include -- are you familiar with exploratory units?

A. I am familiar with exploratory units. I

think that's what they were still termed, as in San Juan, when I was working -- when I supported the San Juan northwest operations for ConocoPhillips. We had a lot of 28-7 units. We had -- so we had a lot of units.

Q. Okay. And do you understand that one of the purposes of exploratory units is to consolidate facilities, so that there's less surface disturbance?

MR. AMES: Objection, leading question again.

HEARING OFFICER ORTH: Please rephrase, Mr. Feldewert.

Q. (By Mr. Feldewert) Do you understand that's one of the benefits of explor- -- or some of the benefits of exploratory units?

A. Yes, sir. And it's for consolidation. But you don't really need it, because we do surface commingling operations to consolidate -- you know, to bring wells into a single facility, so there's also the surface commingling that you can do for this release.

Q. And just like you -- when you have these, these common central facilities, the production is advocated at that facility, correct?

A. That's correct.

Q. And then for reporting purposes, do you have the ability to allocate that production back to a particular well?

A. Yes, we do. We do well -- perform well tests and determine how to allocate back.

Q. And as a result, would you also be able to allocate back to a particular well any volumes that are flared from a central facility?

A. Yes. We would determine -- we would allocate that based on the gas production from that well. So we would take the total volume of the flared -- the total flared volume of that property, or that facility, and allocate it back to all the wells that are active at that facility.

Q. Okay. And do you see any real benefit for a rule that's focused on reducing unnecessary and excessive service loss, of tracking that on a well-by-well basis versus tracking it on a facility basis?

A. I don't -- I mean, given the information at the property level as -- as we, you know, showed on our exhibit, and so that already shows all the wells that are going to that property. And we would essentially just take that volume and allocate it

back to those wells.

Q. Ms. Perez, Ms. Sandoval raised a concern about a release -- a potential release of less than 50 MCF.

Do you remember that?

A. Yes, sir.

Q. Has the division ever required a reporting -- the reporting of a release of less than 50 MCF of gas?

A. No. Part 29 starts at 50 MCF as well.

Q. Okay. And I have put up on the screen the definition of surface waste.

Are you familiar with that?

A. Yes, sir.

Q. It says "unnecessary or excessive surface loss or destruction without beneficial use."

Do you see that?

A. Yes, sir.

Q. Based on the way the division's reporting has been structured, has the division ever considered a release of 50 MCF to be excessive?

A. Not that I'm aware of.

Q. Now, Ms. Sandoval was asking you about a standard for accuracy.

Do you recall that?

A. Yes, sir.
Q. And she seems to be grappling with a standard for accuracy.
Do you recall --
A. Yes, sir.
Q. -- Mr. Grieves' testimony on the accuracy standard for meters?
A. Yes. He was talking about the accuracy standard for flare meters.
Q. Okay. He provided that information, correct?
A. Yes, sir.
Q. Okay. When it gets to estimation and a standard for estimation, Ms. Sandoval, I want to refer you -- I'm sorry, Ms. Perez -- I want to refer you to the OCD's Exhibit 4A, Slide 83.
Do you see that in front of you on the screen?
A. I do.
Q. And I want to refer you to the entry down here for venting in excess of designed specifications for pneumatics.
Are you there with me?
A. I am.
Q. Would you please read out loud the reason

that the division deleted that as a reporting category?

A. "Deleted because of high cost to measure with low accuracy and no credible method of estimation."

Q. "No credible method of estimation"?

A. Yes, sir.

Q. Is that the standard that the division applied here?

A. Yes, sir.

Q. Okay. And, Ms. Perez, not all releases that occur in the oilfield constitute unnecessary or excessive surface loss without beneficial use?

MR. AMES: Objection, leading question.

HEARING OFFICER ORTH: Mr. Feldewert, please rephrase.

Q. (By Mr. Feldewert) Ms. Perez, are all releases in the oilfield surface waste?

A. No. Not all releases are surface waste.

Q. Okay.

A. Not all are unnecessary or excessive.

Q. All right.

MR. FELDEWERT: That's all the questions I have.

HEARING OFFICER ORTH: All right.

Thank you, Mr. Feldewert.

Did Mr. Feldewert's redirect raise any recross for anyone?

CHAIRWOMAN SANDOVAL: I have a quick question.

HEARING OFFICER ORTH: Madam Chair.

FURTHER EXAMINATION

BY CHAIRWOMAN SANDOVAL:

Q. Currently, is there any de minimis for reporting venting activities?

A. Not that I know of.

Q. So any venting activities under 50 MCF would have to be reported on the C 115, as is currently in place?

A. I'm sorry. Say that again.

Q. Any releases or venting under 50 MCF currently is required to be reported on a C 115, as is in place right now, correct?

A. So there is a requirement -- are you saying there's a requirement to report anything less than 50 on the C 115?

Q. That's what I am asking you.

Is there a de minimus, basically? If it's under 50, do you get a pass on reporting it on your C 115 right now?

A. I don't know of a pass. I think that if -- you know, anything that's attributed to a high-pressure source that we have -- we can measure, we would -- it would be reported as a vented volume.

Q. So right now, today, you have to be able to measure venting in order to report it on the C 115?

A. Or estimate it.

Q. Okay. That's different.

So you have to -- but I don't think you've still answered my question.

Yes or no, do you have to report all venting, even if under 50 MCF, today, on the C 115?

A. I don't know.

Q. Would it shock you or surprise you to know that yes, you are required to report all venting activities, even under 50 MCF, on your C 115?

And if not, you would be out of compliance with OCD's regulations as they stand today?

Would that surprise you?

A. No.

Q. Do you believe Oxy is in compliance with the regulations as they're written today?

A. I hope so. Somebody knows that it's the requirement.

Can you point me to that requirement?

Q. I'm sure it is under our current rules. There is no de minimis -- I'm sure somebody can find those regulations for you. I don't know the number off the top of my head, but I'm sure it's under the normal C 115 and the guidance notices that have been put out in the past.

But I'm sure somebody at the OCD can assist you with that. I would not be able to assist you with that.

MR. FELDEWERT: Madam Chair, are you referring to a rule or a guidance document?

I'm aware of C 129. I mean, I'm aware of Rule 29 that requires the de minimis reporting threshold.

Is there another rule that you're referring to?

CHAIRWOMAN SANDOVAL: The production reporting rule.

MR. FELDEWERT: Is that what you're referring to?

CHAIRWOMAN SANDOVAL: Daniel Sanchez and the compliance group. If you're asking for compliance assistance, Daniel Sanchez, in the compliance group, would be your point of contact for

that.

But I think that's sort of outside of -- outside of the...

MR. FELDEWERT: I'm asking what you're referencing for your definitive statement.

CHAIRWOMAN SANDOVAL: I would have to pull up the regulation for you, Mr. Feldewert. I don't recall the number offhand.

I'm sure I can get it for you.

MR. FELDEWERT: Okay.

CHAIRWOMAN SANDOVAL: But it's in the production reporting requirements. There is no -- it requires, you know, venting and flaring to be reported as well as your production.

There is two -- there are two different things that we have. There's the C 129 and the C 115. I hope those aren't being conflated.

But if there is compliance assurance questions that an operator has, the compliance group would be the most helpful group.

I just want to understand from -- and it's sort of outside of what we're doing today. I just want to understand, from Ms. Perez, whether or not -- what her understanding is, so I don't want to get off track.

MR. FELDEWERT: I understand, Commissioner Sandoval. I'm just wondering what -- how this relates to a rule that is focused on unnecessary and excessive surface waste.

CHAIRWOMAN SANDOVAL: Well, I think Ms. Perez, and what you, and what your cross-questions were, sounded like there was only reporting if it was over 50 MCF.

And so I was trying to understand better and clarify with Ms. Perez whether or not it's under 50 MCF too.

Because her testimony just sounded like it was only over 50 MCF.

What I am trying to understand, because I think it's a very important piece for me to understand, is -- is -- are operators tracking and supposed to be reporting things under 50 MCF?

Do you understand what my questions were now?

MR. FELDEWERT: I understand your inquiry. My point being, I'm failing to understand how that relates to the tracking of unnecessary and excessive surface loss, unless you're taking the position that a 50 MCF release is a -- is a waste.

MR. AMES: Objection. This is not an

opportunity for counsel to question the chair of the commission. This is an opportunity for the commissioners, the chair, to ask questions of the witness.

We aren't here in a general free-for-all dialogue here.

COMMISSIONER KESSLER: I second that objection.

MS. FOX: If Mr. Feldewert has an objection to the question he can object, and the hearing officer can rule.

HEARING OFFICER ORTH: All right. Thank you, Ms. Fox, and thank you, Mr. Ames.

I believe Mr. Feldewert was trying to understand the reference underlying the Chair's question to Ms. Perez. And I believe we've probably gone as far as we can to understand that reference.

So, Ms. Chair, do you have any other questions of Ms. Perez?

CHAIRWOMAN SANDOVAL: No, I don't at this time. I just want to be clear. I was only trying to ask questions of Ms. Perez.

Mr. Feldewert came in and turned things, I think, more into a dialogue, where the conversation should not have gone.

My questions originally were only questions for Ms. Perez, to try to understand better what the reporting requirements were today.

And Mr. Feldewert, I think, took us off track into a place that we did not need to go.

HEARING OFFICER ORTH: All right.

MR. FELDEWERT: I disagree with that position.

HEARING OFFICER ORTH: All right. Thank you, Mr. Feldewert.

So I believe, then, we can excuse Ms. Perez.

Is there any reason not to excuse Ms. Perez?

MR. FELDEWERT: No, Madam Hearing Officer.

HEARING OFFICER ORTH: All right. Thank you.

We also need a break. We've been going for two hours. Let's return at 10:17. It gives us 15 minutes there.

And I think at that point we will hear Mr. Feldewert's reply to the motion responses on NMOGA's motion to exclude certain evidence from the Climate Advocates and EDF's presentation.

Thank you.

(A recess was taken from 10:02 a.m. to 10:18 a.m.)

HEARING OFFICER ORTH: All right. We are back after a short break. And what I'd like to do at this point is to address NMOGA's motion to exclude evidence and testimony pertaining to additions to Section 19.15.27.8.C1, as proposed by the Environmental Defense Fund and the Climate Advocates.

We received NMOGA's motion, which did not come in pursuant to the deadlines earlier set for motions, but that was because it addressed the prehearing statements that were filed, such that it could not come in any earlier. So in my mind, there's not a timeliness issue.

We do have two responses to the motion; namely, response in opposition from the Environmental Defense Fund, and response in opposition from Climate Advocates.

I do not believe that we should have a full-blown motion hearing. What I'd like to do now is invite NMOGA to make a brief reply to the responses in opposition to the motion.

Mr. Feldewert, whenever you are ready.

MR. FELDEWERT: Thank you, Madam Hearing

Officer.

I did read their responses. There were two of them that were filed, basically as I understand it, and made the same suggestions.

And as I read through them, I -- they seem to concede that the division's proposed rule -- the division's proposed rule does not suggest or contemplate a vapor-type vessel, what they call air pollution control equipment, that -- to collect gas emissions during initial flowback, before a separator can be put in place.

There's nothing in the division's rule that contemplates consideration of such a device.

And I believe they all -- Climate Advocates and EDF also concede that the public did not have notice that such a device would be considered in this rule making regulation.

There's been no disclosure. They concede there's been no disclosure to the public as part of the rule making progress of the technical data that they contend to have in support of this device.

There has been no opportunity there for any scrutiny of that technical information on this device by the public, you know, addressing issues such as safety or feasibility in various operating

areas, or feasibility in various types of initial flowback streams. None of that has been provided to the public.

What they seem to suggest is that something like this device was mentioned in comments to a draft rule or in comments during, perhaps, stakeholder meetings that took place before the division actually published its proposed rule.

And they contend that, as a result, this vapor-type flowback vessel is what they call a logical outgrowth of the division's application in the proposed rule.

But logical outgrowth is not determined by what somebody suggested at some point in time before a proposed rule is published and noticed for hearing.

When you read the cases that we cite, they state that modifications -- I'm sorry -- yeah, modifications constitute a logical outgrowth if the public could have expected that the change would have been part of the rule making process. In other words, part of this rule making process, and that test cannot be met here.

Logical outgrowth is determined by the rule that was actually filed for public notice under

the commission's rule making proceedings. Any logical outgrowth must arise from what the division, as the applicant here, has proposed for rule making.

And there is nothing in the division's proposed rule that would suggest that this proceeding was going to contemplate consideration of a vapor-type vessel to collect gas emissions in all circumstances during initial flowback before a separator can be put in place.

I also note in their reply -- in their response that neither Climate Advocates nor EDF offer any argument to address how the public notice and technical information disclosures required by the commission's rule making provisions were met here. That's because they were not.

This proposal has not been properly put forth to the commission.

There's been no public scrutiny of the technical information that they believe supports it; and, therefore, it's not in a position to be considered by this commission as a regulatory requirement. This -- particularly given the fact that the public has not had an opportunity for any scrutiny here.

Now, they can file their own application

with the rule making just like NMOGA could.

And they could file an application for a rule making to seek to impose the use of this pollution control device. But to do so, they would need to follow the commission's procedures for doing it, which requires a specific proposal and disclosure to the public well in advance of the hearing of the technical information that they would purport supports this kind of device.

That has not happened here.

And so I -- we suggest to you that it is improper to take time from this hearing on the division's proposed rule and divert ourselves into an effort to address a device like this that has not been the subject of any kind of disclosure for rule making and has not been -- the technical information has not been disseminated to the public for scrutiny and comment.

So we ask that you strike -- prohibit witnesses and testimony that is focused on this -- what they call a pollution control device, and which they further describe in their proposed modifications.

Thank you.

HEARING OFFICER ORTH: Thank you,

Mr. Feldewert.

I understand your point, and I know, including from a reading of some of the transcript from the produced water hearing in July, that this commission does take very seriously the question of whether proposed rules or changes to those rules by other parties meet the logical outgrowth test when they're being advised by two -- by the attorneys from the attorney general's office on that question.

Having said that, I'm going to deny the motion to exclude them from putting on this evidence and testimony, and invite you to -- I believe there will be closing arguments allowed. We're not -- we're not sure of that yet, but that they will be allowed in some form, and I would like you to continue to press your argument in that format.

But in terms of preventing them from presenting this prohibition for the equipment to prevent the initial flowback, I'm not going to exclude them altogether from that.

So we move now -- and I can draft a brief order, not before we get to after hours times, but thank you for that, Mr. Feldewert.

MR. FELDEWERT: You bet.

HEARING OFFICER ORTH: Let's see. We move

now to Mr. Biernoff and the state land office.

Mr. Biernoff?

MR. BIERNOFF: Thank you, Madam Hearing Officer. We have our witness here on the Webex, Mr. Danny Martinez.

(Witness sworn.)

HEARING OFFICER ORTH: Thank you.

Mr. Biernoff, whenever you are ready.

MR. BIERNOFF: Thank you, Madam Hearing Officer.

DANNY MARTINEZ,

after having been first duly sworn under oath, was questioned and testified as follows:

EXAMINATION

BY MR. BIERNOFF:

Q. Good morning, Mr. Martinez. How are you doing?

A. Good morning. I'm doing well.

How are you, Ari?

Q. I'm good. Thank you.

What is your position at the New Mexico State Land Office?

A. I serve as the division director of the management division of the New Mexico land office.

Q. Okay. And does the state land office have

a role with respect to oil and gas production in New Mexico?

A. It does. The New Mexico State Land Office started out as a trust on behalf of 21 different beneficiaries, the largest being our public schools.

With regard to oil and gas production, the commissioner is responsible for leasing lands for the development of oil and gas, which involves collecting revenues in the form of lease bonuses, local payments, and rentals.

Q. Okay. And what are your job responsibilities, as director of the royalty management division?

A. As director of the division, I oversee three different business units. And those business units are responsible for the collection, processing, distribution, and auditing of royalty payments from oil gas and CO2 cells on state trust land.

Q. Okay. Can you please describe your experience in this field, the field of royalty management and auditing, particularly with respect to the oil and gas industry?

A. When -- when I was hired at the land office, one of the reasons that I was brought across

was to implement a field audit program. The -- the division didn't have one, and we established that.

And that involved putting together training programs, procedures, to assure compliance with the state's oil and gas lease.

Q. How long have you been working in the field of royalty management auditing?

A. It's been close to 20 years now. I started in the division back in 2001.

Q. And where did you work before you came to the division?

A. Prior to that, I spent ten years working for the taxation and revenue department under the service tax bureau.

And prior to that, my first job out of college, I worked with Ernst & Young. And was my first introduction to the oil and gas industry. Their client base was mostly oil and gas.

Q. Okay. Mr. Martinez, have you reviewed the Oil Conservation Division's proposed rule on venting and flaring of natural gas that's the subject of this rule making proceeding?

A. I have.

Q. And did Commissioner Stephanie Garcia Richard ask you to review that rule and report back

to her, on the rule's implications for the land office?

A. Absolutely, she did.

Q. I'm sorry. Were you still --

A. No.

Q. Okay. What was -- I was just going to ask you: What was your conclusion, in response to the commissioner's directive?

A. We're very supportive of the rule. The commissioner sets out a mission for the agency which involves protecting -- protecting state trust lands, safeguarding its resources, maximizing revenue for the beneficiaries.

And -- and this rule sets us in the direction to accomplish a lot of that mission.

Q. Okay. Using your recommendations, did the commissioner and the state land office offer any kind of suggestions for the Oil Conservation Division for strengthening the rule?

A. Absolutely. The -- looking at the rule, specifically in the area where it allows for estimates, naturally, it -- it's somewhat concerning. Given the fact that a lot of state trust wells are -- are marginal wells, are lower-producing/lower-pressure wells, I actually

have some numbers that I ran this morning. And the trust has about 14 and a half thousand active wells. And roughly, about 60 percent of those fit into the definition of the lower-pressure/lower-producing wells, according to the rule.

Q. Okay. And you've mentioned estimates. What does the rule say about estimates? Give us the context for what you just testified about.

A. With regard to flaring, the rule allows -- doesn't require that -- that the -- the amounts that are being reported as flared be metered. It allows for -- for estimates to suffice.

Q. Estimates suffice for -- for which -- for which wells or which operators?

A. For reporting of the flaring for the wells that fit that marginal -- that marginal definition.

Q. Okay. I see.

And -- and what was the state land office's suggestion to address that provision?

A. The suggestions were to absolutely require that there's consistency in validating the -- the basis for those estimates.

The suggested formula -- I believe they made reference -- NMOGA, one of the witnesses --

also made reference to a formula that the commissioner also is -- is suggesting. Essentially taking the different components -- the GOR test ratio, sales volumes, and the lease use, beneficial lease use, comparing those, the result being the flare estimate.

Now the suggestion of consistently independently verifying those components -- the production components, the sales component and the lease use component -- is absolutely critical in order to determine the flaring amount -- the flaring estimates to be reasonable.

Q. Okay. Why is independent verification important for the state land office?

A. Just for that purpose. So because flaring, vented -- any lost gas, we view that as precise and as accurate as possible. It's a -- it's a trust resource, and we need to account for it.

We need to reduce any type of loss.

We -- we are supportive with reducing emissions for the environment and from the revenue standpoint, so we're sure to account for all the revenue that -- that's due the trust.

Q. Okay. Mr. Martinez, have you reviewed the Oil Conservation Division's proposed revisions to

their proposed draft rule --

A. I have.

Q. -- that's their exhibit -- OCD Exhibit 2A?

A. I have.

Q. Okay. And what is your assessment of their revisions, OCD's proposed revisions, with respect to the state land office's concern that you just stated?

A. I think, for the most part, the language they added does -- does satisfy a lot of the suggestions of The Commissioner.

The language that they add, for instance in Paragraph 5, using a methodology that can be independently verified.

Also paragraph 6, to allow the division to independently verify the volume and the heating value of the flared natural gas.

And additionally, it gives us some comfort level in Paragraph Number 7, that if they're not satisfied with that process, they could require other measuring equipment to be placed out on the wells.

Q. Okay. And just for clarity, Mr. Martinez, you referenced Paragraphs 5 and 6.

Are you talking about 19.15.27.8F5 and 6?

A. That's correct.

Q. Okay. And are you familiar with the proposed rule's provision that operators have to report vented and flared volumes for royalty owners and mineral estate?

A. I am.

Q. Okay. And does the state land office support that provision?

A. We definitely support it. I've been listening to a lot of the hearing, and I believe Commissioner Engler is the one who made the statement that I thought was a good statement, where he asked a question that -- I believe one of the witnesses from NMOGA -- where he stated, Well, if you are a royalty owner, wouldn't you want to know how much vented and flared product is coming off your land?

And the absolute answer is yes.

Q. So why -- well, so why does the state land office want to know that information? What does that information help the state land office do?

A. Well, it allows us to -- to quantify volumes that we know aren't going through a sales line, and that we need to be sure that we're still collecting royalty revenue on.

And we -- we also, like everyone else, need to do what we can to help minimize the waste, lost products, that are being vented and flared.

Q. Okay. Mr. Martinez, did you hear any of the testimony from Mr. Smitherman or Ms. Perez about operators already reporting flared and vented volumes on C 115 forms?

A. I did.

Q. Okay. What's your assessment of that testimony?

A. You know, the -- the problem is the level of reporting. And there are a couple of problems.

One, the level of reporting.

Within the C 115, vented and flared gas is reported at a -- at a property -- at a pool level.

So the difficulty that -- or the challenge that we face with that, you potentially could have a property that's -- that is producing from the same formation that includes ten wells. And five of those wells may be state trust wells. The other five may not be.

So reporting of the venting and flaring product at that level, I have no idea if the flared production relates to state trust levels.

Q. Okay. And what would reporting of vented

and flared volumes on a per-well basis, or broken down by well, what would that do for the state land office?

A. It -- it gives us more accuracy, to be able to trace the volumes that are subject to royalty, and it allows us to -- to look at potential problematic wells that are on state trust land.

Q. Okay. Okay.

Mr. Martinez, is there anything else regarding the state land office's position, the proposed Oil Conservation Division rule, that we haven't already talked about, that is important for the OCC to hear about from you?

A. You know, let me say I definitely appreciate all the work that's gone into the rule. I mean, there's a lot to it. I commend a lot of the people. They've really spent a lot of time and thought in putting this rule together.

I think one of the areas that -- that I think that they should consider is a little more concrete consequences for noncompliance with the rule.

For instance, with royalty reporting. If -- if you're not in compliance with the statutory lease, you know what's going to happen.

For instance, if a company is producing trust product and they have an expired lease, they know exactly what's going to happen. They know when to collect the value of the product.

If the company reports the royalty payment, they know exactly what they're going to be billed as far as interest.

So you know, kind of thinking a little bit about that, it may be helpful for operators to know, if I'm not complying with this part of the rule, here's what is going to happen.

MR. BIERNOFF: Okay. Thank you, Mr. Martinez.

Madam Hearing Officer, I don't have any other questions for Mr. Martinez at this point in time.

HEARING OFFICER ORTH: All right. Thank you very much, Mr. Biernoff and Mr. Martinez.

Mr. Ames, do you have questions of Mr. Martinez?

MR. AMES: Madam Hearing Officer, OCD does not have any questions for Mr. Martinez. We appreciate his testimony.

Thank you.

HEARING OFFICER ORTH: Thank you.

Mr. Feldewert, do you have questions of Mr. Martinez?

MR. FELDEWERT: Yes, Madam Hearing Officer. Thank you.

HEARING OFFICER ORTH: Go ahead.

EXAMINATION

BY MR. FELDEWERT:

Q. Good morning.

A. Good morning.

Q. I want to ask you first about your -- you made a statement, I think, that it's important -- or you thought it was important for the state land office to have some understanding of vented or flared volumes to quantify, I think you said, what would have gone to the sales line.

Is that accurate?

A. We -- we -- to account for all the product that -- all state product.

Q. And I think you -- your phrase was, and that would have gone to a sales line.

A. Accounted for state trust product involves accounting for product that goes through a sales line and product that's lost, vented, flared, on a lease.

Q. Okay. And that accounting, would you

agree with me, that it's -- the accuracy of that accounting, when you're dealing with volumes, is important?

A. It is extremely important.

Q. In other words, you just don't want guesstimates, right? You want some actual understanding of the actual volumes?

A. Absolutely.

Q. When you do -- you all do volume audits, right, Mr. Martinez?

A. We -- my audit function is responsible for conducting desk audits, which are mostly volume audits and field audits.

Q. Right. Right. Okay.

When you all do those volume audits, what level of reliability do you use? What do you look to, to conduct your volume desk audits, for example, or field audits?

A. We're extremely dependent on the C 115. So our desk audit will essentially take the volumes of the C 115 and compare it to all the volumes that were remitted on the royalty returns.

Q. Well, my question is: What level of reliability do you expect operators to have when they are reporting volumes for monthly production?

What's the bar? What's the level of reliability?

A. We expect it to be 100 percent accurate.

Q. 100 percent accurate. Okay.

So can that be accomplished even with a meter, right?

A. Yes.

Q. And is it also accomplished if you use a credible method of estimation?

A. Yes.

Q. And I believe you've -- your statements indicate that the state land office agrees that a GOR test, which is what the division allows, is appropriate and reliable?

A. What -- we're supportive of that, if -- if the metering equipment is -- provides the accurate results that we're looking for.

Q. I understand, I understand. I understand the need for accuracy on these monthly reporting accounting methods.

You made a statement about a desire to -- for reporting of these vented and flared volumes on a well basis.

Is that right?

A. That would be our preference, absolutely.

Q. Okay. And you would want some -- the same

kind of accuracy associated with that, correct?

A. Absolutely.

Q. All right. Now, I'm curious about that, Mr. Martinez, because you indicated that it was important for you for royalty accounting purposes?

A. That's correct.

Q. But isn't it true, Mr. Martinez, that the state land office's royalty share is dependent upon the state acreage to be in a spacing unit?

Isn't that correct, Mr. Martinez?

A. The -- the royalty is based on the state trust interest in -- in wells. So it could go beyond the spacing unit. It could go -- someone was just talking about unitization agreements, participating areas. It would be dependent on the type of rule.

Q. But all of that's a geographic area. That's not a well-by-well basis. That's based on the state's acreage contribution to the overall acreage that is included in a -- for example, a horizontal well space unit?

A. That's correct. However, the way that we collect royalty is, it's important that we understand information at a well completion level.

The way -- the way we collect royalty is

based on a production unit -- a production unit number.

Q. I'm sorry. You said a production unit number?

A. A production unit number. That's correct.

Q. And is that -- as I understand a production unit number, that could be a spacing unit?

A. Production unit number has a lot of different business rules behind it. Let me give you an example of one.

Q. Let me ask you -- let me ask you, to make sure I understand. Because I -- a production unit number, as I understand the regulations, that production unit number could be associated with a spacing unit, right?

A. That's correct.

Q. It could be associated with a communitized area?

A. That's correct.

Q. It could be associated with a unit?

A. That's correct.

Q. Okay.

A. And it could be associated with several spacing units.

Q. Several spacing units. I agree.

But you don't have -- for example, if you have a horizontal well spacing unit, okay, and let's say there's five wells in that horizontal well spacing unit, doesn't the reporting for those five wells all come together in terms of volume, and you report on a PUN level, a production unit number level?

A. Depending on the characteristics of those five wells. They don't necessarily need to be horizontal wells.

Q. You're right.

A. If those wells are drilled into the same formation, if those wells share the same property ID, and depending if they're part of the agreement or not, all of those wells would share the same production unit number and would collect royalties on that production unit number and the associated -- behind them.

Q. Okay. That was my point.

So in other words, if I understand it, Mr. Martinez, if I had a spacing unit, okay, and there -- let's go with five wells. I don't care if they are vertical or horizontal. Okay? Are you with me?

A. Okay.

Q. And all five of those wells are dedicated to that spacing unit. Okay?

A. One spacing unit or five separate spacing units?

Q. One spacing unit.

A. Okay.

Q. One spacing unit, five wells.

And let's say two of those wells happen to be located on state trust lands that are committed to the spacing unit, and three of those wells are located on nontrust lands associated with that spacing unit.

Are you with me, Mr. Martinez?

A. I sure am.

Q. Okay. The state land office does not get paid for just the two wells on state trust lands, do they?

A. You're talking about agreements now.

Q. Okay.

A. The state land office is going to collect royalty based on -- if they're based on common agreements or participating areas, they are going to get paid based on their acreage contribution to the agreement.

Q. Not on a particular well?

A. Correct.

Q. Okay. All right.

A. However, if I could add something.

We have situations that aren't part of the agreements -- and that is just to show the importance of collecting data on a well completion level.

You potentially could have ten wells with ten separate spacing unit numbers that aren't part of an agreement that are drilled in the same formation and share the same property ID. Those ten wells are going to be part of the same production unit number.

Now, five of those wells may be in state trust land, the other five do not.

So when going through our exercise of making sure that we're receiving correct royalty, we need to isolate those five wells, because now we look at C 115 reporting. I'm going to get C 115 reporting for that entire property.

So when I -- when I run my -- my audit reports, the first thing that it's going to show me is, wait a second here. I'm missing royalty, because it's expecting to look at volumes from all

ten wells, and it's reported at the property level.

So independently, I need to go out and isolate those state trust wells in order for an accurate comparison.

Q. But, Mr. Martinez, when you do that, right, and you're looking at whether the state land office has been properly paid royalty, the royalty payment is not dependent upon how much production comes out of those five wells. Isn't it dependent upon how much production comes out of the total produced by all of the wells?

A. Not in the example that I just gave you. The example that I just gave you, those are ten wells that are operated on a lease basis, not part of an agreement.

Q. So they will have their own PUN number?

A. No, they would share the same PUN number. You see, that's the complication of the business rules that we have amended several years ago. That's why the importance of identifying data at the individual well completion level is important to us.

Q. And you're saying that your royalty is dependent upon the production of one of those five wells?

A. In that situation, the royalties that I'm

expecting to collect is a production from the five state trust wells that are operated on a regular lease basis.

I only get royalty if those five wells are producing from a federal lease or a tribal lease.

Q. Okay. Now, let's see.

You said you started back in 2001 with the state land office?

A. With the state land office, that's correct.

Q. And prior to that you worked for the taxation and revenue department?

A. That's correct.

Q. So if I understand it, when you started at the state land office, you worked with Kurt McFall?

A. I worked with Kurt McFall at the tax department and at the land office.

Q. In fact, he was your predecessor at the state land office, right?

A. That's correct.

Q. Okay. And when you worked at the tax department did you work with Valdean Severson?

A. Valdean Severson was my bureau chief.

Q. That's what I thought.

There was a mention about the OnGuard

system, Mr. Martinez, which I'm sure you're very well familiar with, right?

A. Blood, sweat, and tears.

Q. Okay. Is that a complicated system?

And the reason I ask you is, I always heard Mr. McFall and Valdean Severson complaining about the OnGuard system.

A. The OnGuard system was implemented in 1994. And at the time, it was cutting edge.

It was extremely complicated. It took several years to iron out the rough edges, but I would tell you this. Pretty much my lifespan, my career lifespan, is going to run consistent with the OnGuard system.

And one of my biggest accomplishments is that system. I was one of the original authors of that system.

Q. But it's -- you would agree with me, it's complicated?

A. Yes. There's an OnGuard system and there's an OnGuard concept, is how I can describe it.

The system has since been split out. The concept, we're still trying to accomplish.

Q. Okay. And it has -- is it, then, kind of

like an operator -- an operation production accounting system? And that is, you have a lot of parts that kind of come together?

Is it similar to that?

A. It is. It is. If you look at the flow of data for an oil and gas company with the different business units, I can see some comparisons, in that the agencies need data from each other.

Q. Yeah. So when you had to make changes to the OnGuard system, could you just push a button and it would happen?

A. Absolutely not. That would have been nice.

The -- the OnGuard system is an amazing system. And like I've mentioned, it was put in production back in 1994.

And if you look at the evolution of the industry, it is such a fast-moving industry, I don't know that I even knew of horizontal wells back in '94. And you know, trying to accommodate the changes to the industry allowed to this life cycle, I will say one thing. The basis of that system was at an API plus pool level. And we were able to fit a lot of the changes throughout these last 25-plus years or so, but it was extremely difficult to do

so.

Q. Okay. And so when you're dealing with a complicated system like this, and you have to bring various components together, did it require the expertise of outside vendors to help you do that?

A. The vendors that initially designed and implemented the system were absorbed. We have two groups, what we call the OnGuard service center, which was a separate agency that was under the tax and revenue umbrella.

So the modifications were pretty much accomplished in-house.

Q. Okay. Did it take time?

A. It absolutely took time.

Q. Did it always take longer than you anticipate it should?

A. I -- you could ask that about any IT project, and the answer is going to be "pretty much."

Q. Okay. Okay.

MR. FELDEWERT: That's all the questions I have, Mr. Martinez. Good to see you. Thanks for your time.

THE WITNESS: Thank you.

HEARING OFFICER ORTH: Thank you,

Mr. Feldewert.

Ms. Fox, do you have questions of Mr. Martinez?

MR. BAAKE: We do not, Madam Hearing Officer.

HEARING OFFICER ORTH: Thank you, Mr. Baake and Ms. Fox.

And Ms. Paranhos, do you have questions of Mr. Martinez?

MS. PARANHOS: Thank you, Madam Hearing Officer.

I do not have any questions.

HEARING OFFICER ORTH: All right. Thank you.

We are to you, Commissioner Engler.

COMMISSIONER ENGLER: Thank you. I do have questions.

EXAMINATION

BY COMMISSIONER ENGLER:

Q. Good morning, Mr. Martinez.

A. Good morning. How are you?

Q. Surviving.

Let me pick up real quick from where you just left off there about the OnGuard system.

You said it was originally written in

COBOL, right?

A. That's correct.

Q. It's not still in COBOL, is it?

A. Right now -- if I seem a little nervous, we've actually got into production, as of Monday, moving it off the mainframe.

Q. Okay. Good luck.

A. Yeah. Thank you.

Q. I guess as, you know, a royalty owner for the state land office, if -- if -- with getting, say, volumes of flare and vented, you know, whether it's by well or by unit, and so you are going to get this data, what's the state land office going to do with that?

A. The -- what -- what we would do is, we need to make sure, first of all, that we're collecting royalty on -- on the flared, vented, lost production.

We also need to do our part, as best we can, to try to help industry in minimizing any waste, any vented and flared product.

Q. So if -- from that standpoint -- so if you have that volume -- and we all agree we want to minimize waste.

So are you -- what actions would you take,

as the state land office, to try to accomplish that?

A. Well, royalty payments, it is a self-reporting system. We have our instructions, we have our product codes that we provide to our royalty remitters on how to report this vented and flared production.

Now if I have an audit function in place, that if they're not, naturally, audit them and come up with our findings to make sure that they do amend their returns for any unreported royalties.

Q. Okay. So if you have cases where you find significant flaring and venting, and it's against -- with regards to state land office royalty, and so are you going to then -- since you would consider that underrepresented royalty. So then I guess you would notify the operator and try to do what? Negotiate, to remediate, to what?

A. That falls within my audit function. When an auditor goes out to audit a company, they will identify all of the areas in which underreporting exists.

Then they will send what we call a summary of exceptions, identifying the amount of underreported royalty and the -- the interest that's associated with the late payments.

That will be sent to the company, and the company amends their royalty returns with the associated underreported royalty.

Q. That's interesting. I didn't know that. Thank you.

So going back -- well, coupling that with this whole idea of reporting in systems, is the state land office and your -- you know, you're sweating your changeover with your OnGuard, are you guys prepared to be able to handle that additional reporting?

A. Right now we receive all of OCD's C 115 data, their well data, their well completion data, and another file that's called a PUN. That's some information that we use to create our reporting IDs.

It's a very complicated process that we go through.

Receiving that data from the industry from that file, I think, would be an easier process than trying to incorporate what we're doing today.

COMMISSIONER ENGLER: Okay. I have no further questions. Thank you.

HEARING OFFICER ORTH: Thank you, Commissioner Engler.

Commissioner Kessler, do you have any

questions?

COMMISSIONER KESSLER: I do. Thank you.

EXAMINATION

BY COMMISSIONER KESSLER:

Q. Good morning, Danny.

A. Good morning, Jordan. How are you?

Q. I'm good. Thank you.

I want to pick up where Dr. Engler left off.

You were discussing with him different actions the state land office could take based on operators' reporting venting and flaring for particular leases or wells.

And Mr.- -- and Dr. Engler had asked whether or not the land office was prepared to accept that information, essentially.

And I'd like to know, first of all, does the state land office have other remedies beyond just audit and collection of royalties available to take action against operators or lessees who are venting and flaring excessively?

A. I -- I would refer -- outside of my division, where I'm able to collect royalty and assess interest, I'd have to defer that to other divisions, if they also have penalties that they

could assess for -- for wasted trust product.

Q. Let's put it this way.

You are familiar with the state lease, correct, the lease form?

A. Yes.

Q. Is one of the -- does a state lease form authorize cancellation of the lease based on certain lessee actions?

A. It absolutely does. It -- if the lease is not within good standing -- and there's a variety of reasons why it may not be in good standing -- they could terminate -- cancel the lease.

Q. Okay. And could one of those reasons for termination be that the operator is wasting a state resource?

A. Absolutely.

Q. All right. Does the state land office intend to review the information collected by OCD for venting and flaring on state leases?

A. Absolutely.

Q. And will the land office, like OCD, be able to identify patterns for operators who are venting and flaring in excess?

A. They -- they definitely would.

Q. And the land office is prepared to take

action against those lessees who are wasting state resources.

Is that correct?

A. Absolutely.

Q. I believe all of my other questions have been answered, except I would like you to review, just at a high level, how the state land office uses C 115 data in field audits and royalty collection.

Just kind of hit on the broader categories, so that we can get a sense of how entwined the reliance by the state land office is on that C 115 data collection.

A. The C 115 data is very critical to my audit function. It's critical for our ability to make sure that we're getting paid all the royalty from that data.

What we'll do is, the volumes that are put on the C 115 are reported at a property and a pool level.

So when we first built OnGuard -- this was for tax also, way back when. We built the business rules so that our production unit number could pull in those volumes and compare them to the volumes that are in front of the royalty return. They are the ones that are reported on the severance tax

return.

I referred to the desk audits early on. That's my starting point. If my -- my auditor is able to go through a series of audit procedures to weed out some of the areas where -- where this comparison is not in balance.

But essentially what they do, if they start with that C 115 for lease property on a monthly basis, and they're able to compare those volumes that are reported on the royalty return, and if there's a difference, then they'll send out a letter to the company trying to understand why they didn't get those royalty volumes.

Q. Would it be difficult for the state land office systems -- systems being OnGuard and systems in terms of the audit procedures that you have in place -- if changes were made to the C 115 form?

A. There is -- there's always challenges that enhancements to improve the C 115 reporting is going to result in enhanced procedures for us.

You know, I may go off point a little bit. But I've always tried to suggest that even at the disposition level of OCD, collect data at a well completion level. Go to the lowest level, because then it allows me to compare at the lowest level,

and I could automate my system to just send out letters when things aren't balancing.

Q. Are you supportive of the OCD's effort to collect venting and flaring information on a well level?

A. I absolutely am.

Q. And are you supportive of state land -- of OCD's proposed rule that would have a C 115B form to collect vented and flared information?

A. I absolutely am.

COMMISSIONER KESSLER: Okay. Those are all of my questions.

Thank you.

HEARING OFFICER ORTH: Thank you, Commissioner Kessler.

Madam Chair?

CHAIRWOMAN SANDOVAL: I think most of my questions have been answered. I just have a couple, maybe, very quick ones.

EXAMINATION

BY CHAIRWOMAN SANDOVAL:

Q. Are you or the state land office supportive of this rule?

A. We are very supportive.

Q. I'm not sure of, you know -- I guess what

your involvement has been.

But from your level of involvement in this rule, do you believe it's been a collaborative process?

A. I -- I do. And -- and this hearing is an example of it being collaborative.

Q. Thank you.

I just want to confirm, I think, what I have heard.

Can you confirm that the state land office would prefer -- or it would be more helpful for the state land office -- to have information on a well-by-well basis?

A. Absolutely.

Q. And it would be better, system wise, to have that information separately on the C 115B and not mess with the C 115?

A. I agree with you.

Q. I know you said you worked at the tax and rev department. I'm not sure if you have any expertise on that.

But do you think that there could potentially be issues for tax and rev as well, if the C 115 form was modified?

A. I -- based on my expertise when I worked

there for ten years, I would also encourage that enhanced reporting.

CHAIRWOMAN SANDOVAL: Okay. All right.

Thank you, Mr. Martinez.

HEARING OFFICER ORTH: Thank you, Madam Chair.

Mr. Biernoff, do -- does any of the questioning prompt some followup from you?

MR. BIERNOFF: No, Madam Hearing Officer. Thank you.

HEARING OFFICER ORTH: Okay. Thank you.

Thank you very much, Mr. Martinez, for your testimony. You're excused.

THE WITNESS: Thank you.

HEARING OFFICER ORTH: All right. I believe we turn now to the Climate Advocates, Ms. Fox and Mr. Baake?

MS. FOX: Thank you, Madam Hearing Officer.

May we have five minutes to -- for a restroom break, and also to set up sharing for our first witness? She still doesn't have sharing ability. We're having some issue with that.

HEARING OFFICER ORTH: All right. I'll leave that for you and the technical host. Let's

come back at 11:25.

(A recess was taken from 11:16 a.m. to 11:27 a.m.)

HEARING OFFICER ORTH: We are back after a short break, and we turn now to the presentation by the Climate Advocates.

Ms. Fox, whenever you are ready.

MS. FOX: Thank you. We will call our first witness, Brenda Ekwurzel.

HEARING OFFICER ORTH: Ms. Ekwurzel, would you raise your right hand, please?

(Witness sworn.)

HEARING OFFICER ORTH: And would you please spell your name?

THE WITNESS: E-K-W-U-R-Z-E-L.

HEARING OFFICER ORTH: Thank you.

Ms. Fox, she's a little bit quiet.

MS. FOX: Do you want me to mute while she's talking? Would that help?

HEARING OFFICER ORTH: No, it's not background noise.

Ms. Ekwurzel, I'm not sure if you could turn up your volume a little? You're just a little quiet.

THE WITNESS: Sure. I can talk louder.

Is that better?

HEARING OFFICER ORTH: That's better. Thank you.

Go ahead, Ms. Fox.

MS. FOX: Thank you, Madam Hearing Officer.

BRENDA EKWURZEL,

after having been first duly sworn under oath, was questioned and testified as follows:

EXAMINATION

BY MS. FOX:

Q. Good afternoon, Dr. Ekwurzel.

Could you please tell the commission about your educational background?

A. Thank you. I received my Ph.D. at Lamont-Doherty Earth Observatory at Columbia University, where I studied CS changes in the Arctic Ocean.

I conducted my post doctoral research at Lawrence Livermore National Laboratory of the Department of Energy.

Essentially, I've been studying climate change for around three decades.

Q. And can you tell us about your professional experience?

A. Thank you. I was a faculty member at the University of Arizona, in Tucson, Arizona. I advised graduate students researching water resources and wildfires and other events at field sites spanning from California to New Mexico.

And today, I am the director of climate science at the Union of Concerned Scientists, where our teams of research scientists work with scientists around the world to conduct climate impact studies, primarily in the United States.

And I also had the honor to serve as co-author of the most recent national climate assessment.

Q. Is Climate Advocates' Exhibit 2 an accurate copy of your CV?

A. Yes.

Q. And, Dr. Ekwurzel, today you're going to give a presentation to the commission on impacts of climate change in New Mexico and the Southwest.

Is that correct?

A. Correct.

Q. And have you given us a version of this presentation before?

A. Yes. I was asked to give a similar presentation to the New Mexico House of

Representatives water and natural resources committee on November 9 of last year.

Q. And, Dr. Ekwurzel, for your testimony today, you've prepared a PowerPoint that is Climate Advocates' Exhibit 3.

Is that correct?

A. Correct.

Q. Would you please proceed with your presentation?

A. Thank you.

Commissioners, thank you for the opportunity to appear before you today and share how climate impacts are already creating consequences for people's lives, livelihoods, and ultimately the New Mexico economy.

In 2018, New Mexico had a far larger share of methane emissions compared to the share for the entire nation. More than half of the state's total greenhouse gas emissions are from the oil and gas sector.

Methane attracts more than 80 times more heat than an equivalent molecule of carbon dioxide over 20 years.

According to the intergovernmental panel on climate change, its emphasis report, the

so-called global warming potential of methane is 84 or 86 times larger than carbon dioxide without or with the inclusion of climate carbon feedbacks respectively. And these emissions contribute to temperature change.

Temperatures have increased in many parts of New Mexico at a rate greater than the global average temperature.

This map shows the difference between the 1986 and 2016 average temperature, and the historical 1901 to 1960 average temperature.

Now, this is what New Mexico could feel like on heatwave days if emissions continue at the current high rate, which scientists model as RCP 8.5.

Under this scenario, extreme heat days over 90 degrees Fahrenheit would increase in New Mexico by more than a month in most of the state, compared with the historical period of 1976 to 2005.

Now these days wouldn't necessarily occur sequentially, just to give you an idea of the magnitude of number of days we're talking about here.

Extreme heat exposure affects people

differently, depending on their health and environment. A heat index above 90 degrees Fahrenheit, outdoor workers become more susceptible to heat-related illness.

A heat index above 100 degrees Fahrenheit, we start to see children and elderly adults, pregnant women, and people with underlying conditions that have a heightened risk of heat-related illness.

Now of course above 105 degrees Fahrenheit, anyone could be at risk of heat-related illness or even death as a result of prolonged exposure.

So what does this mean for New Mexico? Even concerned scientists created a peer-reviewed publication, and we also have this online widget that's publicly available.

And I plugged in the results for two possible futures for Albuquerque, New Mexico.

So historically, Albuquerque experiences around 17 days per year with a heat index above 90 degrees Fahrenheit.

On our current high-emissions trajectory, by mid century -- not that far away -- Albuquerque would likely have more than two months' worth of

days with a heat index above 90 degrees Fahrenheit. And by late century, more than three months' equivalent of days.

However, with bold actions to limit global emissions, this could be held at around two months' of days of over 90 degrees Fahrenheit index.

So let us turn away from extreme heat and look at some other consequences of climate change.

Wildfires. So this is a figure from the national climate assessment. It shows the cumulative forest area burned by wildfires, and it's greatly increased between 1984 and 2015.

And the analyses shown here estimate that the area burned by wildfire across the western United States over that time period was twice what would have burned had climate change not occurred.

That was the past. Now, turning to the future.

The risk of acreage burned by wildfires in New Mexico is expected to increase for most of the state.

Now, we know the toll of wildfires is great during a wildfire. What often is forgotten are the risks after the last embers have stopped burning.

For example, this is a broadcast news coverage of an extreme weather event such as the post wildfire flooding, the damaged homes in Santa Clara Pueblo in New Mexico, in 2012.

And perhaps more importantly, the water resource treatment facilities were devastated during this post wildfire flooding event.

Now, climate change is also changing the ecosystems with water resource implications in the state. New Mexico is likely to lose the conditions where ponderosa pine can thrive reliably in the state.

If you look at the figure on the left, you can see the ponderosa pine, shown in the reddish color, is a -- a thriving forest species in high mountainous areas and other parts of the state.

If we were to look ahead in climate change under high emissions, the projected suitability in 2016 greatly diminishes for this forest pine species.

So New Mexico would also see crop conditions change for large parts of the state under a high-emission scenario.

The US Department of Agriculture plant zones indicate the whole temperature requirements of

crops. So increases in temperature under the higher scenario, RCP 8.5, would shift these zones northward and upslope from the period -- in the historical period 1976 to 2005, which is shown in the left panel.

Now compared to projections for the end of the century, 2070 to 2099 is on the right panel. And this is an average of 32 models.

So we can see it is the crop habitable zones in New Mexico would largely look like the very southern part of the state, in many parts of the state.

Albuquerque and Santa Fe rely on water from the Colorado River Basin. The majority is diverted from the Colorado River Basin, and the rest is from groundwater wells.

So this is another finding that's cited in the national climate assessment.

So in the Colorado River Basin drought, high temperatures, due mainly to climate change, have contributed to somewhere between 17 and 50 percent of the record setting stream flow reductions between 2000 and 2014.

The Colorado River annual flow loss of 35 percent or more, with an increased temperature

under the high emissions scenario over the century, is a finding of Brad Udall and Jonathan Overpeck, in a publication they published in 2017.

Now, we ask: Why is this happening? And one of the major reasons is the drying effect of warmer air on plants and soils. Essentially, more water loss is happening with a rate of vapor pressure deficit.

So to put this all in context, here's the summary of what naturally has occurred historically in New Mexico.

There have been droughts in the past. This is nothing new. But usually, in an historical drought, there is often a decrease in precipitation.

At the same time, we often see historical droughts associated with the increase of evaporation of water loss from the soils, as well as an increase in water loss from vegetation, transpiring that water into the atmosphere.

Now with climate change, we already have increased global temperatures. And that is even more in New Mexico, as I said.

In a hot drought, we -- even if you had the same decrease in precipitation -- let's just hold that constant. Just changing the temperatures

means you have accelerated the evaporation. You have increased the parching of soils.

The other consequence is, you greatly increase the water loss from vegetation. And this all combined means there's less water resources flowing through the soil, flowing through groundwater, into the streams and rivers and major river basins that are supplying water resources to the state.

So this is from the chapter we've worked on, and I had the privilege of working on in the fourth national climate assessment.

Under scenarios with high emissions and limited or no adaptation, annual losses in some sectors are estimated to grow -- this is across the entire United States -- of hundreds of billions of dollars by the end of the century.

Now, to put this in terms that -- some of the things that are concerned with New Mexico, I've outlined in some of the red boxes some of the highest consequences.

So labor hours, outdoor workers, extreme temperature mortality, roads, inland flooding, water quality, freshwater fish, winter recreation, municipal and industrial water supply, agriculture.

So let's look at a study from New Mexico State University by Hurd and Coonrod, where they found that while the total annual economic losses are estimated in the vicinity of 300 million under severe climate changes, where runoff is reduced by nearly 30 percent, both economic and noneconomic losses are likely to be significantly higher.

This is just one example of the many consequences to New Mexico's economy from climate change.

Thank you so much for the opportunity to share ways of reducing risk for our future in New Mexico.

Thank you.

Q. Thank you very much, Dr. Ekwurzel.

MS. FOX: I'd like to move for admission of Climate Advocates' Exhibits 2 and 3.

HEARING OFFICER ORTH: Let me pause for a moment in the event there are objections to Climate Advocates' Exhibits 2 and 3.

(Exhibits admitted, Climate Advocates' 2 and 3.)

HEARING OFFICER ORTH: 2 and 3 are admitted.

Thank you.

MS. FOX: And Dr. Ekwurzel stands for cross-examination.

HEARING OFFICER ORTH: Thank you, Ms. Fox.

Mr. Ames, do you have questions of Dr. Ekwurzel?

MR. AMES: Ms. Orth, thank you.

No, OCD does not have any questions for the doctor.

Thank you.

HEARING OFFICER ORTH: Thank you.

Mr. Rankin, questions for Dr. Ekwurzel?

MR. RANKIN: Good morning, Dr. Ekwurzel.

I have no questions for Dr. Ekwurzel.

HEARING OFFICER ORTH: Thank you.

Mr. Biernoff?

Mr. Biernoff, do you have questions for Dr. Ekwurzel?

He may have stepped away.

Ms. Paranhos, do you have questions for Dr. Ekwurzel?

MS. PARANHOS: Thank you, Madam Hearing Officer. I do not.

HEARING OFFICER ORTH: Commissioner Engler?

COMMISSIONER ENGLER: Thank you.

EXAMINATION

BY COMMISSIONER ENGLER:

Q. Good morning, Dr. Ekwurzel.

A. Good morning.

Q. I appreciate the information. In fact, as a fellow Ph.D. in academics, we could talk for hours on some of this, but I don't want to do that. I find it very fascinating.

But I do have a question.

It's on your -- what's your Exhibit 3 -- it's your Figure 2, where you have your two bar graphs comparing New Mexico versus the US with CO2 methane.

A. Yes. Uh-huh.

Q. And definitely, we want to -- the methane percentage, obviously in New Mexico, is significant, and we want to address that, yes.

So -- but my -- thank you.

Do you have -- my question is: Do you have other states' breakdowns that are also, like, oil-producing states in terms of their CO2 and methane?

A. Yes. Some of those are available, and they're also figures of seeing what the sources of methane -- you can see there are satellite imaging

and other types of imaging that are at a much larger scale, that you can start seeing where some of the hot spots are in the United States for different source emissions. Such things as methane, as well as carbon dioxide.

And in general, what you can see is that New Mexico is, you know, noteworthy in the ratio of methane, is much higher than the national average.

And I could get -- follow up with information on those specific sources for other states if you would like.

Q. Well, I guess -- yeah. So I think it's -- data is there, like, for states like Texas and North Dakota. Again, major producing states.

And I think I've seen somewhere where they also have high methane volumes?

A. Yes. You can see that -- a lot of the similar -- what you see is, there's figures where you can see where the big development extractive regions are happening and you'll see that the -- the share of emissions is -- you know, Texas is definitely in the mix, New Mexico, and even further north and things like that.

Q. Well, yeah. I can see that. I think -- I guess my final comment there is, I just want to say

that New Mexico is going to do better than Texas, so that we could have a little battle going on.

Thank you very much.

THE WITNESS: Thank you.

HEARING OFFICER ORTH: Thank you, Commissioner Engler.

Commissioner Kessler?

COMMISSIONER KESSLER: I don't have any questions.

Thank you for your presentation, Dr. Ekwurzel.

HEARING OFFICER ORTH: Thank you, Commissioner Kessler.

Madam Chair, do you have questions for Dr. Ekwurzel?

CHAIRWOMAN SANDOVAL: Yes, I have a few quick questions.

EXAMINATION

BY CHAIRWOMAN SANDOVAL:

Q. One, do you support the rule?

A. As a climate scientist, I know that emissions cause further climate change. And if these -- if this strengthened rule would reduce methane emissions, that is -- that would help climate change. So yes.

I do not -- and I'm not speaking about specific details of the policy, just to be clear.

Q. Okay. Thank you.

From your involvement with either this rule or previous rules, do you feel that this was a collaborative process?

A. Yes.

Q. Okay. Thank you.

A. I just -- I just want to say that in general, many, many people have been weighing in on these issues over the years. And any way we could have more voices and many groups that are affected by climate change consequences and being a part of the process, I strongly support.

CHAIRWOMAN SANDOVAL: Thank you.

That's all I have.

HEARING OFFICER ORTH: All right. Thank you.

Ms. Fox, any followup?

MS. FOX: No, Madam Hearing Officer.

HEARING OFFICER ORTH: All right.

Thank you very much, Dr. Ekwurzel, for your testimony. And you're excused.

Ms. Fox, before you call your next witness, who I assume is Ms. Tietz, would you please

confirm the order of your witnesses and whether any of your estimates have changed since the last time we spoke?

We've lost you on the camera, Ms. Fox.

(Discussion off the record.)

HEARING OFFICER ORTH: So let's come back at 12:30.

MR. BAAKE: Madam Chair?

HEARING OFFICER ORTH: Yes.

MR. BAAKE: I would preface by saying she is the one who is doing most of the coordinating. But I believe it's going to be Ms. Tietz and Mr. Schreiber, the next two. I'll confirm that.

HEARING OFFICER ORTH: Thank you very much, Mr. Baake.

All right. Let's break until 12:30.

(A recess was taken from 11:49 a.m. to 12:31 p.m.)

(Witness sworn.)

HEARING OFFICER ORTH: At some point we will ask you to reconfirm the order of your witnesses and the estimates of their time.

I understand right now we're going to hear from Ms. Tietz. And the witness after Ms. Tietz will be --

MS. FOX: Mr. Schreiber.

HEARING OFFICER ORTH: Mr. Schreiber. Thank you.

You may proceed.

MS. FOX: Thank you.

ALEXANDRA TIETZ,

after having been first duly sworn under oath, was questioned and testified as follows:

EXAMINATION

BY MS. FOX:

Q. Would you please state your name?

A. Alexandra Tietz.

Q. And would you please spell your last name for the court reporter?

A. T-E-I-T-Z.

Q. Ms. Tietz, could you please describe your experience and your expertise?

A. Thank you.

For over two decades I have developed experience in developing and drafting policy, regulations, and legislative text.

I focus mainly on air pollution, climate change, and energy issues.

In particular, I have a sense of experience in designing and evaluating regulation of

waste from oil and gas production.

As an appointee in the Obama administration, I led the team that developed the Bureau of Land Management's methane and waste prevention rule issued in 2016.

In the course of that work I consulted and worked very closely with the BLM's petroleum engineers and other technical experts to develop those regulations.

Since I retired from the federal government in 2017, I've served as an expert consultant to nonprofit environmental advocacy organizations on projects for multiple clients. And many of these were related to methane and oil and gas production.

Before my work with the Obama administration, I spent over a decade as senior counsel to the house oversight and government reform committee and the house energy and commerce committee, both under the leadership of Congressman Henry Waxman.

In the course of that work, I supported congressional oversight of an untold number of numerous regulatory efforts by federal agencies, as well as working to draft many laws, amendments,

et cetera, for house consideration and passage.

I have legal expertise in the -- in the -- in regulation, cost/benefit analysis.

I have expertise in other economic aspects of regulation, and familiarity with many technical aspects of it as well.

And in the course of the -- let's see -- I -- the -- our oversight work included work with agencies including EPA, the Department of Energy, the federal energy regulatory commission, the pipeline and hazardous material safety administration, and white house offices, such as the office of information and regulatory affairs, which oversees regulatory proceedings in the federal government.

And before that work, I began my career as an attorney adviser in the EPA's office of general counsel, where I spent almost seven years working on EPA air regulations.

I have an undergrad from Overland College, a master's in environmental studies from Yale University school of forestry environmental studies, and a law degree from Boalt Hall, UC Berkeley.

Q. Is exhibit -- climate exhibit -- Climate Advocates' Exhibit 4 an accurate copy of your

resume?

A. It is.

Q. Ms. Tietz, would you please provide an overview of your perspective on this rule making and the topics that you will cover today?

And I will begin to bring up your slides right now.

A. Thank you for allowing me to present before you today.

And these regulations that -- I'm sorry.

I would like to begin by thanking the members of the New Mexico Oil Conservation Commission for the opportunity to testify before you today on the proposed regulation to reduce methane waste from oil and gas production in New Mexico.

These regulations are not only vital to conserving the resource, but also to increasing revenues that belong to the people of New Mexico, combating climate change, and bringing cleaner air and better health to communities in the state.

We strongly support the Oil Conservation Division's proposals, and we will also present recommendations to make the rules stronger, more effective, and easier to implement and to enforce, to avoid regulatory gaps, and ensure that they meet

Governor Lujan Grisham's commitment to adopt regulations on methane that, quote, will serve as an example to the rest of the country, end quote.

The governor's op ed is Climate Advocates' Exhibit 6, and her executive order on climate change is Exhibit 5.

My testimony will cover, as indicated on the slide here, the wasteful-including practice of routine flaring, including widespread recognition that it's no longer acceptable and necessary, and New Mexico's opportunity to advance the interests of both the public and the industry by preventing it.

I will provide a very quick overview of the elements of the proposed rule that we support, and those where we feel that improvements are needed. And then I will provide more detailed comments on several elements of the rules, including why they are necessary and will be effective, or in a few cases, what further improvement is needed to assure that they meet the goals.

Q. Ms. Tietz, what is the practice of routine flaring?

A. So the proposed regulations would have the effect of prohibiting routine flaring. And this, in our view, is a critically important element to the

regulations, and we urge the commission to adopt it as proposed.

The world bank's definition of -- sort of -- so the world bank's zero routine flaring by 2030 initiative, which is Climate Advocates' Exhibit 7, provides a widely-held understanding of what the term routine flaring means.

They define it as, quote, flaring that occurs during the normal production of the oil and in the absence of sufficient facilities to utilize gas on site, dispatch it to market, or reinject it.

And it's this routine flaring with associated gas, gas that comes from oil wells, and the ongoing disposal of large quantities of salable gas, that we find is unnecessary, and it's not due to technological constraints.

This is essentially a business practice that is designed to maximize profits from oil production. And as such, it is the epitome of waste.

Routine flaring should no longer be tolerated as an acceptable business practice, and this rule is New Mexico's opportunity to lead the nation in ending it.

Q. What's the situation with routine flaring

in New Mexico, Ms. Tietz?

A. In 2019, operators in New Mexico reported flaring over 30 BCF of natural gas. And this would be enough to have supplied about 80 percent of New Mexico's households with their home heating and cooking needs. That's a lot of gas.

But as the OCD has testified, this data -- this is the reported flaring data -- is incomplete and it's, quite possibly -- quite likely, in fact -- an underestimate, given gaps in the reporting.

There's no reported venting or flaring from some operators in the database. And also, given some questions about measurement and what is required to be reported, I think that this is likely an underestimate.

Routine flaring did drop during the pandemic, but is expected to increase again with the recovery.

Q. Are all operators the same, in terms of whether and how much they flare routinely in New Mexico?

A. No. Actually, there's substantial variation in the quantities reported by different operators.

And Ms. Fleischman will describe this in

more detail in her upcoming testimony.

But we see that some oil producers of flaring, the vast majority of gas flared from producers, while others are capturing most of their gas, which is a matter of -- you now, they've outlined the takeaway capacity, they've coordinated with the midstream, and they've managed to severely limit or eliminate their routine flare.

Q. Is routine flaring within the control of the operator?

A. Yes, it is. Planning, it -- it's a matter of planning the timing, the placement, and the startup of new oil wells in coordination with gathering system capacity. And then you can take the gas away and sell it.

You know, natural gas well operators don't conduct routine flaring, because their industry is -- and their operations are designed to capture and sell the gas.

Oil well operators are also fully capable, using the same types of equipment, without any extraordinary expense, of eliminating this wasteful practice, as we see in the differences in flaring rates across the different operators.

Q. Please briefly describe domestic

regulatory efforts to date, to reduce routine flaring.

A. So the earliest one I'm aware of is the state of Alaska, which has barred most venting and flaring since the 1970s.

More recently, North Dakota adopted routine flaring -- and it's in 2014, as I believe the commission has heard in this proceeding. And the Bureau of Land Management adopted routine flaring limits for federal minerals in 2016, which are the rules that I worked on.

Those rules have since been overturned in a district court decision, but is now on appeal.

This past November, Texas -- the state of Texas took a step by adjusting its requirements to make it easer to the regulator to limit routine flaring case-by-case.

And also in November, Colorado adopted regulations that prohibit routine flaring.

Q. What is the industry --

A. So the industry has been taking voluntary efforts to reduce this. But it's a -- you know, which I think there is a recognition that there is a problem. But this recognition and the voluntary efforts alone are really not enough to fix the

problem.

The world bank launched a voluntary zero routine flaring initiative in 2015. And that brings together governments, oil companies, and development institutions who, quote, recognize, end quote, the unsustainability of routine flaring and, quote, who agree to cooperate to eliminate routine flaring no later than 2030.

Oil companies that -- end quote -- endorse the initiative commit themselves to, quote, develop new fields they operate without routine flaring. Oil companies with routine flaring at existing oilfields they operate will seek to implement economically viable solutions to eliminate this flaring as soon as possible, and no later than 2030.

Oil companies have endorsed this initiative, including BP, Shell, and Occidental. And I think this underscores that the largest international oil companies recognize that the practice is not necessary, that it's unsustainable, and that it's increasingly unacceptable to the public. They're willing to end it now in new fields and phase it out as soon as possible in existing fields.

Some are already doing so, including EOG,

Oxy, and Chevron, according to a recent study by a group of oil and gas consultants named GaffneyCline, which is Climate Advocates' Exhibit 8.

Even smaller operators are feeling the pressure. In June, the Texas methane and flaring coalition, consisting of seven state trade associations and over 40 Texas operators, stated that, quote, the coalition agrees we should strive to end routine flaring.

But I just want to note that voluntary efforts alone, you know -- in the history of major industrial pollution problems, it's -- it's -- I can't identify offhand any situation which industry's voluntary efforts ended or solved the problem. This is an area where it's clear regulation is needed.

Q. How are investors viewing the problem of routine flaring?

A. Major investors are also very concerned about this, and they are calling on regulators to prohibit routine flaring, increasingly.

A Bloomberg article in September reported that investors managing more than $2 trillion urged the Texas railroad commission to ban routine flaring by 2025.

And that's Climate Advocates' Exhibit 9.

And then most recently, major investors have called on Governor Lujan Grisham, the New Mexico Energy, Minerals, and Natural Resources Department, and the New Mexico Environment Department to adopt strong methane rules, including prohibiting routine flaring.

And these investors included investors with more than $102 billion in assets under management, and the New Mexico state treasurer, Tim Eichenberg.

And that is contained in Climate Advocates' Exhibit 10.

Q. Why are industry and investors taking actions to reduce and prohibit routine flaring?

A. I think these voluntary actions are demonstrating that industry is recognizing that the waste threatens their longer term viability. It's a rational position for them to take.

The scale of the waste and the pollution is -- is striking and substantial, and it's diminishing the natural gas industry's social license to operate, which is basically the public acceptance of their operations. And that's hurting industry's bottom line.

Depending upon the leakage or -- rates, the waste of gas can be -- depending on the leakage and flaring rates, waste of gas can be as damaging to the climate -- or use of gas can be as damaging to the climate as coal. And the public climate, you know, concern, is growing very rapidly. In part -- and including increasing concern about natural gas and the ongoing use of natural gas.

While venting is most damaging from a climate perspective on a volumetric basis, flaring consumes even larger volumes of gas, so it's a more significant waste issue.

And it also has -- it also has significant climate impacts, though they're not as strong as venting.

Flaring releases both CO2 and methane in the form of unburned methane that comes out of flares, as well as the combusted CO2.

And it is -- it occurs -- routine flaring goes on for long periods of time at a well. It is very clearly and obvious to the public that this is waste, and it's highly visible. We've got a big flare burning there.

So it's part of the ongoing sort of growing public concern and opposition to natural

gas. And that makes it increasingly difficult for companies to site or expand pipelines, LMG facilities, and other new infrastructures.

In addition, municipalities -- we are just seeing most recently, municipalities starting to ban natural gas hookups in new residential construction.

I think that there's -- the industry is recognizing -- and I don't want to speak for them -- but I would imagine that they are concerned that these movements are hurting their profitability and future prospects.

So you know, another indicator of this is, I recently participated in a forum conducted by the European commission. And the purpose of this was to present their new methane strategy to North American experts in this area.

The EU commission of communication of their methane strategy is Climate Advocates' Exhibit 11.

The EU is currently working to adopt regulations to measure and account for the life cycle climate contributions of gas imports to the EU, based on their climate concerns about the use of gas.

And absent -- they indicated that absent

some significant improvement in the life cycle carbon intensity of natural gas, that they would contemplate regulatory measures and eliminating the carbon intensity in gas imports.

So that's another indicator of ongoing concern and pressure on the industry.

Regulation that reduces waste and the climate impacts of oil and gas production can actually benefit the industry domestically, and perhaps even help preserve its access to international markets.

Q. What are the implications of all of this for New Mexico, Ms. Tietz?

A. Well, I think that the revenues from oil and gas production, it's clear they are very important to the state, and they give the state and the commission an economic interest in -- in protecting -- in protecting those revenues.

And one way to do that is to prohibit routine flaring. That's -- as I've been discussing here.

From our perspective, what's far more important is that allowing continued routine flaring condones this business model that's based on waste and pollution, and is contrary to the public

interest of the people of New Mexico.

We are effectively -- you know in allowing this practice to continue, we're effectively subsidizing the industry by allowing the -- their waste disposal to put -- shift the costs onto the public. And those costs include lost natural gas royalties, adverse climate impacts, and harmful air quality and public health impacts.

And of particular concern, the public health impacts are not just generally distributed, but they often disproportionately harm native, Hispanic, and other communities suffering from environmental injustices and cumulative air pollution and health concerns.

So this is a -- this is a high price for the people to pay. And put simply, I would say that routine flaring serves private interests at the expense of the public interest. And the strongest support the elements of the proposed rule to have the effect of prohibiting routine flaring and implement and enforce this prohibition on it.

Q. Ms. Tietz, let's now turn to the proposed rule. Which elements of the OCD's proposed rule do you support?

A. I broadly support this rule. And I'd just

like to take a moment to commend all of the OCD staff and leadership who have worked so hard on this rule, for their tremendous effort, their commitment, and their expertise.

I appreciate -- you know, you followed a thoughtful and inclusive process with the map and the public comment, the drafts, and the interactions with stakeholders. And you've really listened to feedback from all sides, and I think everyone in this process really appreciates that.

As a result of the governor's leadership and your work, New Mexico has an opportunity to -- now, to significantly reduce methane waste and pollution and harm to its people and the environment.

And I'll just say, from my own experience, I know how hard this job has been. And you know, thank you for doing it. You've been doing a great job, and I'm sure there's a ton more work coming, but we really appreciate it.

So turning to key elements of the rule that we strongly support, these would include the requirement to flare, rather than vent, except when flaring is technically infeasible or would pose a -- I think we skipped a slide here, Ms. Fox.

I'm sorry. No, this is the right one.
COMMISSIONER KESSLER: I'm trying to follow along. Is this one of the exhibits?
THE WITNESS: The PowerPoint.
MS. FOX: No, it's not, Ms. Kessler. We filed it as a demonstrative.
COMMISSIONER KESSLER: Okay. Thank you.
THE WITNESS: I would have loved to have had it fully completed in that time frame.
But anyway -- so the key elements of the rule that we strongly support are the part about the flare and the vent, the prohibition on routine flaring, with limited exceptions, the general prohibition on venting and flaring with limited exceptions, the inclusion of the gas capture requirement, and limiting venting and flaring from natural gas gathering systems, which is a really critical step forward in this area that OCD is doing that is -- I've not seen other jurisdictions as engaged in.
And requiring operators to submit gas management plans, showing that the gas will be captured and sent to a gathering system, otherwise beneficial use, or reinjected for future use.
And also, these strong and comprehensive

measurement requirements are extremely important and helpful.

Q. (By Ms. Fox) And could you please identify some of the areas in the rule where you believe improvements are still needed?

A. Yes. We had made recommendations for improvements in the following areas that are indicated on this slide.

Closing the loophole allowing unnecessary venting during completions and recompletions.

There are ways to strengthen the gas capture planning provisions in our view.

Strengthening flare stack specifications to reduce venting.

Requiring faster and comprehensive replacement or retrofitting of flare stacks without auto igniters.

Requiring gas to be rerouted into the pipeline, or if necessary, flared rather than be vented during maintenance and pipeline blowdowns.

And requiring volumes of flared gas from controlled storage tanks to be included under the reporting provisions.

I will address a few of these, and I think other witnesses of ours will address others.

Q. Ms. Tietz, I'll now ask you to go through several elements of the rule in more detail.

Would you please begin with the requirement to flare rather than vent?

A. Sure. As OCD has recognized and proposed in Part 27, Section 8A, whenever gas can't be captured and put to use or reinjected, if some form of release is necessary, operators should always flare rather than vent, except where venting is technically -- sorry -- except where flaring is technically infeasible or a risk to safety, and venting is safer than flaring.

And this is a common sense requirement that's based on longstanding industry and best practices for safety.

Now -- and now, you know, not only do we have this as a safety reason -- safety reasons to do this, but we now understand that it's also safer to flare rather than vent for climate and for local air pollution impacts.

And I think the commissioners heard jurisdiction -- sorry -- heard testimony during this hearing that there are longstanding commission rules that require flaring over venting.

However, there have been some questions

raised during this process regarding the commission's legal authority to require flaring rather than venting.

I would just say that we agree with OCD, that the commission has ample authority to do this, given its broad statutory authority to adopt regulations to conserve oil and gas and prevent waste, in several of its specifically enumerated powers.

Q. Did you encounter similar questions about the authority to require flaring over venting in the context of the 2016 BLM methane and waste prevention rule?

A. We did. The 2016 BLM rules were also founded on waste prevention authority. Specifically in that case, the Mineral Leasing Act of 1920.

In addition, BLM relied on the Federal Lands Management and Policy Act authority, that each provision of the regulations we made sure was independently supported by the bureau's waste authority.

And as a matter of fact, in talking to the -- working with the BLM engineers during the rule making, they indicated that they hadn't -- previously, audit was necessary to require flaring

over venting, because that was a standard practice for safety.

But we became concerned, in the presence of working on these regulations, that as BLM required operators to reduce their flaring and venting, the regulations themselves could create a converse incentive if we did not prohibit venting, that would tend to, perhaps, encourage operators to vent rather than flare in situations where they might have flared before.

And that was something that we were quite concerned about.

You know, flaring is easy to detect from a distance. And what is -- detecting venting requires closer proximity or specialized equipment, depending on the volumes.

And basically, venting is harder to detect than flaring. And you know, if there's concern about compliance on an operator's part, there just may be more instances of venting than there otherwise might have been.

So we included a requirement in the 2016 rule that was similar to the proposed requirement in Part 27, Section 8A. Our provision in 43 CFR Section 3179.6B states, quote, the operator must

flare rather than vent any gas that is not captured, end quote.

And then it listed specific exceptions to the general requirement, as OCD provides in Part 27, Section 8D.

I would also say that it does not appear that our concern was -- was far-fetched. With the growing public opposition and -- to flaring and increasing regulatory oversight of flaring, there are reports of operators, whether deliberately or inadvertently, inappropriately venting rather than flaring, even to the extent of seeing venting happening through flare stacks.

So in New Mexico, the statute gives the jurs- -- the commission jurisdiction and authority over all matters relating to the conservation of oil and gas. And this certainly appears to us to be broad enough to authorize and protect the provision that conforms to standard industry practice, to ensure that in the course of regulating waste, the commission's own requirements do not inadvertently incentivize actions that could cause health and safety problems at the production site in addition to more harmful air pollution.

Q. Ms. Tietz, would you please discuss the

proposed provisions in OCD's proposed rule that would have the effect of prohibiting routine flaring?

A. Yes. To meet the state goals of this regulatory process, it is critical that New Mexico prohibit routine flaring. And Climate Advocates strongly support the provisions in the proposed regulation that would have this effect.

As I stated before, flaring to dispose of associated gas in the absence of sufficient facilities to utilize gas on site, dispatch it to market or reinject it, is an avoidable outcome of deliberate business choices. And this way of disposal is waste.

Proposed Part 27, Section 8D, prohibits operators from venting or flaring natural gas during production operations except in the enumerated circumstances.

The list of exceptions -- of excep- -- exceptions or exemptions, sorry -- does not include insufficient availability in a gathering system. And that, then, makes the effect of these provisions to prohibit routine flaring.

Q. And how does this prohibition work with the other regulatory provisions that limit venting

and flaring?

A. As designed and proposed by OCD, the routine flaring prohibition, the statewide natural gas capture requirements, and requirements for natural gas management plans all work together.

The flaring prohibition requires, and the natural gas management plans ensure, that no new wells flare routinely. Existing wells are required to cease routine flaring, and operators must reduce other venting and flaring to the extent necessary to meet their annual capture requirements.

I would emphasize here, though, that simply adopting routine flaring prohibitions are not sufficient to actually getting the results.

To change operators' behavior and to reduce waste and pollution, the prohibition must be implemented.

Now obviously, this is true of all regulations, but it is a particular concern here. Operators' reports do not indicate the causes of releases, but it is -- or the causes of flaring is likely that where they are flaring larger volumes or percentages, that these are probably indications of routine flaring.

And we have reports that many operators do

not appear to be engaging in routine flaring, while other operators are reporting flaring quite substantial volumes and/or percentages of their gas production, and likely are doing routine flaring.

So ending this practice is a significant step for waste and pollution reduction and for operators.

In its prehearing statement, the OCD states, quote, routine flaring is no longer an allowed practice. As such, the division will work with operators to phase out this practice through a compliance program.

And this statement does raise some concerns here.

The plain language of the proposed rule provides that routine flaring is prohibited as of the rule's effective date, and there is no provision for a phaseout.

To the extent that OCD might contemplate any kind of a, quote, compliance program, we just want to underscore how particularly unwarranted that would be with respect to new or recompleted wells.

This is -- these wells, in -- it's especially straightforward to avoid routine flaring at new wells. They have the ability to ensure the

gathering capacity, when alternative beneficial use is available before beginning production, and it's the matter of timing and coordination. Or in some cases, investment in alternative beneficial uses. But this is not, you know, a matter of installing massive new amounts of technology at every well or anything like this, and it's perspective at new wells, in particular.

As proposed, the natural gas management plan provisions in Part 27, Section 9D, contemplate that a need to routinely flare for newly completed wells is something that operators can and must anticipate and avoid.

Q. Ms. Tietz, I would like to turn now to the proposed provisions requiring the natural gas management plans, in Part 27, Section 9D.

How would those provisions work to help end routine flaring from new wells?

A. Those provisions would require operators to file a plan, as part of their application for permit to drill. And that plan is a gas management plan.

The plan is supposed to show what actions the operator would take at each proposed well to meet the venting and flaring and gas capture

requirements, including the routine flaring prohibition.

OCD would then be able to look at the information filed and determine if the operator will comply with the requirements and whether to capture -- whether to grant the APD.

Q. Will the gas management plan provisions help OCD implement and enforce any flaring requirements, including the prohibition on routine flaring?

A. Yes. I believe they are intended to help enforce the requirements, and they are an important piece of helping to enforce the requirements.

And they get part of the way there. We -- we did have a few targeted improvements that we think the commission should consider to make the -- to make these provisions more effective.

One of the basic principles of regulations that I've spoke of, over a long period of doing it, is that regulators don't ever have sufficient enforcement resources to catch every violation. It's just not -- not a possibility.

And so one way to maximize your limited enforcement resource is to make -- wherever possible, to make compliance the default action

rather than requiring the regulator to act to enforce in each instance.

And the proposed text makes a good start in following this principle, but I think it doesn't quite fully succeed in making compliance the default action -- option here.

So the plan is for the operators to demonstrate that they will comply with the routine flaring prohibition at new wells before they can obtain an APD to start production at that well to start production, puts the compliance onus on the operator rather than OCD.

And that's a key purpose of requiring natural gas management plans as a condition for APD for a new well.

But if the regulations allow for natural gas management plans that are insufficient to ensure that a new well will not rely on routine flaring, in that case the onus shifts back to OCD to go out and actively enforce the prohibition after the well begins production.

And that's where they're limited -- you know, these limited resources become a concern, and inevitably are going to result in ongoing routine flaring, and in this case, even for new wells.

Q. How would you suggest modifying OCD's proposal to make the natural gas management plans to better serve their intended purpose?

And if you could please start with the new requirements for venting and flaring.

A. So as drafted in OCD's 1230 proposal in Exhibit 2A, Part 27, Section 9D4 clearly requires an operator to certify whether it will be able to connect the well to a natural gas gathering system in sufficient capacity to transport 100 percent of the volume of natural gas on the date of first production.

If an operator determines it will not be able to connect to such a natural gas gathering system, Part 27, Section 9K5 requires the operator to shut in the well until it is able to certify or to submit a venting and flaring plan.

So far so good.

The venting and flaring plan requires the operator to, quote, evaluate the potential alternative uses for the natural gas until the natural gas system is available, end quote.

And that's where, in my view, the language falls short.

If we could put up Slide 10, perhaps.

The plain language of the venting and flaring plan does not require the operator actually to select and use one of the possible alternative uses for the gas.

To ensure that an operator cannot just evaluate the options, but actually must select and use one, we suggest a few targeted modifications.

So we have -- the provision basically says if the operator determines it will not be able to capture the gathering system capacity, quote, the operator shall submit a venting and flaring plan to the division that evaluates -- and we would suggest adding -- and select for one -- going back to the division's language -- the potential alternative uses for the natural gas -- we would add -- to ensure that the natural gas is put to an alternative use until the natural gas system is available.

This is -- and this would just clarify that the plan -- the point of the plan is not just to evaluate options, but to actually select and adopt one, showing how the operator would actually put the gas to an alternative beneficial use, rather than flaring it.

Q. And how would you suggest strengthening Part 27, Section 9.D7, which addresses what happens

if an operator fails to submit an adequate venting and flaring plan, or if OCD determines that the operator won't have adequate takeaway capacity at the time a well is spud?

A. Thanks. So the first -- the first suggestion we would make here would be to align the venting and flaring plan referenced in this subparagraph with the prior suggestion, to assure that the venting and flaring plan provision above requires the operator to select one of the alteratives.

This section addresses what happens if an operator fails to submit both an adequate venting and flaring plan, end quote.

But it doesn't constitute, in the lang- -- in the proposed language, it does not indicate what would constitute, quote, an adequate plan.

And during this proceeding, we have heard at least one, and possibly more than one witnesses, testify that a venting and flaring plan that would beneficially use, say, 50 percent of the gas could potentially be considered adequate.

But that reading would not be consistent with the prohibition of all routine flaring that is contained in Part 27, Section 8D. And the

requirement in Part 27, Section 9D1, that the natural gas management plan, quote, shall describe the actions that the operator will take at each proposed well, end quote, to, quote, comply with the requirements of Subsections A through F of 19.15.27.8 NMAC, including for each well, end quote.

And those provisions contain the prohibition on routine flaring.

My colleagues have also heard from OCD that the prior interpretation that, say, a 50 percent capture, or 50 percent use would be potentially approvable, is not correct.

And that to be considered adequate, OCD believes the venting and flaring plan would have to ensure beneficial use of the gas.

But clearly, given the differences in -- in what we've heard, there seems to be some confusion here. And we urge the commission to clarify the text and address it.

To do so, we have a simple term and condition again. We would suggest adding, after the word "plan," where it says they have to have an adequate plan, quote, that provides for alternative uses for 100 percent of the anticipated volume of natural gas produced on the date of first production

from the well, end quote.

And that could clarify the text.

Q. Under the proposed text, how much -- how must OCD respond to an inadequate venting and flaring plan or takeaway capacity? Is that really clear?

A. No, I don't believe that the proposed text is clear on this point.

The current text provides that in this situation, OCD, quote, may deny the APD or conditionally approve the APD, end quote.

And in my view, this text is ambiguous in two ways.

So first the text allows OCD to deny or conditionally approve the APD, but it does not limit OCD to those two actions. And in allowing Action A, allowing Action B, that does not automatically preclude Action C, which would be OCD using its existing authority to simply approve an APD, but without conditions.

So we suggest that the text be clarified to replace "may" deny or conditionally approve, with "shall" deny or conditionally approve, or may only deny or conditionally approve.

I do understand that OCD interprets the

proposed language as already limiting its authority to one of the two listed actions. And my concern, however, is that although that's the interpretation, I -- we don't see the text as clearly precluding a different interpretation. And of course legal interpretations are rather easily changed, or at least more easily changed than changing regulatory language.

So in my view, it's just a matter of good regulatory language to always clarify ambiguities wherever you can do that without, of course, making a statute unwieldy or -- statute or regulation unwieldily or unworkable or, you know, repetitive.

But I don't think that that's what we're suggesting here.

The second issue with this subsection is that the phrase "conditionally approve" is entirely open ended. And here, we're not suggesting that the regulatory text needs to specify permissible conditions or tell OCD, you know, exactly what they have to include in the permit.

But I think it would be helpful to specify the purpose of conditionally approving a permit.

You know, my -- my understanding of OCD's intent here is that the -- the point of the

conditions is to ensure that even if the showing weren't sufficient at the time OCD granted the APD, the conditions would say, by the time the well is spud the operator would have the capacity to capture, use, or reinject the gas.

And that's a perfectly reasonable basis for -- for granting a conditioned permit.

But it's not clear that that is, in fact, the only -- or the -- you know, the only way that OCD could condition the permit; and, therefore, grant the APD.

So we would suggest that the text be clarified to provide that the APD be either denied or approved, quote, with conditions sufficient to ensure that 100 percent of the anticipated volume of natural gas produced on the date of first production from the well will be transported to a natural gas gathering system or will be used for one or more of the alternative uses identified in 19.15.27.9D5.

This does not dictate to OCD what the conditions must be. It simply provides a standard for evaluating the adequate safety of the conditions.

Finally, I wanted to point out one other concern here.

The proposed gas management plan provisions also do not clearly address what happens if an operator certifies that it will be able to connect to a gathering system, or that it will put the gas to an alternative use, but then the operator fails to do so.

You know for example, although an operator may have expected a gathering system to have capacity, that may no longer be the case at the time that the well begins production.

But it's not clear to me, from the proposed text, whether the gas management plan in venting and flaring plans would be formally, quote, approved by OCD or incorporated as terms of the permit.

If they are, then it appears that OCD should be able to enforce compliance with the actions described in the plans, and that would resolve the concern.

As a matter of the plain language, as it's proposed, OCD is authorized to deny the APD if the operator does not certify, or the venting and flaring plan is inadequate.

But I don't see language directing OCD to approve or incorporate the plans in the permit.

I recognize the language also does not preclude OCD from doing so. And OCD's practices in this regard may be addressed elsewhere in the existing regulations. But unless other provisions or standard practices make it clear that OCD would need to formally incorporate or approve the plans that accompany the application for the permit in a way that makes them enforceable, at a minimum, this appears to be ambiguous and provides a potential gap in the proposed text.

Nevertheless, I sort of added this as a -- at the end of this point, because the prohibition on routine flaring in the proposed regulations makes this potential enforcement gap much less of a concern than it otherwise would be.

And so we did not suggest a specific modification to address the potential enforcement gap. In our view, if the operator fails to comply with its plan and it flares routinely, it would clearly be a violation of Part 27, Section 8A, and so OCD could enforce that provision regardless of whether it could also enforce the elements in the gas management plan of the vending and flaring plan.

But my view is that it would not be prudent to rely solely upon the prospect of

enforcing the gas management plans absent further clarification of the text, if that is what the commission has in mind going forward.

Q. Ms. Tietz, would you please discuss what additional information operators should include in their natural gas management plans and why?

A. Yes. Proposed Part 27, Section 9D1, specifies the elements that must be included in all natural gas management plans.

And we support the two additional provisions that OCD most recently proposed in the new Subparagraphs D and E of that section.

However, the proposed requirements for gas management plans still do not adequately promote information exchange between the production and midstream segments of the industry. And this is an absence that I think is -- it's worth the commission considering here.

One of the factors driving routine flaring is that gathering pipeline capacity often lags increased production of associated gas by months to years as the midstream companies wait to build capacity until the supply is in place.

And the purpose of information exchange is simply to give midstream companies advance notice of

expected increases in gas production; thereby, allowing operators in midstream companies together to shorten or eliminate that time lag between when the additional production is available and when the capacity is available to take it away.

So in 2014, North Dakota adopted provisions requiring operators to inform midstream companies of anticipated production from planned wells. And they are now relying upon North Dakota's experience in adopting similar provisions in the 2016 rules.

OCD also included such provisions in the initial July 2020 draft of the regulations, but then dropped them from the October proposal.

During the BLM rule making process, the director of North Dakota's department of mineral resources stated that he viewed North Dakota's requirements for producers to communicate with midstream companies that anticipated production as one of the most effective elements of North Dakota's flaring rules, at least at that time.

And you know, he had seen that these communications were helping to encourage more timely buildout.

So requiring producers to certify that

they share this information is not a costly requirement. It doesn't require new equipment or operational changes.

And to the extent it facilitates gas capture, it may actually increase producers' revenues by allowing them to get their gas to market sooner.

So we would suggest the following language to be added to Part 27, Section 9D1. The language is up on the screen here. I won't read you the whole thing.

But in summary, it would require an operator to certify that it can -- it had communicated with midstream operators and provided information to them on the location, the timing, and the volume of anticipated production.

Q. As proposed, do the regulations require operators to provide sufficient information for OCD to evaluate the natural gas management plans?

A. I think this is an important -- Part 27, Section 9D7 requires OCD to determine whether, quote, the operator will have adequate natural gas takeaway capacity at the time a well be spud, end quote.

So the natural gas management plan needs

to provide OCD the information it needs to make this determination.

We would suggest just two small modifications to provide additional relevant information that is not required by proposed language.

First, for operators that aren't meeting their captured requirements at the time they request an APD, as proposed, the plan must specify whether the natural gas gathering system has the existing capacity to gather the anticipated future production of the well.

But this isn't really the right question. Because what matters is whether the gathering system will have sufficient capacity to gather the well's production when it is producing.

We suggest adding text to require the operator to state not just whether the gathering system has capacity now, but also at the anticipated time of connection, is expected to have capacity to gather the anticipated natural gas production volume from the well.

You can see the language there, at the anticipated time of connection is expected to have capacity, is what we would suggest adding to that

provision.

In addition, we suggest that gas management plans should include information on the name of the natural gas processing plant or processing plants that are expected to receive the gas. And this could be under Part 27, Section 9D2D.

Again, it's on the screen here. The name and the location of the natural gas processing plants.

So this information is highly relevant if it is capacity constraints at the processing plant or plants, rather than in the gathering system that may drive routine flaring.

Q. Ms. Tietz, what's your view of the gas capture requirement in the proposed regulations?

A. I support the requirements to ensure that operators capture for sale or beneficial use or reinjection all or almost all of the gas they produce.

In my view, the simplest and the most enforceable way to require this for new wells is to prohibit routine flaring, and implement it by requiring operators to demonstrate how they will capture gas as a condition for receiving an APD.

For existing wells, a routine flaring

prohibition is also a straightforward and enforceable requirement.

And then the percentage base capture requirement is a reasonable way to phase down other types of venting and flaring over time, which is also critical to achieve.

One proposed vulnerability -- sorry.

One potential vulnerability of the proposed approach, the percentage-based approach, however, is that whether or not operators actually capture the percentage of gas required depends on accurate measurements and reporting of venting and flaring.

And this is why OCD's new measurement requirements are so important, and why we so strongly support those.

Nonetheless, both measurement requirements and compliance with the statewide gas capture requirements still will need comprehensive audits and enforcement to ensure that widespread industry and compliance is occurring, and that the gas capture requirements is actually working in increasing the volumes captured.

So -- and we continue to have concerns that OCD has not been provided all the resources it

could use in order to assure compliance here.

So we think that the proposal by the state land office to require routine third-party verification of vented and flared volumes makes a huge amount of sense in a way to make this gas capture requirement actually work and produce the results that the commission is looking for here.

Q. And in your opinion, Ms. Tietz, is the 98 percent capture rate sufficient?

A. So considered as a whole, I would say that the proposed venting and flaring regulations here are very strong. And you know, working all -- all the pieces working together really is a -- is a tremendous step forward.

But just considering the gas capture requirement in isolation, I would state that a 98 percent capture rate by itself, although it sounds very good -- 98 percent, that's -- that's a lot, right?

It still allows a lot, and far too much gas, to be wasted. And you know, we can sort of see this better by looking at what's happening right now in New Mexico.

If you look at the reported rates of venting and flaring by New Mexico operators in 2019,

some operators already meet the 98 percent gas capture rate, but they're still venting and flaring pretty massive quantities of gas with all of the attendant, you know, waste and pollution and health and climate impacts that that implies.

Lesley Fleischman, a senior analyst with the clean air task force, will provide a more detailed analysis on New Mexico operators' venting and flaring practices.

So -- but I just want to focus in on one -- on a few points here. The combined volumes, for example, of three -- of flaring, just flaring from three companies in 2019 -- and these are three companies that flared between 1.1 percent to 1.4 percent of their gas production, so that's well below -- well below the 2 percent.

They still, together, flared a volume of gas sufficient to meet the home heating and cooking needs of over 80,000 New Mexico homes that year.

And that's a tremendous amount of waste.

If fully complied with, we expect that the general prohibition on venting and flaring, including the prohibition on venting and flaring, would further drive down venting and flaring rates below 2 percent, or capture rates above 98 percent.

But without vigorous implementation and enforcement of the entire set of regulatory requirements, we would expect a massive volume of unnecessary waste and a huge contribution of climate change to continue.

For example, according to Ms. Fleischman, flaring 2 percent of the 2019 production volumes would have burned a volume of gas sufficient to serve over 450,000 New Mexico homes for heating and cooking needs.

So the gas capture requirement is good. 98 percent is a reasonable starting point in the context of the overall rules, and we are not suggesting a different number here.

But it's important to recognize that that alone would absolutely not achieve the goals that we're trying to achieve here.

Q. Ms. Tietz, let's now talk about completions and recompletions.

And do you believe that those operations are adequately addressed in the OCD proposal?

A. No. The proposal includes -- the proposal includes a subsection from completions and recompletions, but the requirements are unlikely to achieve any additional reductions of waste or

pollution from these operations.

As industry commenters have noted, EPA has regulated completions and recompletions involving hydraulic fracturing by imposing reduced emission completion requirements, also known as requirements for RACs, or recompletions.

EPA acted on this aspect of oil and gas production precisely because EPA recognized, all the way back in 2012, that uncontrolled completions vent significant quantities of natural gas, making them a large source of air pollution, including methane, volatile organic compounds, and any toxic air pollutants, such as benzene and other carcinogens.

And of course from the commission's perspective, venting large quantities of natural gas is a massive source of waste, as well.

Unfortunately it appears, however, that EPA's regulations did not achieve their intent.

While some of the continued emissions and waste that we're still seeing are likely due to noncompliance, the regulations are also drafted in a way that has, I believe, unintentionally provided some major loopholes.

The proposed regulations do not address these loopholes, and so they will not further reduce

venting from completions and recompletions.

Q. Would you please explain what the reduced emissions completions requirements are intended to achieve?

A. So for over two decades, industry has used REC equipment, reduced emission completion equipment, to handle flowback from hydraulically fractured wells and capture the gas.

Natural gas producers themselves developed and deployed this equipment at a time when gas prices were high and they were losing, you know, substantial quantities of a valuable resource during completions.

And then since 2012, hydraulically fractured natural gas wells have been expected to use such equipment under the EPA regulations, with hydraulically fractured oil wells added to the regulations in 2016.

This reduced emission completion equipment was designed to be temporary and easily moved from wellsite to wellsite. It normally includes filters, such as plugs. It includes sand catchers in one or more attached separators. And it is designed -- and this is key -- for the pressures and volumes associated with initial flowback.

Also where well pressures are too low for the REC equipment to function properly, the pressure needed to retrofit those with compressors, that would also be part of the set of equipment.

And we have more details on the equipment in Climate Advocates' Exhibit 14.

So in adopting regulations for reduced emission completions, EPA expected the industry would use this mobile REC equipment to minimize venting and emissions.

Q. What are the problems with the EPA requirements?

A. Well, it's becoming increasingly clear that problems with EPA regulatory text have seriously undermined the compliance with the provisions.

The EPA regulations distinguish between what it terms, quote, initial flowback, end quote, separation flowback.

EPA defines initial flowback as the period, quote, when it is not technically feasible for a separator to function, end quote.

And the EPA regulations provide an exemption from the REC requirements during its initial flowback period.

The EPA REC requirements, thus, only apply once a, quote, separator can function.

But this distinction sets up a test that is ambiguous, and it turns out subject to abuse, as when a separator can function may depend on the specifications for the separator and whether other equipment is used in conjunction with it.

The EPA has recently tweaked its regulations to try and limit the extent of the exemption to a small degree, but it certainly has not closed the loophole created by this distinction.

Q. And how does the exemption for initial flowback weaken OCD's proposed completion requirements?

A. So the key problem with both the EPA regulations and OCD's proposal is the broad exemption from any requirements to limit venting when it is deemed, quote, infeasible to operate a separator.

Connecting to REC equipment, including enclosed vessels, from the initiation of flowback, allows operators to basically eliminate venting and flare any gas that cannot be sent to a sales line.

Both the state of Colorado and the Canadian federal government, for hydraulically

fractured wells, prohibit operators from venting during flowback.

For example, Canada's federal rules provide, quote, hydrocarbon gas associated with flowback at a well and upstream oil and gas facility must not be vented during flowback; but must, instead, be captured and added to hydrocarbon gas conservation equipment or hydrocarbon gas destruction equipment, end quote.

The only exception they provide to this venting prohibition is, quote, if all of the gas associated with flowback at the well does not have sufficient heating value to sustain combustion, end quote.

It seems reasonable to assume that these jurisdictions are comfortable that equipment is available and operators are able to meet this requirement without raising safety concerns.

And I believe it's appropriate for OCD to hold the operator responsible for obtaining REC equipment that is satisfactory to meet the specific job, adequate to meet the job.

I understand that operators have expressed concerns that there may be some circumstances in which controlling venting from the beginning of

flowback is more difficult, or perhaps even technically infeasible.

But when the problem is caused by a factor under the operator's control, such as the choice of fracking fluid, which can contaminate the flowback gas, that does not seem to be sufficient for allowing venting.

If there are, indeed, specific situations that are beyond an operator's control, in which there is no existing equipment that is able to safely handle flowback, it is incumbent upon the industry to specifically identify the obstacles in those situations.

And then if OCD concurs, the regulation could address those situations.

But assuming the REC equipment to handle all flowback safely does exist, as other jurisdictions have found, the burden should be on an operator to justify an exception to OCD's proposed -- to the rules.

Q. How should OCD's proposed rules be modified to address this situation?

A. Together with -- excuse me -- together with the Environment Defense Fund, Climate Advocates proposed language that would require operators to

capture or flare, not vent, throughout the flowback period, including initial flowback.

You will hear from EDF's technical expert, Tom Alexander, in support of these provisions. Our proposed language adds elements that -- the Colorado text that the regulatory structure proposed by OCD.

In essence, it would require the use of enclosed, vapor tight flowback vessels during initial flowback. And it would require flaring rather than venting gas during this stage.

This language leaves it up to industry to decide how to avoid such venting, but we presume that operators would deploy REC equipment to meet the requirement.

OCD's proposed text addressing separation flowback already requires gas to be sent to be reinjected or to be used on site, unless doing so would pose a safety risk. So we have not proposed changes to that language.

In short, Colorado and Canadian regulators recognize that venting is not necessary during initial or subsequent flowback from hydraulically fractured wells, and technology to control it is affordable and available.

And if New Mexico is to lead the nation on

controlling methane and waste, OCD must be no less protective than these other jurisdictions.

Q. Ms. Tietz, you stated that EPA recently modified the text of its requirements.

What did EPA change, and how do those changes relate to OCD's proposed text?

A. So just this past September 2020, EPA made a set of changes to the Quad-O and Quad-OA regulations.

While most of the changes issued under the Trump administration weakened the regulations, EPA did make two very small improvements to the requirements for completions and recompletions, which does indicate that they are recognizing that there are some problems with these provisions.

First, some operators have apparently been reading the regulatory reference for use of separators, as in they're exempt until it's technically feasible for a separator to function, to allow them to rely on production separators.

Well, production separators are built to handle the pressures and volume associated with production, not with flowback.

Not surprisingly, production separators may not be able to function until flowback is mostly

or fully completed. And in that case, those completions would largely evade the requirements to capture or flare gas during completions.

So EPA tried to address this by specifying that the separator must be designed to handle flowback fluids.

And the current text now reads, quote, the separator may be a production separator, but the production separator also must be designed to accommodate flowback, end quote.

That's 40 CFR Section 60, 5375AA1, little I.

In OCD's rules, any rule referenced to a separator during completion operations should make it clear that such a separator is part of the REC equipment; and, hence, it must be designed to accommodate the volumes and pressures associated with flowback.

The second change EPA made was to require that the separator be on site or otherwise available nearby during the entirety of the flowback period.

A requirement to have the equipment on site is relatively easy to verify and enforce, as opposed to, it is at a point in the process where the separator is now able to function; and,

therefore, we have to bring the equipment on site at that point.

You have the equipment there at the beginning, and then it's there. And then once the operator has the equipment on site, you've incurred the cost of obtaining the equipment, renting it, and so there's a much less disincentive to use it, or a much more incentive to use it. Disincentive -- whatever. I think you follow me -- because most of the cost is already incurred by the operators.

So the rules should also -- the proposed rules should also -- or the adopted rules should also include a requirement that the operator have any equipment needed to comply with the completion or recompletion requirements on site as of the initiation of flowback.

Q. And, Ms. Tietz, do you have any closing thoughts for the commission?

A. Thank you. Yes, Ms. Fox.

In closing, I would like to say we really commend OCD for proposing a protective set of recommendations that, as drafted, would sharply reduce wasteful and polluting of venting and flaring of natural gas from oil and gas production in New Mexico.

And many elements of these requirements would lead the nation by example.

Absent weakening changes, and with a few modest improvements, these regulations would achieve legal benefits for the climate and for public health in New Mexico.

They are also practical and reasonable for the industry, and they are desperately needed.

So we urge the commission to adopt these regulations in whole, along with the critical strengthening modifications we have identified, and will identify in our further upcoming testimony.

And I would just like to thank you again for the privilege of testifying before you today.

Q. Thank you, Ms. Tietz.

MS. FOX: I move admission of Climate Advocates' Exhibit 1 and 4 through 11.

HEARING OFFICER ORTH: Let me pause for a moment, in the event there are objections to the admission of Climate Advocates' Exhibit 1 and 4 through 11.

(Exhibits admitted, Climate Advocates' 1, and 4 - 11.)

HEARING OFFICER ORTH: Exhibits 1 and 4 through 11 are admitted.

Thank you.

MS. FOX: Ms. Tietz stands for cross-examination.

HEARING OFFICER ORTH: Thank you very much, Ms. Fox.

Mr. Ames, do you have questions of Ms Teitz?

MR. AMES: I do not, Ms. Orth. Thank you.

HEARING OFFICER ORTH: All right. Thank you.

Mr. Rankin, do you have questions of Ms. Tietz?

MR. RANKIN: Madam Chair, I do.

Thank you very much.

HEARING OFFICER ORTH: You're a little soft, Mr. Rankin.

(Discussion off the record.)

EXAMINATION

BY MR. RANKIN:

Q. Good afternoon, Ms. Tietz.

How are you?

A. I'm well, thank you.

How are you?

Q. I'm doing well.

I want to just first start with your CV,

your resume.

If you would, just take me through -- in particular, I want to focus on the time frame in which you were at the BLM and you were working on the 2016 venting and flaring reduction rule that you were talking about during your testimony.

Tell me -- lead me through your time as counselor to the director, when you were working on preparation of the development of those rules.

What was your role in the development of that language?

A. So I was the political team lead for the team that developed those regulations. I worked very closely with the career team lead, and we -- the bureau had been working on a draft of them for approximately, I don't know, somewhere between four and six years before I arrived. And they were still working on regulatory text and had not yet proceeded to many of the decisions necessary.

So there was interest in actually, you know, moving the regulations forward. And I helped the team to identify key questions, work with the counsel at the interior department, DOJ.

We worked with many of the states. We talked to state regulators, we talked to tribes. We

had a whole series of public hearings, where we went to multiple states to have open public hearings on -- I think this was between the proposal and the final, I believe.

We developed a proposal, you know, took the comments, did the standard rule making thing where you spend your life reading comments and adjusting things and making decisions.

And we developed the final regulations.

Q. So in your resume, you did -- you say that you developed the policies and the text.

And that was for that BLM 2016 rule, correct?

A. That is correct, yes.

Q. Okay. And that rule was --

A. Obviously, in conjunction with my boss, my boss' boss, and the assistant secretary for land and minerals, who signed the regulations.

Q. And that -- that language of the text that you worked on eventually was the rule which was promulgated as a rule?

A. Yes.

Q. Okay. Thank you.

And what year was it actually promulgated or enacted as a rule?

A. It was promulgated in November of 2016.
Q. Did it define what types of gas from oil and gas operations is considered, quote, unavoidably lost, end quote, for purposes of the rule?
A. Yes.
Q. And if gas fit within that definition of the rule, it was not considered waste.
Is that correct?
A. I would have to go back and read the exact text to be sure, since this one is many years ago.
So we said that royalty was not due on avoidably lost gas -- sorry -- is due on avoidably lost gas, but is not due on unavoidably lost gas.
Q. So if it's helpful, maybe Mr. Cross will allow me to share, and I'll put the language up on the screen.
A. Okay. I obviously have the rule here, if you want to break for me to --
Q. It may be easier if I can share it with you --
A. Sure.
Q. -- so we can see it together.
A. Sure.
Q. Do you see my screen here, where I'm sharing, I believe, the 2017 version of the language

from the BLM rule?

Is this the correct rule that you and I have been discussing?

A. Yes.

Q. All right. So if you would, just tell me -- lead me through what you just -- your answer again, and explain how this rule defines unavoidably lost gas.

A. So BLM applies royalties only on gas that it views as being avoidably lost. And the way this rule was structured was, we laid out what was -- what BLM considered unavoidably lost for purposes of royalties. And then it said everything else is avoidably lost and royalties are due.

Q. So looking through this, as I understand the language -- and I'm just going to, you know, ask you to -- to step in.

But under the provision here, unavoidably lost gas -- and I'll paraphrase -- unavoidably lost gas is gas produced under Subpart A1, oil and gas that is lost from the following operations or sources.

And then it lists, below, those operations or sources?

A. Uh-huh.

Q. And it goes on to say, quote, and that cannot be recovered in the normal course of operations, end quote.

Is that -- is that...

A. Is gas that's lost from the following operations, and that cannot be recovered in the normal course of operations where the operator has taken prudent and reasonable steps to avoid waste, yes.

Q. Great. Thank you.

And now -- now just going through this list here, I didn't see -- it appears that the list -- that they are listed basically in chronological order, essentially, from the drilling of the well down through production and operations. So is that kind of the idea of the sequencing here?

A. Yeah, most of it.

Q. Yeah. So the first category that's considered unavoidably lost is this -- volumes of lost gas related to well drilling, correct?

A. Yes.

Q. And then next in line are -- is volumes of lost gas from well completion and related operations, correct?

A. That's right.

Q. And then --

A. If the operator had taken prudent and avoidable steps. And that was assuming that, of course, the well completions and related operations were complying with all requirements for those.

And the one other thing I would say regarding this is, this was BLM's take on these -- on what was avoidable and unavoidable at the time of this writing of the rule. It recognized that these were things that could change over time as, for example, with routine flaring.

Q. Okay. But --

A. Acknowledging these and -- you know, costs, et cetera, of what you can do in the course of the operations.

Q. All right. But nonetheless, well completion and related operations is -- is identified as an unavoidable lost source of gas without qualifications.

And the -- other than the prudent --

A. It was taken through the steps to avoid waste, and where the separator is in compliance with the completion requirements elsewhere in the regulations.

Q. All right. Okay. Very good.

Now, I'll skip down a couple of these.

The next one I want to point out is under romanette 7, which addresses normal operating losses from a natural gas activity, pneumatic controller, or pump.

And as you have pointed out, that's in compliance with these other regulations that are cited, correct?

A. Right.

Q. And then it goes on to identify in romanette 8, normal operating loss from a storage vessel or other low-pressure production vessel that is in compliance with other incorporated regulations, correct?

A. Yes.

Q. Okay.

A. For purposes of royalties, yes, it's considered unavoidable.

Q. Yeah. And then it also goes on to identify well venting in the course of down well maintenance, down well liquids unloading performed in compliance with these other incorporated referred-to regulations, correct?

A. Yes. Yes.

Q. And then it goes on to identify, in

romanette 11 on the same page, facility and pipeline maintenance, such as when an operator must blow down and depressurize equipment to perform maintenance and repairs.

A. Yes.

Q. Okay.

A. That's one that would definitely probably be reconsidered in the -- several of these would probably be reconsidered in a subsequent rule making.

But yes, at that time that was definitely our view.

Q. And these -- so these were promulgated in November of 2016, and they were in place for how long before they were vacated by the Courts?

A. Well, they were in place for a very long time before they were vacated.

However, they were in place for a very short time before the administration stayed them through a notice that was overturned by the Courts, and then stayed them again through something that was challenged, but I believe was then mooted, and then rescinded them.

And then that decision to rescind them was vacated by the California Courts, at which point it

went back to -- but the California Courts stayed these underlying rules to allow parties to reinitiate the litigation that had begun on these rules back in 2016.

And at that point, you know, after almost at the end of the administration, they were vacated sometime in the fall.

Q. I seem to recall it was a long time.

A. It was actually quite a long time before they were vacated. But I can't say that they were actually in place during that time.

Q. Understood. I agree with all of those. It's been a long, convoluted history around these rules.

A. Indeed.

Q. But I think the point I want to get across, and just make sure I understood, was that under this rule there were certain categories of operations and sources that were identified as being unavoidably lost gas, correct?

A. Yes, for purposes of royalties.

Q. Okay. Now these rules, when they were promulgated and enacted, they were -- took up all those operations covered by BLM on all federal lands including New Mexico, right?

A. Yes.

Q. So looking at these types of sources and operations as you just described, I understand that before -- I will refer to them as items rather than having to say operations and sources again. I'll just call them the items on the list here.

Do you agree with me that these operations or sources are limited to low-pressure sources or operations?

A. Well, well drilling is not totally -- emissions during well drilling, would that be low pressure?

Q. So I'm asking you. In your opinion, are -- would these fall within the category of the low-pressure source?

A. No, I do not believe so.

Q. Which of those categories, in your opinion, would not fall within the low-pressure definition?

A. So I haven't looked carefully at exactly which operations always are at low pressure versus high pressure. So I think I would defer to a petroleum engineer for that distinction.

Q. Do you have an understanding, a general understanding, of what would be considered a

low-pressure source or operation in the industry?

A. Yes.

Q. What is that understanding?

A. Sources or operations that are not highly pressurized, that are at atmospheric or near atmospheric pressure.

Q. Okay. So something that's in the range of at or near atmospheric pressure.

Would you agree that pressures below, say -- I'll use 15 pounds per square inch gauge, is -- falls within the range of what's considered a low-pressure operation or source?

A. I would prefer to not overstep my boundaries here and defer to a --

Q. I understand that. I understand. I appreciate that, being a lawyer, and not going beyond where you can go.

Now the Climate Advocates' modifications that you just reviewed, some of the elements of the proposed modifications, they don't treat lost gas from sources or operations that we just discussed in this BLM rule as being unavoidably lost.

Do you agree?

A. Yes.

Q. And in fact, the modifications -- some of

the expressed modifications that Climate Advocates have made to the proposed rule include some gas lost from sources and operations that the BLM rule determined was unavoidably lost gas, correct?

A. That's correct. We've come a long way in terms of what they've asked the industry to do.

Q. Now going back to the language of this rule, the provision here indicates that it's this gas -- this lost gas from these operations or sources is considered to be lost because -- I'm going to highlight this language here. I'm sorry -- because it cannot be recovered in the normal course of operations.

Is that -- do you agree with that?

A. No, it's not because of that. It is -- it's gas that is lost from the sources and that cannot be recovered, where the operator has taken prudent and reasonable steps to avoid waste.

Q. Okay. So it's unavoidably lost because of not -- I'm going to -- I don't want to misstate or mischaracterize your testimony.

But I think I understood you to say that it's unavoidably lost -- maybe if you wouldn't mind rephrasing that, so I can understand.

A. Sure. It has to have been lost from the

following operations or sources, and it cannot be recovered. That loss cannot be recovered in the normal course of operations, and where the operator has taken prudent and reasonable steps to avoid waste.

Q. Okay. Now --

A. So --

Q. Go ahead.

A. So where all of those are the case, then it is unavoidably lost. It is not that all of those operations, everything that comes from it, equals that. If you see, it has to be all of those conditions.

It does not mean those conditions define -- it is not the statement that all gas from well drilling is necessarily all of those things. It is that if it is gas from well drilling and you cannot recover it in the normal course of operations and the operator has taken prudent and reasonable steps to avoid waste, then it is considered unavoidable.

Q. All right. I understand. I'm with you.

So I think, when you were talking about your experience with the BLM rule -- I'm going to refer to your testimony here.

I understood you to say that the -- the efforts -- the foundation of that rule was premised on BLM's authority to prevent waste.

Is that a correct characterization of what you said?

A. Yes.

Q. And so the thrust -- and you said that each -- you made sure that each individual provision that was under this rule independently -- was independently supported by that -- by that intent, that goal of minimizing waste.

Is that fair to say?

A. Correct. Yes.

Q. So in that sense, the BLM rule you helped draft and promulgated shares the same rule with this rule, which is to prevent and minimize waste.

Is that fair to say?

A. Yes. We want it to reduce waste and avoid -- prevent methane.

Q. Okay. So sharing that goal, I want to just kind of review with you a little bit more, shared -- or talk about that shared goal here.

Do you see this screen I'm sharing with you here?

A. Uh-huh.

Q. I think you may have seen it before. It's popped up a couple of times.

This is excerpts from New Mexico's Oil and Gas Act that defines the definition here of surface waste.

And in bold, highlighting, and underlined, it states that -- it indicates, or emphasizes, that surface waste is the unnecessary or excessive surface loss or destruction without beneficial use.

Do you see that?

A. Yes.

Q. Okay. So what I want to get a sense for is, would you agree that "excessive" means unavoidable?

I'm sorry. That "excessive" means avoidable? In other words, that the loss of -- that excessive loss of gas is the equivalent of avoidable gas loss?

A. I don't think it's necessarily equivalent to avoidable.

I think avoidable goes to whether or not there's something that can be done about it.

And excessive goes -- you know, goes to quantity. I mean, obviously, it's a close relationship, but I don't -- I wouldn't call them

synonyms.

Q. Okay. Fair enough. All right.

And so the converse of that, the -- would be -- would you agree that excessive does not mean unavoidable?

A. Excessive doesn't mean unavoidable?

Q. Yes.

A. Well, excessive clearly does not mean unavoidable.

Q. Okay. That's the -- that's your answer. I just wanted to make sure I understand.

A. I'm not quite sure I follow. But no, the word "excessive" does not mean the word un- -- is not the same and equal term, "unavoidable."

That seems to be -- any dictionary would seem to agree with you on that point. They would not have the same definitions.

Q. I understand.

Now I'm going to move on to other portions of the rule here, and I want to touch on a couple of the elements that you discussed on your direct.

I'm going to talk about -- let's see.

I will ask you to turn to page 15 of your slide presentation and demonstrative.

A. So this is where my failure to print my

slides becomes a slight issue, but perhaps we can put it on the screen.

Q. Maybe Ms. Fox can help us here.

(Discussion off the record.)

Q. (By Mr. Rankin) There we go.

Now under the second main bullet there, you stated that it's -- as I recall, that it's important under this rule to have accurate measurement in reporting this.

Do you agree?

A. Yes.

Q. So you would agree that the ability for an operator to accurately measure volumes of vented or flared gas is going to be a critical element to the operation of this rule?

A. Of the gas capture requirement.

It would not be necessary, for example, to avoid routine flaring. Maybe other elements of the rule.

Q. Sure. And those elements are fairly significant, in terms of the ability of the operator to comply with its gas capture requirements, right?

A. Well, I think the operator could comply with the requirements, as the rule states them. Because, say, we have measurement equipment that can

only measure to an X degree of accuracy.

At that point, whatever sort of the -- you know, whatever the limits of the estimation or the measurement equipment are, that would be presumably the basis for the operator evaluating their own compliance and for OCD evaluating the compliance.

Q. So within the measurement parameters of the equipment, that's sort of the --

A. Or practices, I said.

Q. Okay. But the point is that -- that you would agree that measurement -- accuracy of measurements is critical for both operators and the division here, to be able to enforce this rule in the gas capturing --

MS. FOX: Objection, beyond the scope.

I let the first question go by, but now he's continuing.

MR. RANKIN: Madam Hearing Officer, she testified about the importance of accuracy in measurement and reporting of this rule.

I'm just asking her to confirm my understanding of her testimony.

MS. FOX: She testified very generally that that's evidence that Climate Advocates was going to put on. But she didn't provide specific

evidence on accuracy reporting in the scope.

HEARING OFFICER ORTH: I thought it was going to be through another witness.

MR. RANKIN: That's fine. I will save that for another witness, then.

Now looking at the last page of Ms Teitz' presentation on page 17, Ms. Fox, if you can put that up as well.

Q. (By Mr. Rankin) Ms. Tietz, if I understand your testimony here, you touched on some of the issues around safety concerns that have been discussed around these reduced emissions and depletions. And you indicated that operators have raised concerns around safety.

Were you present for the testimony of OCD's witnesses?

A. I was not present for most of the testimony.

Q. So you're not aware then, obviously, that OCD witnesses themselves raised concerns about the safety concerns of these practices?

A. I think I -- I was aware that -- I think I -- well, I was aware that safety concerns have generally been mentioned, yeah.

Q. Okay.

A. I didn't see that witness or that statement.

Q. And you're not -- you're not an engineer -- an oil and gas operations engineer. You have no education or experience in evaluating the safety of drilling operations, process, or equipment, including this type of reduced emissions completions practice that you're talking about?

A. I'm not -- I would say I'm not in any way evaluating the safety of oil and gas operations.

Q. Can you say that again? I'm not sure if I got that.

A. I -- I agree that I do not -- I'm not here providing my opinion on the safety of oil and gas operations. In my testimony, I deferred to the other jurisdictions that apparently found that you could prohibit venting without endangering -- without raising safety problems.

Q. Okay. I think I follow that. I think I follow that.

MR. RANKIN: Madam Hearing Officer, I have no further questions for this witness.

HEARING OFFICER ORTH: All right. Thank you, Mr. Rankin.

Mr. Biernoff, do you have questions of

Ms. Tietz?

MR. BIERNOFF: Thank you, Madam Hearing Officer. I have a few clarifying questions for Ms. Tietz.

EXAMINATION

BY MR. BIERNOFF:

Q. Ms. Tietz, you were testifying on direct, and also in response to Mr. Rankin's questions, about litigation throughout BLM's waste prevention rule, right?

A. Yes.

Q. Okay. And just to clarify, I think again during cross with Mr. Rankin, you made reference to the California Courts?

A. Yes.

Q. That's the federal district court in the state of California, right?

A. That's correct. Thank you. That is correct.

Q. Okay. I just wanted to clarify that.

And then with respect to the litigation in federal district court in Wyoming that sought to invalidate the original 2016 BLM waste rule, are you aware that the BLM switched courses in midstream, stopped defending the rule when the Trump

administration came into office, and aligned itself with the opponents of the rule?

A. I am, yes.

Q. Okay. Do you think that made any difference in the outcome of the litigation?

A. Absolutely. I think, you know, there are many legal principles and precedents that relate to deference to agency interpretations of their own statutory authority, and agency explanations of their own actions and agency technical expertise.

And the Court definitely referred to any -- any opinion to BLM's, you know, current views of many issues in the -- the then current views of many issues in the litigation.

Q. And is the district court decision in the Wyoming federal district court case that we're talking about largely vacating the BLM waste rule, is that decision on appeal now?

A. It is.

MR. BIERNOFF: Okay. Thank you, Ms. Tietz.

Madam Hearing Officer, I'll pass the witness.

HEARING OFFICER ORTH: Thank you, Mr. Biernoff.

Ms. Paranhos?

MS. PARANHOS: Thank you, Madam Hearing Officer.

I have no questions for this witness.

HEARING OFFICER ORTH: Thank you.

Commissioner Engler, do you have questions of Ms. Tietz?

COMMISSIONER ENGLER: I just have a question, and I don't know if she can answer it.

EXAMINATION

BY COMMISSIONER ENGLER:

Q. Good afternoon, Ms. Tietz. This is Tom Engler.

Can you hear me?

A. I can. Good afternoon, Mr. Engler.

Q. I have a question, and this may be more of a question for Ms. Fox.

But on the venting and flaring during recompletion of the -- completion and recompletion operations and the suggestions by Climate Advocates about the flowback vessels and the operations, is someone -- is someone going to provide some technical expertise on those operations and that equipment?

And that might be more of a question for

Ms. Fox.

A. Well, in my testimony, I referred that the Environmental Defense Funds' witness, Tom Alexander, is addressing some aspects of that, I believe.

Q. That was Tom Alexander, who will talk more about the engineering component of that?

A. That is correct.

Q. Okay. That's -- well, this -- do you --

A. I believe the description of the practices and the extent to which they happen and are or are not being used -- I know Ms. Fox is supposed to say this rather than me -- but I believe Mr. Schreiber will be testifying on that aspect of it as well.

Q. Are you aware of the Colorado rules that a lot of this verbiage that you guys are proposing almost comes straight out of the Colorado rules?

A. Yes.

Q. Okay.

A. But I was --

Q. Go ahead. I'm sorry.

A. I was going to say, yes. Yes, the -- that, deliberate, picking up of the text -- some of the text from of the Colorado rules and, you know, using it in an appropriate way in the OCD structure, as opposed to importing it wholesale.

But we tried to pick up the text that they used, yes.

COMMISSIONER ENGLER: Thank you.

HEARING OFFICER ORTH: Thank you, Commissioner Engler.

Commissioner Kessler?

COMMISSIONER KESSLER: Just one question.

EXAMINATION

BY COMMISSIONER KESSLER:

Q. Good afternoon, Ms. Tietz.

I'm looking at the Client Advocates' redlines to the rules, and in particular, Part 27.8F5.

And that is redlines measurement of -- measurement where gas -- Number 5.

And the state land office had presented a version of this language outside the OCD, where an operator needs to estimate rather than measure gas.

And so basically, there are just a number of different versions of the same thing floating around right now.

Which of these versions do you think is the best proposal and why?

A. I'm sorry, Commissioner. And I realize I should have referred to -- I referred to

Commissioner Engler as Commissioner Kessler as well.

But I have not focused on these provisions of the rules, so perhaps Ms. Fox could indicate which of our witnesses would be presenting opinion on that.

Q. I thought you had spoken about it earlier.

A. Not this specific. If I'm -- if this is F5, the provision entitled measurement of vented and flared gas?

Q. Yes.

A. No. I had spoken to the general point that we strongly support OCD having robust view requirements for measurement, and that this is an important element of the rule.

But I did not discuss any of the specific proposed modifications to their language.

But I believe another one of our witnesses will do that.

COMMISSIONER KESSLER: Ms. Fox, do you know who would be speaking to the provision F5 related to measurement of vented and flared gas?

MS. FOX: I believe that will be an EDF witness, and possibly Dr. McCabe, on that part.

COMMISSIONER KESSLER: Okay.

Q. (By Commissioner Kessler) And then

finally, you had presented a definition of routine flaring. And I think that was a slide in your presentation.

If that's somewhere in your exhibits -- I had asked to follow along. I -- I wanted to look at that definition again.

Where can I find that?

A. Yes, that is in our exhibits. It is in the exhibit that goes with that section of the testimony.

I apologize for not understanding that -- well, I believe that is Exhibit 7. Routine flaring, that should include the definition they have provided.

Q. I see this exhibit, but I didn't see a definition of routine flaring.

A. Oh, dear. Well...

MS. FOX: Commissioner Kessler, I did forward to you Ms. Tietz' slide presentation.

THE WITNESS: And if for some reason it's not in there, we can, of course, get you the exact citation and the material. It's pulled from their website. So...

COMMISSIONER KESSLER: I pass the witness.

HEARING OFFICER ORTH: Thank you,

Commissioner Kessler.

Madam Chair?

CHAIRWOMAN SANDOVAL: Thank you.

EXAMINATION

BY CHAIRWOMAN SANDOVAL:

Q. And my first two questions here, I think you hit on them in your testimony, but I just want to confirm.

Do you support this rule?

A. I do, very strongly.

Q. Do you believe, in your experience of the past rule makings, that it was a collaborative process?

A. I do, indeed. Yes. I think the map was a very extensive process. And then with all of the additional comments, formal and informal interactions, and then this long and very, very detailed process -- I've never been through a process quite as detailed as this in terms of the interactions with the stakeholders. So...

Q. Thank you. So it sounds like you were present for Mr. Bolander's testimony.

A. I was not present for all of it. I may have been present for portions of it.

Q. If I read you some of the testimony and

then ask a question, does that work for you?

A. Absolutely, Commissioner.

Q. Okay. So I believe -- I'm not sure, actually, who was crossing him at this point in time. It's on page 61 of Thursday's transcript, if anybody is just dying to open the transcript.

So the question was -- it says:

"You mentioned here in your slide that there is no methodology to safely capture the initial flowback until you have separation."

And what Mr. Bolander responds is:

"Yes, I am concerned with that. I do know that Colorado did make that change to require that. However, I have some concerns with that from my background in operations and HS" -- and it says A here, but I think it's HS and E, "that that can be done safely in all cases.

"Not to say that it can't be done, but to make it a normal part of regulation does give me some concern."

And then the person crossing says:

"So it's not something based on your experience, Mr. Bolander, that you would recommend at this point in time?"

And he said:

"Correct."

And they were talking about -- again, I think not necessarily meaning the modifications that the climate alliance made. But I think similarly, you know, requiring those types of regulation.

Does hearing that testimony about potential safety concerns give you any pause on what was proposed by the climate alliance?

A. I think that you always need to take safety concerns very seriously. This is -- you know, these operations, health and safety, is a critically important element.

That said, I do find, in my experience of regulation, that -- shall we say concerns that are limited to particular circumstances and situations are often raised by industry in a very general way to broadly argue against regulatory requirements, basically.

And I would say that absent far more specific identification of real serious technical issues or problems, and discussion of the -- sort of the capabilities of the equipment, I would be -- I -- I think -- you know, I don't think that it is appropriate to simply take -- take that as a -- as a reason not to move forward with looking into doing

as strong regulations as possible.

But particularly, as we -- we know that, you know, there is sort of a -- there's a history of use of this equipment in various situations. I mean, I think that -- you know, it's -- obviously you have to think about it, but I don't think it precludes regulating.

Q. Okay. Thank you.

Can you -- so I think your experience was with -- well, actually, with EPA and BLM, correct?

A. That is correct, yes.

HEARING OFFICER ORTH: Madam Chair, I'm sorry.

Ms. Fox was booted from our session again, and we really are due for a break at this point. I wasn't going to interrupt your exam, but we have been going nearly two hours.

Can we take a 10-minute break, in the hopes that Ms. Fox can rejoin?

(Discussion off the record.)

HEARING OFFICER ORTH: All right. Let's take 10 minutes. Thank you.

(A recess was taken from 2:28 p.m. to 2:42 p.m.)

HEARING OFFICER ORTH: Madam Chair, very

sorry for the interruption.

If you would, proceed with your questioning.

CHAIRWOMAN SANDOVAL: Thanks.

Q. (By Chairwoman Sandoval) All right.

So, Ms. Tietz, I think Mr. Rankin brought this up, but it's the OCD's statutory definition of surface waste in 70-2-3B. And I think he had some questions for you regarding -- I don't know, one of the terminologies in there. Maybe it was excessive.

So I'm just going to read the section that NMOGA has in bold and underlined. I almost said highlighted. It's not highlighted. It's bold and underlined.

It basically says -- and in any event, it raises the unnecessary or excessive surface loss or destruction of beneficial use.

From your, I guess legal background, does the "or" in the middle of those mean to you that you don't have to have all three present, just one?

A. That's correct, in my view.

Q. Okay. So one of those is the unnecessary -- so it's unnecessary or excessive surface loss. So if we break that down, it could be basically unnecessary loss.

In your opinion, would things such as an open thief hatch be unnecessary gas loss?

A. Yes. If it was not supposed to be open, yes.

Q. Thank you.

If it was left open, for example, by a pumper who forgot to close it?

A. Yes. Clearly unnecessary.

Q. Would a leaking fugitive component that -- I mean as was testified earlier, there is, you know, a level at which they're designed to have maybe some leak or loss off of them.

But above those, you know, it's not designed to have excessive, you know, like more than that. I think EPA says it's 50 PPM.

So if it's above that, does that mean the pressure design is -- for the gas loss out of that component, would you say that that is unnecessary loss?

A. Yes.

Q. Okay. For a fugitive emission -- I'm sorry. I just -- for a pneumatic controller, if it is malfunctioning and not operating the way it is supposed to be operating, would you say that the extra gas -- the loss, because it's

malfunctioning -- would be unnecessary?

A. It certainly seems to be.

Q. Okay. Thank you for that clarification.

I guess my last question is just -- I think in a couple of places in the Climate Advocates -- and it may be in the EDF too, but I can't confirm that -- so there's reference to combustion devices used. Its designed destruction efficiency, I believe it's 98 percent for hydrocarbons.

Is that terminology typically something that's seen in the air emissions world?

A. That is a portion of our recommendations that I am not -- that I did not specifically address, that I believe Dr. McCabe will be addressing.

Q. Okay. All right. I will save my questions for him.

Let's see. I guess maybe one last question.

I'm on -- it's 27.9D. So in the very end, in 8 -- so 9D8B of the Climate Advocates' proposal, it talked about approving NMED conditionally with sufficient conditions to ensure that 100 percent of the anticipated natural gas produced.

Basically, you're going to capture 100 percent. I guess why 100 percent instead of 98, which is what the gas capture percentage is in five years?

Or why are we -- I guess why 98? Why 100, as opposed to what the gas capture percentage for that operator is for that year?

A. Well, earlier in the -- in the regulatory text -- if I can find the right place.

So there's two reasons for that.

So the operator is required to certify that at the time of submitting the natural gas management plan it will be able to connect the well to a gathering system with sufficient capacity to transport 100 percent of the natural gas.

So this is simply picking up the requirement from OCD's proposed language to transport 100 percent of the natural gas, and then saying they have to certify to that.

And so if you're conditioning the permit, it should -- the condition should ensure the same thing that you were originally supposed to be certifying to.

Q. So that citation --

A. Sorry. That is in -- and I apologize. My

computer battery, I just realized, is at 3 percent. So if I suddenly go black, that is why.

But -- okay. So DD4 -- sorry. 9D4, the operator to certify that he has determined, based on -- that it will -- they are able to catch -- to take away 100 percent or not.

And then the other piece of it is that in terms of -- because the failure to -- to capture beneficial use of the gas would be -- would be routine flaring, and the routine flaring is prohibited by Section 8A and D, in combination.

That in order to be compliant with the prohibition on routine flaring, the new well would have to be capturing 100 percent, or beneficial use of 100 percent of its gas, not 98 percent of its gas.

Q. If it was intended 100 percent, I mean that the gas -- shouldn't there be a recognition that emergency situations or things could arise?

A. Right. 100 percent of the gas that would be available for takeaway capacity, basically.

Sorry. 100 percent of the salable gas within what is -- I am not saying this -- this well.

But if you're certifying the takeaway capacity for 100 percent of the gas, then the

commission should ensure that you would be looking at takeaway capacity for 100 percent of the gas or alternative beneficial uses for 100 percent of the gas that otherwise would be flared.

Obviously, that's not -- that doesn't override the other exemptions for emergencies, et cetera, as you know.

MS. FOX: I hate to interrupt your questioning, Madam Chair, but I'm wondering if Ms. Tietz should plug in.

CHAIRWOMAN SANDOVAL: That was my last question. But if you have redirect, she probably has to plug in.

MS. FOX: I do not.

CHAIRWOMAN SANDOVAL: That was my last question. Thank you.

HEARING OFFICER ORTH: Thank you, Madam Chair.

Thank you, Ms. Tietz and Ms. Fox.

I believe I heard you say you don't have any followup.

Is there any reason Ms. Tietz shouldn't be excused?

MS. FOX: No.

HEARING OFFICER ORTH: All right. Thank

you very much, Ms. Tietz.

MS. FOX: Thank you, Ms. Tietz.

HEARING OFFICER ORTH: Ms. Fox, where are we going from here? And if this is a good time for you to make any adjustments to the order of your witnesses or to the time estimate, that would be great.

MS. FOX: Thank you very much, Madam Hearing Officer.

We are going to put Mr. Schreiber on now. I'm going to need sharing ability, just to make sure I can access the PowerPoint.

And then after Mr. Schreiber, Dr. Singer will appear, if time permitting, today.

CHAIRWOMAN SANDOVAL: Mr. Coss, can we make sure to start the recording back up, please?

(Discussion off the record.)

HEARING OFFICER ORTH: Mr. Schreiber, would you raise your right hand, please?

(Witness sworn.)

HEARING OFFICER ORTH: Thank you.

Would you spell your last name, please?

THE WITNESS: S-C-H-R-E-I-B-E-R.

MS. FOX: Madam Hearing Officer, may I just check and make sure I've got Mr. Schreiber's

PowerPoint up here?

HEARING OFFICER ORTH: I can see it.

(Discussion off the record.)

DON SCHREIBER,

after having been first duly sworn under oath, was questioned and testified as follows:

EXAMINATION

BY MS. FOX:

Q. Would you please state your name?

A. Don Schreiber.

Q. And, Mr. Schreiber, is Climate Advocates' Exhibit 13 an accurate copy of your resume?

A. Yes.

Q. And, Mr. Schreiber, you prepared a presentation for the commission?

A. Yes, I have.

Q. And that presentation is set forth in Climate Advocates' Exhibit 14?

A. That is correct.

MS. FOX: Members -- Madam Hearing Officer and members of the commission, within Exhibit 14, which is a PowerPoint of Mr. Schreiber's, there are 25-odd -- some-odd slides, which I'm going to -- we are going to show you.

And there are also 11 exhibits within the

prehearing statement. And we're going to refer to those 11 exhibits within Exhibit 14 as sub exhibits, just to clarify, prior to the presentation.

Q. (By Ms. Fox) Mr. Schreiber, before you begin your presentation, could you briefly summarize some major points you'll make?

A. Well, my wife and I own a ranch and lease land in northwest New Mexico in the San Juan Basin of Rio Arriba County.

So I'm going to tell my story, personally, about how ConocoPhillips was to reduce emissions in completions or recompletions on 44 wells that would reduce methane, and include how San Juan Basin --

HEARING OFFICER ORTH: Hold on, Mr. Schreiber.

(Discussion off the record.)

THE WITNESS: -- in San Juan Basin and Rio Arriba County that is subject to oil and gas development.

I'm going to tell my personal story, about how after we moved here in 1999, ConocoPhillips had agreed to do -- reduce emissions completion for green completion -- well, on the 44 wells on our land, and that would reduce methane emission.

And including how, during our negotiations

with ConocoPhillips in 2008 regarding completions on our ranch, they agreed to reduce emissions completion on all new and recompleted wells within the open space pilot project, which is an area that includes our deeded land, our federal grazing permit, and approximately 2,700 acres of additional grazing permit lands that are adjacent.

We'll talk about how Hilcorp purchased ConocoPhillips' assets in 2017. And since then, it has refused to honor the agreement that we have to do the green completions, even though there is technology readily available to do so.

And how reduced emission completions have been in wide and well-documented circulation in use throughout the United States, with extensive records at the beginning in the early 2000s, including the 44 planned wells in the Conoco drilling program.

And I am asking the commission, on behalf of myself and other rural New Mexicans living daily with the impacts of oil and gas, that the Oil Conservation Division regulations require, as our neighboring state of Colorado has just done, to reduce emission completions and -- and they be required for all completions and recompletions in New Mexico, to protect the health of our families,

our environment, our climate, and to stop the direct economic harm that we suffer from the waste of this nonrenewable resource.

Q. (By Ms. Fox) Mr. Schreiber, would you please proceed with your presentation for the commission?

A. Thank you very much.

I begin my presentation, and I would like to begin by quoting testimony from the -- from the 2012 article published by Energy Index, which is part of the Independent Petroleum Association of America. That is shown in Sub Exhibit 1 of Exhibit 14.

And it begins with a question. And here, I will begin the energy in-depth quote.

Are green completions something new?

Not exactly. Some companies have been doing green completions for almost a decade.

One example is Devon Energy Corporation, and here's what they have to say.

Now, the Devon quote.

Green completions have been part of Devon's standard practice in the Barnett shale since 2004. The company uses the same processes to complete wells in New Mexico, Wyoming, Oklahoma, and

south Texas.

Using this process, Devon has reduced methane emissions by more than 15 billion cubic feet in the Barnett shale area of north Texas.

Not long ago, green completions were so uncommon that Devon had to look as far as Wyoming to rent the necessary filtering equipment. Now, more than 2,000 green completions later, that rental equipment is readily available and readily available locally.

That is the end of the Devon quote.

Capturing methane during the initial pullback, or preproduction phase of natural gas completions and recompletions, is a decade goal and proven method of reducing waste and preventing the discharge of harmful and toxic chemicals into the living spaces of rural families like mine, and families all across our state that live in both proximity to completion and recompletion activities such as our nearby neighbors on the Navajo Reservation.

Devon personnel introduced me to recompletion and reduced emission equipment at their Navajo dam yard in 2008. That yard is about 30 miles from our 3,000-acre ranch here in northwest

Rio Arriba County.

That reduced emissions completion equipment, belonging to the Williams Corporation, was brought to our ranch and used in the green completion wells, along with other REC equipment, beginning in 2008 and continuing through 2012.

22 natural gas wells were drilled on and around our ranch as part of the 44 well drilling program that we participated in with the BLM and with ConocoPhillips. And it was, and still is, called the open space pilot project.

That's our Exhibit 14, Sub Exhibit 2.

The 2010 ConocoPhillips in Farmington -- and that's the office that I worked with -- sponsored the environmental protection agency's producers technology transfer workshop. And that is titled reducing methane emissions from production wells, reduce emissions completions, detailing green completions.

Some of the sponsors of that technology workshop is the New Mexico Oil and Gas Association and the New Mexico Environment Department.

And that is Exhibit 14, Sub Exhibit 3.

What I didn't know then, but that I learned later through personal experience, is that

green completions, reduced emission completions, have been in wide use since the early 2000s, and that major oil companies, like Exxon, Mobil, British Petroleum, Devon, ConocoPhillips, and others, including service contractors like Weather Group, were successful in capturing methane and other chemicals, like organic compounds, hydrogen oxides, during initial flowback or preproduction in a variety of different completion and recompletion situations in a variety of different locations, and including here on our ranch.

In addition to completing and recompleting wells under their own drilling programs, many oil and gas companies participated in extensive studies conducted in partnership with the EPA natural gas STAR program.

And we have that -- a link to that.

And that program included other industry trade association partners, including the American Petroleum Institute, the Independent Producers Association of America, and the New Mexico Oil and Gas Association.

Prior to becoming involved with the green completion, and the reduced completion program, I was an insurance executive specializing in oil and

gas insurance in the Four Corners area, spending 22 years there, from 1976 to 1998.

And that did include observing oil and gas practices and processes in the field and, if necessary, evaluations and processing claims arising from accidents associated with the drilling and production of natural gas. Those were -- the most devastating ones were from methane emission, primarily associated with well drilling and completion.

Often, I would be called to see a rig fire or a blowout at the drilling process, and witnessed tremendous property damage, including drilling rigs, completion rigs, workover rigs, and associated equipment burned to the ground and, most unfortunately, the extensive and awful terrible workers' compensation injuries that accompanied those losses due to failure to control methane emissions.

Those still -- several of these workers compensation injuries resulted in the death of well hands or oilfield workers present.

In an effort to include safety in drilling and production operations, I attended the University of Texas, Permian Basin, in Odessa, and received an

elementary drilling certificate that included instruction in well completion.

I also served as a member of the national faculty for the Society of certified insurance counselors, teaching oil and gas risk management. And CIC is the largest insurance education organization in the United States, serving 65,000 agents at that time.

My wife and I both retired in 1998, and in 1999 bought a ranch near the old ranching community in New Mexico, in Rio Arriba County.

And our objective was to create a salable model of sustainable agriculture using nontraditional ranching methods. We had hoped to help address the decades long degradation of the range land from overgrazing and from oil and gas drilling and production surface impact.

We were hopeful to find a path that would help reestablish a once vibrant economy of the area that was based on agriculture.

As drilling pressures increased in the early 2000s, we were concerned with numerous industry impacts on the ranch, including theft, the destruction of property, traffic, industrial waste, surface impacts, and well completion, which were

still being done basically in the same manner they had been done for over 50 years in the San Juan Basin.

That common practice of completion called for the initial flowback gases, or preproduction gases, including methane, to push the frac fluids, produce water, and drilling debris to the surface where the solid waste would be discharged into an earthen pit, and the gases were vented or burned via a line from the wellhead called the bully line.

The environmental impact of bully line completions were obvious to us, given the audio, visual, and olfactory impact that we were exposed to as we lived and worked around our ranch.

Those impacts came into an especially sharp focus when, as the flared gases cool, the black smoke waves were created and drifted onto our home from a bully line completion about a mile and a quarter northeast of our ranch.

So therefore, moving away from bully line completions and avoiding the harmful and toxic waste from completions were a great concern to us, as we began discussing the 44 well drilling program of ConocoPhillips in 2008, which led us to the discovery that green completions were already being

done in the San Juan Basin.

In September of 2008 we reached an agreement with ConocoPhillips and the Bureau of Land Management regarding green completion, closed loop, well spacing, road construction modification, rehabilitation, surface damage, and other considerations that would allow the 44 well drilling program to begin.

Prior to this, BLM had placed a moratorium preventing any further drilling within the open space pilot project unless it met some of these conditions.

BLM withdrew their moratorium and the drilling project began in 2008.

22 of the 44 wells in the program were completed or recompleted between 2008 and 2012, when a decline in natural gas prices shut down new drilling, and no more wells were completed or recompleted.

We visited each of the 22 drilling sites multiple times, to ensure that the agreement was being followed, which it was. And we observed green completion equipment in use.

There were no reported accidents or incidents as a result of any blowouts or

uncontrolled methane emission releases on any of the wells completed during the entire period of the agreed drilling and completion program.

In August of 2017, Hilcorp Energy purchased ConocoPhillips in the San Juan Basin, including all of the wells on and around our ranch.

Well, the first drilling and completion and recompletion contact that we had with Hilcorp was when we were sent a notice on February 7, 2018, of their intentions to recomplete the San Juan Unit 28-6 and Unit 27, and that is on our federal grazing permit and within the open space.

Hilcorp set an on-site meeting for February 20.

Now these types of on-site meetings were routine for my wife and me, as we had attended over 100 since coming to the ranch in 1999, including all on-site meetings that we had attended for the wells and the open space pilot project and for our neighbors as well, sometimes under a power of attorney.

Now we were shocked when Hilcorp stated at that on-site meeting that they weren't sure that they would use reduced emission equipment. They said that they were having technical difficulty at

all wells.

They stated they didn't have the reduced emission completion equipment. And they told us that they had no trained crews, that the formation pressures might be too low.

We believed that Hilcorp should honor the agreement and conduct RECs. And in 2012, EPA had promulgated rules on reduced emission completion, which we had talked about -- the previous witness talked about.

We sought support for Hilcorp to use REC. We sought it from the local BLM office, the District 3 Oil Conservation Division office in Aztec, the OCD office in Santa Fe, the New Mexico Environment Department office in Santa Fe, Region 6, and finally, both the BLM and the EPA in Washington, DC.

While Hilcorp did remove a bit of 127 from their recompletion schedule, it proceeded with recompletion of the San Juan Unit 28-6, Number 143, approximately 1.4 miles from our home, without affording us the benefit of an on-site meeting.

When we learned that the well was to be fracked on March 7, and that it was already under way, we went there. And when we arrived at the

location on that day, the fracking operation, including preparation for recompleting, were in place with flowback solids to be captured, and the flowback gases to be vented directly into the atmosphere and into the space where we live and work.

MR. RANKIN: Madam Chair, this is Adam Rankin, for NMOGA.

I'm not sure exactly where this testimony is going. I believe -- I'm not clear how it's relevant to the specific requirements in the rule or the proposed modifications that Climate Advocates is suggesting.

HEARING OFFICER ORTH: Ms. Fox?

MS. FOX: This -- Mr. Rankin, Madam Hearing Officer, his testimony goes to the need for completions and recompletions, the advisability thereof. His personal experience as a landowner with completions and recompletions.

HEARING OFFICER ORTH: Okay. I -- I do see that in the prehearing statement you filed, that that would be his testimony.

Please go ahead.

THE WITNESS: Thank you.

I think it's clear that Hilcorp would not

comply with the green completions in 10 of the 2012 EPA reduced emissions completion regulations or the BLM 2016 methane waste rule division.

And Hilcorp, having made it clear that they would not honor the agreement we had with ConocoPhillips, we looked more closely into both the OCD completion regulations and the EPA completion language in its 2012 Quad-O and Quad-OA in the 2016 regulations.

In 2018, the OCD was permitting completions and recompletions that allowed only two options for initial flowback, including the OCs.

And those two options were either to flare or vent the gas, even though the OCD form is titled gas capture plan.

The 2010 EPA Quad-O green completion regulation was intended to stop venting and limit flaring during completions and recompletions.

However, industry explained the definition of the separator and the phrase technical infeasibility, to avoid using reduced emission completion techniques.

As both OCD and NMED officials have publicly stated, while OCD does have a gas capture plan -- and I will quote madam Chair, Ms. Sandoval,

here.

While they do have a gas capture plan, Chairman Sandoval's quote is the ex- -- the exceptions within the rule, Quad-OA, the rule, a complete and thorough examination of the EPA problem and current progress was submitted to OCD in September of 2016 by Western Environmental Law Center.

And the previous witness has -- and I would recommend that we move on, Tannis, to 14, 15, 16, and 17.

CHAIRWOMAN SANDOVAL: Ms. Fox, are we going to watch the videos or whatever? It says "separate video."

Is that a video clip?

THE WITNESS: Was that in there? I'm sorry, Madam Chair.

MS. FOX: Madam Chair, I was -- as we were going through them, I thought that would be an interruption, so maybe let's do that after his testimony.

Thank you.

CHAIRWOMAN SANDOVAL: Okay. That works. Thank you.

MS. FOX: Thank you.

THE WITNESS: Anyway, noting that EPA has had, as the previous witness has testified, is at this time trying to correct those ambiguities in the green completion language through the recently published technical amendment.

In order to understand the extent of venting during completion and recompletion, as opposed to flaring, I sampled 11 months of OCD gas capture plan forms in 2018 in Rio Arriba County and San Juan County, and found that more than two-thirds of the completed and recompleted wells were vented directly to the atmosphere and into the living space where rural families live and work.

No gas was captured during the completion/recompletion phase of these wells.

OCD's past failure to capture -- require capture of methane during completion and recompletion is in stark contrast to the gas that was captured during completion and recompletion and preproduction by the major oil companies and gas producers that have used reduced emission completion equipment for a long time.

Take the example of Weatherford Durango, as a participating producer in the EPA gas STAR study, which was sponsored by Exxon Mobil and the

American Petroleum Institute.

And that is Exhibit 14 and our Sub Exhibit 3.

Weatherford Durango successfully completed three wells in the Fruitland Coal formation of the San Juan Basin, not far from our ranch. In just those three wells, it captured and sold 2,000 MCF.

The Williams Company identify household use at an average of 196 cubic feet per day.

Our Exhibit 4, Sub Exhibit 4.

Therefore, with these three well completions alone, we could provide year round gas for 47.9, almost 48 households, for many rural families like mine, who are forced to purchase propane due to lack of access to natural gas. That cost savings is in the thousands of dollars per year.

Hilcorp divides, in the San Juan Basin, into five operating areas. In February of 2020, we were notified that Hilcorp intended to recomplete 22 wells in our area alone.

If the Weatherford Durango gas capture ratio held up, that would translate to the same amount of gas used in over 200 households for an entire year.

Based on Weatherford numbers, three wells successfully recompleted, 27 households of gas for a year. 22 wells equals 205 households per year.

So in this hearing parties may argue that reduced emission completions are technically infeasible, claiming that there is a lack of equipment, despite widespread use of reduced emission equipment among many operators, claiming that there is a safety risk, even though there are no examples of accidents arising from RAC equipment in the San Juan Basin.

Claiming that there is a lack of trained crew, even though a skilled workforce sits unemployed throughout New Mexico, and especially in the Four Corners.

And that's my Exhibit 14 -- our Exhibit 14, Sub Exhibit 5.

HEARING OFFICER ORTH: Mr. Schreiber, I'm sorry. I just got a text from Ms. Fox. She was booted off again and is trying to get back on, so let's just pause for a moment.

(Discussion off the record.)

(A recess was taken from 3:23 p.m. to 3:26 p.m.)

THE WITNESS: Ms. Fox, I don't know if

your system is interfering again. I'm getting some feedback on this end.

Q. (By Ms. Fox) I apologize. I just wanted to say that I'm not able to share.

A. Hold on a second.

We only have one slide to go.

Q. Well, that's a good thing, because it's not sharing. So maybe, to avoid further interruptions, the commissioners just can't follow along with the exhibit.

(Discussion off the record.)

THE WITNESS: I'm going to play the Fred Flintstone card. And I have an assistant, and so we're going to do it the Fred Flintstone way.

And I am going to start -- resume at Exhibit 5.

So here is exhibit -- I'm sorry -- Slide 22. And that is my math exercise on how much we are losing in terms of gas, just off of the few wells. Or conversely, how much gas we could recover using reduced emissions completions.

And this is salable gas, so that the arguments that the carbon gas is not usable were beyond that.

So this is salable gas. And when we,

throughout this part of New Mexico, and I suspect other areas, until these are not available, including water and including gas, so that we are, like our neighbors, forced to purchase propane. And many people have to purchase it in small quantities because they can't afford the large tanks, so that they're buying it at the absolute price height.

And so I ask the commission would recognize that.

I had just said -- Mr. Baca, thank you.

I was at Exhibit 14, Sub Exhibit 5, about the unemployment in Farmington.

So industry may claim that formation pressures are too low for reduced emission equipment, even though Weatherford Durango reports successful recompletions and completions in the San Juan Basin, as does ConocoPhillips, wells that were successfully completed and recompleted in a variety of formations, including the Blanco Mesa Verde formation here on our ranch.

And Slide 23 -- and of course, we will make all of these available to the commission and counsel.

But the -- it is a pressure chart of a pressure monitor well that Hilcorp maintains to

determine formation pressure near our ranch. It's in the next township from us.

And that -- this will show that -- that's also Exhibit 6 -- I'm sorry -- Exhibit 14, Sub-Exhibit 6, that the typical pressures are throughout the San Juan Basin, particularly for the Blanco Mesa Verde, are shown here in Slide 23, and reflected as 122.5 PSI at 5,500 feet, which has been the most common target for recompletion by Hilcorp, as we can see from the OCD gas capture plans that I analyzed.

Based on my personal experience, none of industry's objections to reduced emissions completions are valid. There's ample evidence that reduced emissions completion equipment works here in the San Juan Basin. I've seen it with my own eyes.

There are trained crews who can perform that work. RECs have been done safely and done so on our ranch. So that is clear.

It was developed with the cooperation of the major oil companies and their trade groups and the lobbying representatives. And it's including the American Petroleum Institute, Independent Petroleum Producers Association of America, and the New Mexico Oil and Gas Association.

And on January 15, 2021, Colorado rules, that did allow venting as part of completion and recompletion, will take effect.

And that's our Exhibit 14, Sub Exhibit 7.

And I want to share this with you, Slide 24.

Thank you.

That is a view from our ranch, where we work, where these -- these Colorado -- where the reduced emission completions have been done, as well as here on our ranch.

And we face the real possibility that with the new Colorado rule that's taking effect, virtually right now, we could use the same company -- have the company drilling in the same formation that I could see from my ranch on my ground here in New Mexico looking into Colorado, that that oil company, gas producer, would be required to capture those completion and recompletion emissions during initial flowback. They could move across the line here and they would not be required, if we don't change these rules.

If the commissioners here fail to adopt green completion and recompletion requirements, requirements that are technically feasible, they

reduce waste, and they protect public health and the environment, then the commission will have ignored, denied, or discounted years of successful capture of methane in the completion process.

And that is verified by industry and their expert. And they will -- the commission will fail to prevent the unnecessary waste of our natural resource, and maximize the royalty and tax revenue to this state.

And that's Exhibit 15, Sub Exhibits 8, 9, and 10.

More importantly, the state will not only take on the -- the state will not only have failed --

HEARING OFFICER ORTH: Excuse me, Mr. Schreiber.

Ms. Fox, we're getting noise from you.

Go ahead, Mr. Schreiber.

THE WITNESS: The state will not only have failed the existential threat of climate -- of our time, climate change.

But rural New Mexico families, like mine, will continue to suffer the harmful and terrible effect of the toxic venting and flaring of the OCs into the spaces where we live and work, and where

our children and grandchildren play.

I was proud to be part of Governor Lujan Grisham's energy transition team in 2018. I was proud to be present in the January 2019 ceremony where Governor Lujan Grisham signed the executive order addressing climate change and energy waste that said, in part, whereas methane is a powerful greenhouse gas, 84 times more effective in fracking than carbon dioxide, over a 20-year time frame.

Whereas, the oil and gas industry is the largest industrial source of methane emissions.

I was proud to serve on the governor's methane advisory panel in 2019, as directed by energy, minerals, and natural resources secretary Sarah Cottrell Propst and the environment department secretary James Kenney.

And I am very proud to be here today to support the governor's call to establish new methane emission rules for New Mexico that will be a model for the nation to follow.

Methane emissions during completion and recompletion are both significant and controllable.

If the Oil Conservation Commission doesn't require green completion, technology that has been successfully employed in the San Juan Basin and all

over the nation for a long time, then we are not leading. We are falling behind.

We must require green completions to meet the governor's climate goals.

MS. FOX: Thank you, Mr. Schreiber.

We would like to move for admission of Climate Advocates' Exhibits 13 and 14.

HEARING OFFICER ORTH: Let me pause a moment, in the event there are objections to Climate Advocates' Exhibits 13 and 14.

(Exhibits admitted, Climate Advocates' 13 and 14.)

HEARING OFFICER ORTH: Exhibits 13 and 14 are admitted.

MS. FOX: Madam Hearing Officer, since my sharing function shows that it's on, but it's not allowing me to share, I can't show those videos right now that I have, but we can show them when my computer is functioning, if that would be okay.

CHAIRWOMAN SANDOVAL: Are there links to them?

MS. FOX: I did send a link to Mr. Baake, and they are on Google docs, and so I could send that link to anybody.

CHAIRWOMAN SANDOVAL: Can Mr. Baake share

them?

MR. BAAKE: I don't have share function, but I can try. I do have those videos right here.

CHAIRWOMAN SANDOVAL: Mr. Coss, would you give Mr. Baake control, please?

MS. FOX: And, David, do you see where they are in all of those materials?

MR. BAAKE: I believe so.

Okay. Good with that one?

CHAIRWOMAN SANDOVAL: Just a quick question.

EXAMINATION

BY CHAIRWOMAN SANDOVAL:

Q. Is there any context behind the videos, what they are demonstrating?

A. Not in the presentation, Madam Chair. I would assume that I would be narrating, or however you wish it to work.

Q. Would you mind narrating them for us?

A. Not at all. We're just demonstrating that a completion is about to begin on our ranch. This would be the 28-6, Number 143 that I had referred to, just trying to show the scope of the equipment layout there. That's a fraction of it, but I will confess that we were not thinking we would be

presenting our whole ranch video, you know, before the Oil Conservation Commission.

So I apologize, but there -- I'm establishing that's what it is, is a completion.

David, if you could show the next video.

MR. BAAKE: Video 21.

THE WITNESS: This is a panorama of the location that we were not advised that they were going to frac and then complete.

And the failure to capture any methane is shown on the left-hand side of that. We have pictures where the -- was captured, and the methane was just spilled out through the top of an open block into the atmosphere.

What's the next one, David?

MR. BAAKE: Don, I put the video on mute. Is that good or...

THE WITNESS: That's probably good. There's no dialogue.

We are going to take two videos here to show, after the completion equipment has been withdrawn, that the completion without reducing methane equipment, emissions completion equipment, is just going to vent the methane through the top of that open box. And you can see it there.

It was very, very windy that day. That is not on our ranch. It is just adjacent to our ranch. And it shows -- again, it's just the same one from a different perspective.

David, I think --

MR. BAAKE: Do you want to go to 27?

THE WITNESS: Yes, please.

So there it is a little clearer. You see the flowback box. As I say, it's just a box with an open top. You can see the bottom of it.

All -- every molecule of that methane emission is released to the atmosphere and into the work space where we live and we work, and it includes every hydrocarbon chemical that's down there -- benzene, xylene, ethyl xylene, and other things that we can't even tell.

So that's what we're -- we have dealt with. And it's a terrible shock for my wife and I, that we had an agreement worked out that was working with ConocoPhillips. But we were reassured that the terrible bully line completion that had happened before was going to stop.

We were reassured that methane would stop being admitted into the atmosphere, either just directly by venting or in flaring in a different

fashion, and that reduced emissions completions would work, which they did, and have, all around the United States and heavily in this area.

So to go back, these films were taken last year, I think. Maybe the year before.

To go back -- to have to go back to that, the only difference between this, what we see here in these videos, the last two, the only difference between that and the bully line completion is that instead of dumping the solids into an earthen pit, as they had done for many years, and covered it, they put them in that box. There's no other change.

That's the same as in -- that huge raging fire that you saw in Hart Canyon in 1958.

So that -- I felt the videos were important to bring before the commission.

Thank you.

(Discussion off the record.)

MS. FOX: Thank you.

And were Exhibits 13 and 14 admitted?

HEARING OFFICER ORTH: They were.

MS. FOX: Mr. Schreiber stands for cross-examination.

HEARING OFFICER ORTH: Thank you, Ms. Fox.

Mr. Ames, do you have questions of

Mr. Schreiber based on his testimony?

MR. AMES: Yes. I just have a couple of questions, Mr.Schreiber.

EXAMINATION

BY MR. AMES:

Q. Hello, Don.

A. How do you do, Mr. Ames?

Q. I'm fine, thank you.

You gave some examples of reduced emission completions in your testimony. You referred to Devon and Shell, I think, right?

A. I did. That was part of the IPAA publication, yes.

Q. Those were gas wells, right?

A. I guess they were, yes.

Q. And you also gave examples of Conoco -- I think it was Conoco -- drilling wells in the San Juan.

Is that right?

A. That's correct.

The -- ConocoPhillips owned 50 percent of the San Juan Basin which, as you know, is 90 percent gas wells.

So on that, ConocoPhillips was drilling natural gas wells. They drilled 22 -- they drilled

35 gas wells on our property, 13 before our agreement to get -- to reduce emission completion, and then 22 after. So those were all ConocoPhillips.

Q. And those -- your examples were all gas wells, right?

A. Yes.

Q. So, Don, you're not an engineer, right?

A. I am not.

Q. And so you're not aware that there might be different considerations in the context of reduced emission completions for oil wells compared to gas wells?

A. My experience is limited to gas wells.

Q. So the answer is you're not aware.

Is that right?

A. I am not.

Q. Okay. Thank you.

MR. AMES: That is all.

HEARING OFFICER ORTH: All right. Thank you, Mr. Ames.

Mr. Rankin?

MR. RANKIN: Madam Hearing Officer, thank you.

EXAMINATION

BY MR. RANKIN:

Q. Good afternoon, Mr. Schreiber.

A. Good afternoon, Mr. Rankin.

Q. I'm just going to pick up where Mr. Ames left off.

You referenced in your testimony that you had received a certification.

Can you remind me, what was that again? What was the certification that you received?

A. It was from the University of Texas, Odessa petroleum extension service.

Q. I can't quite read in my copy of the exhibit.

What year was that?

A. I would have to look as well. Let me see.

Do you want me to find that date for you?

Q. Well, I'd like to know.

A. Okay. It's in our Exhibit 13, I believe.

Do you have that Exhibit 13, Mr. Rankin?

Q. I have it. I printed it out. It's very faint. I can't quite make it out. That's why I'm asking.

COMMISSIONER ENGLER: It is 1982, Mr. Rankin.

MR. RANKIN: Okay. Thank you.

Q. (By Mr. Rankin) Then just so I'm clear, did that -- that was before any of the reduced emissions completions technologies were common.

Is that correct?

A. I can't testify to that.

Q. But you didn't learn about any of the reduced emissions completions during that certification course, did you?

A. No. I learned about oil and gas well issues in the fundamental stages.

Q. Okay. Now, you referenced some -- some OCD gas capture plans that you presented for some wells that were drilled on your property.

Do you recall that?

A. I do.

Q. Those would have been approved -- were approved by the OCD district office, correct?

A. They were.

Q. And they would have been approved after a technical review by the district office, correct?

A. I'm not entirely familiar with the OCD process, with how they approve them.

Q. Okay. Now the videos you showed, you testified that what we saw -- or what we -- what was

in the video was methane.

Is that right?

A. It is methane as well as every other hydrocarbon that comes out of the well.

Q. What is that opinion based on? Just -- I'm not clear I understand how you're opining that it's methane, based on that video.

Can you explain that?

A. The permit was to complete a natural gas well.

Q. I'm sorry. What?

A. They're drilling a permit to complete a natural gas well.

Q. Okay. Are you familiar -- then are you aware that Hilcorp may have used nitrogen, for example, pumped down the hole in order to stimulate the completion?

A. I am.

Q. So you -- so you're sure that wasn't nitrogen that you saw?

A. I am sure that it was methane, and that there may have been other chemicals with it, including nitrogen.

Q. And that's -- is that just based on your assumption, because it's completing a natural gas

well?

A. It's not based on my assumption. The natural gas that's in the formation pushes it -- the nitrogen back out.

Q. And what's your understanding about whether or not nitrogen is combustible? For example, do you have an understanding about whether it can be combusted?

A. Nitrogen is inert.

Q. So it is combustible?

A. It's not combustible.

Q. I want to just understand a little more about -- you testified about EPA's --

A. May I clarify my last statement?

I'm not sure that I answered your question fully.

Q. Okay. Go ahead.

A. So as the nitrogen comes out, if the operator chooses to use nitrogen as a frac medium, which is their choice, when that nitrogen comes out it is, itself, not combustible.

However, all the methane that's coming out, and other chemicals, are. So a -- used membrane and pressures increased lead out the -- and -- and separate the nitrogen in a nitrogen

reduced emission function, and the methane is then sent to the sales line, useful benefit use, or reinjected.

So I wouldn't want to leave this discussion with the impression that because nitrogen is not combustible, that we can't use the -- completion. In fact, there's a common practice that nitrogen is -- completions are -- are used -- in fact, Weatherford, the example I gave, that was -- that was nitrogen for the Fruitland Coal. Those were nitrogen completions. So...

Q. Mr. Schreiber, I think you did answer my question. I think you're going beyond what I've asked for, so I appreciate your interest in distinguishing.

And -- but my question was limited to whether or not nitrogen was -- was combustible, and I think you've answered that. So I appreciate it.

Now, you've testified about -- about EPA's -- some of the issues around EPA's rules, and I want to just explore that a little bit with you.

You -- do you understand what EPA's definition of reduced remission completions is under Quad-OA, that you were referencing in your testimony?

A. I do not -- I'm not sure I understand your question.

Q. I'm just wondering, do you understand what EPA's own definition is of a reduced emissions completion of a Quad-OA?

A. That they wish to limit flaring and to stop venting with the completion process, during the initial flowback prior to the production.

Q. I guess I may not have been clear.

What I'm asking is, if in EPA's rules, under Quad-OA, do you have an understanding of what the reduced emissions completions definition is?

A. I think I just stated it.

Q. Okay. Now, are you -- are you aware, under EPA's language, that during the process of completing a reduced emission completion, as defined by EPA and Quad-OA and 40 CFR 60.5375A, that gas is allowed to be vented to atmosphere and not subject to control in both Subcategory 1 wells during initial flowback, and Subcategory 2 wells prior to a separator being able to function?

A. I'm not familiar with the subcategories. I'm just familiar with the recompletion process and the reduced emission completion process that was here and in effect in the wells -- thousands of

wells that I had demonstrated, and given you in my testimony today.

I'm not the expert.

MR. RANKIN: No further questions, Madam Hearing Officer.

HEARING OFFICER ORTH: Thank you, Mr. Rankin.

Mr. Biernoff, do you have questions of Mr. Schreiber?

MR. BIERNOFF: Madam Hearing Officer, I do not have any questions for Mr. Schreiber.

HEARING OFFICER ORTH: All right. Thank you.

Ms. Paranhos, I believe you said you had no questions, but have you changed your mind?

MS. PARANHOS: No.

HEARING OFFICER ORTH: Okay. Commissioner Engler?

COMMISSIONER ENGLER: Thank you, Mr. Schreiber. I have no questions.

HEARING OFFICER ORTH: Commissioner Kessler?

COMMISSIONER KESSLER: Mr. Schreiber, it's nice to see you.

I have no questions.

HEARING OFFICER ORTH: And, Madam Chair?

EXAMINATION

BY CHAIRWOMAN SANDOVAL:

Q. Mr. Schreiber, I just have my two questions.

One, do you support the rule?

A. I do, with some improvements, as I have suggested.

Q. Okay. Thank you.

Do you believe, with your rule making experience in the past, that this was a collaborative process?

A. Absolutely. I was a collaborator.

CHAIRWOMAN SANDOVAL: Thank you, Mr. Schreiber.

THE WITNESS: Thank you, Madam Chair.

HEARING OFFICER ORTH: Ms. Fox, did any of the questioning raise followup for you?

MS. FOX: No, it did not, Madam Hearing Officer.

HEARING OFFICER ORTH: Okay. If there's no reason not to excuse Mr. Schreiber, we'll thank you for you testimony.

Thank you very much, and you're excused.

THE WITNESS: Thank you, Madam Hearing

Officer.

HEARING OFFICER ORTH: Ms. Fox, is this a decent time for a break before you call Dr. Singer?

MS. FOX: I was just going to ask, because I would like to try to clear up my technical problem with sharing, because I had intended sharing Dr. Singer's PowerPoint.

HEARING OFFICER ORTH: All right. So let's come back at 4:10.

(A recess was taken from 3:57 p.m. to 4:11)

HEARING OFFICER ORTH: Ms. Fox, would you call your next witness, please?

MS. FOX: Yes. Thank you. I call Dr. Thomas Singer.

HEARING OFFICER ORTH: All right. Thank you.

(Witness sworn.)

HEARING OFFICER ORTH: Thank you very much. And if would you please spell your name, please, for the transcript.

THE WITNESS: T-H-O-M-A-S. S-I-N-G-E-R.

HEARING OFFICER ORTH: Thank you.

Ms. Fox, whenever you're ready.

MS. FOX: Thank you, Madam Hearing

Officer.

THOMAS SINGER,

after having been first duly sworn under oath, was questioned and testified as follows:

EXAMINATION

BY MS. FOX:

Q. Good afternoon, Dr. Singer.

Would you -- is your curriculum vitae Climate Advocates' Exhibit 17?

A. Yes, it is.

Q. And, Dr. Singer, have you prepared a PowerPoint presentation for the commission today?

A. Yes, I have.

Q. And is that Climate Advocates' Exhibit 18?

A. It is.

Q. And would you please proceed with your presentation?

A. Yes, I would.

Madam Chair, Commissioner Kessler, Commissioner Engler, thank you for this opportunity to testify before the Oil Conservation Commission in this proceeding to adopt methane waste rules for New Mexico that would reflect current science and technology.

I have prepared my testimony in advance in

order to be very precise in the facts and figures that I will present to the commission, so I am going to read most of this testimony.

I'm the senior policy adviser at the Western Environmental Law Center, a regional public environmental law firm with offices in Taos and around the west.

I hold a BA from Harvard University and an MBA from the Stanford Graduate School of Business, and a Ph.D. in international business from the George Washington University.

I have over 15 years of experience in policy development related to oil and gas methane waste and gas emissions, and I'm familiar with New Mexico and federal regulations governing oil and gas methane waste.

Beginning in 2008, I was appointed to the stakeholder process of the western climate initiative by Governor Bill Richardson --

(Discussion off the record.)

THE WITNESS: -- a stakeholder process for the western climate initiative by Governor Bill Richardson, which included the development of New Mexico's first greenhouse gas inventory.

As an outgrowth of that effort, I also

served on the WCI's working group on oil and gas mandatory greenhouse gas reporting protocols.

In 2012 I coauthored a report published by the natural resources defense council, where I was then working, titled "Leaking Profits."

The US oil and gas industry can reduce pollution, reduce waste, and make money by preventing methane waste.

Beginning in 2014 I led the Western Environmental Law Center's technical analysis and advocacy to the Bureau of Land Management's methane waste rule.

And this past year I served on the State of New Mexico's methane advisory panel.

My testimony today will present evidence regarding venting and flaring based on information that New Mexico oil and gas operators themselves have provided to regulators and to the public.

This includes industry publications on flaring, applications for exemptions from the state's no flare rule, best practices for limiting routine venting and flaring in the Permian Basin, and survey results from the Federal Reserve Bank of Dallas.

My testimony will serve to support the

proposed OCD rule's immediate end to routine flaring and the phased in 98 percent capture requirement, as well as the ability of New Mexico operators to meet these standards.

My testimony will cover the following topics.

First, a May 2020 NMOGA report, flaring in the oilfield, that described why New Mexico operators flare natural gas but fail to identify or address the practice of long-term routine flaring of associated gas.

Second, my analysis of C 129 records filed by operators with OCD, and findings identifying numerous examples of sustained long-term routine flaring as evidenced by flaring authorizations secured by operators for wells continuously over periods lasting multiple years.

Third, a June 2020 report by an industry consultancy, GaffneyCline, describing measures taken by five major Permian Basin operators to prevent routine flaring and -- venting and flaring.

Fourth, evidence of the industry's response to the 2020 oil price decline, indicating that operators have recourse to well shut ins as a reasonable measure for ensuring compliance with the

proposed ban on routine venting and flaring and gas capture requirements.

And fifth, several suggestions for improvements to the reporting provisions of the proposed rule to guide OCD implementation and increase public information and transparency.

And lastly, evidence from other states that have required third-party verification of industry self-reported greenhouse gas data and the existence of a robust oil and gas verification reporting set.

So to begin, I'd like to discuss how the NMOGA flaring report ignored long-term routine flaring, while the proposed OCD rule would rightly end this practice.

In May 2020, NMOGA released a report titled "Flaring in the Oilfield." The impetus from this report was that, quote, NMOGA's members have recognized that there is a need to collect greater clarity as to why natural gas is flared.

Therefore, NMOGA's members prepared this report to closely examine the issue of flaring and educate the public about this important process, close quote.

The report sought to describe why oil and

gas companies flare under different circumstances, end quote, how, in each setting, limited flaring is essential to provide a safe work environment.

In this first slide I summarized the reasons NMOGA gave for why operators flare.

First, during the emergencies or upset conditions, or to otherwise maintain safe operations.

Two, for scheduled or unscheduled maintenance.

Three, during drilling, completion, and flowback operations.

Four, during production testing.

Five, when wellbore pressure is inadequate, where there is an additional -- inadequate additional compression.

And six, in response to temporary infrastructure capacities constraints.

The NMOGA report described these six main reasons why oil and gas producers flare, each of which the report described as, quote, short lived, quote, limited, or, quote, temporary.

While the report described the different types of flaring in general terms, it failed to offer any data or information about the significance

of each type for preventing waste and climate pollution. That is, how much each type contributes to the total volumes of gas flared by operators. Nor, might I add, was this information forthcoming during the methane advisory panel process.

As a result, we do not currently have any data on how much the aggregate volumes of venting and flaring, which will be discussed by my colleague, Lesley Fleischman, are accounted for by each of the reasons for flaring identified in the NMOGA report.

However, the report did state that infrastructure capacity constraints are, quote, the major obstacle challenge in the oil and gas industry, close quote.

According to NMOGA -- and I'll read a lengthy quote -- the unprecedented development pace, especially in southeast New Mexico, has led gas production rates to temporarily exceed the capacity of existing midstream and downstream pipelines and facilities.

These investments are only built after upstream development, drilling, and completion has proven that a minimum necessary natural gas volume has been developed to warrant the investment.

Therefore, economic necessity creates limited periods of time where short -- a shortage of infrastructure exists until gas capture processing and transportation facilities can be permitted and constructed.

This characterization of flaring, due to infrastructure shortages is temporary, and occurring for limited periods of time, ignores a critical piece of the flaring story, that flaring can also become routine, occurring for very long periods of time due to insufficient availability or capacity in a natural gas gathering system, including pipeline connections for adequate compression.

It is important to note that the consequences of long-term routine flaring are dire for shale wells, because significant volumes of gas can end up being wasted if takeaway capacity is not available when production begins.

Research has shown that over the first three years, average well production in the Permian Basin declines by 86 percent.

According to the memorandum prepared by John Donovan and Associates, and provided as an appendix to NMOGA's September 16, 2020, comments on the OCD comment draft rule, quote, the model

suggests that about 97 percent of the production occurs in the first four years after drilling, close quote.

In its prehearing statement in this proceeding, NMOGA stated that, quote, it is within the first year of production that the producer will see peak gas volumes, and that's the most important time period needing assurance that the gatherer has the necessary gas takeaway in place to handle such a peak, close quote.

Given such rapid production inclines, how much of an oil well's natural gas production can be lost to venting or flaring if the operator does not ensure that gathering infrastructure is available early in the life of a well?

Below I provide examples of major oil producers with wells where, for co-produced associated gas, temporary, has, in fact, been for the entire life of the well.

While NMOGA essentially ignored routine flaring in its report, the rule proposed by OCD rightly addresses this problem by providing, as we have heard, no exemptions for routine flaring or venting -- I'm sorry -- venting or flaring of associated gas in Section 19.15.27AD, effectively

banning it.

I strongly support this policy and urge the commission to adopt it.

Time is of the essence. As of last week, there were 69 rigs active in New Mexico, up from the mid 40s for much of this year, or last year.

There were 123 new APDs filed with OCD just during the week of December 20.

There were 55 oil and gas well completions reported to OCD during the month of December 2020.

And the WGI oil price that today -- and I haven't checked in the last few hours -- is just below $53 per barrel, above the widely reported average breakeven point for Permian Basin drilling.

As development in the New Mexico Permian proceeds at pace, the commission must prohibit new wells from venting or flaring on a routine basis immediately upon the effective date of the rule.

Okay. Now let's take a look at the evidence of long-term routine flaring in the form of applications for exceptions to New Mexico's no flare rule, 19.15.18.12B, that span years for individual and groups of wells.

Again, this is long -- this is evidence of long-term routine flaring in the form of the C 129

applications that span years for individual and groups of wells.

Evidence of long-term routine flaring can be gleaned from information about the period of time over which companies have sought authorizations to flare.

If operators have sought such authorizations over very long periods of time for a well or group of wells, it would indicate that they had produced oil regardless of their ability to market the associated gas, perhaps never intending to obtain takeaway capacity at all.

I will provide examples of such wells, ones that have sought and received flaring authorizations continuously for periods lasting up to almost five years.

While conceivably this could reflect situations in which there are years-long delays in the construction or commissioning of new infrastructure projects, or long-term repeated and consecutive upset conditions, or maintenance problems at existing facilities, such situations lasting years on end seem unlikely, or at best, unnecessary.

Current OCD rules limit flaring of

casinghead or associated gas of up to 60 days following oil well completion. After that, companies are required to obtain an exception from the no flare rule from the appropriate OCD district office.

The application for the exception -- the application for the exception has been form C 129 which, according to verbal communications with OCD personnel, historically have been submitted in paper form, filed at the district offices as hard copy, and more recently scanned and entered into the relevant well file.

Here is an example of a form 129.

These forms identify the operator, the well or group of wells covered, the date filed, the reason given for the need to flare, whether or not the application was approved, and the time period of the approval.

While submitting an inspection of public records request to OCD on March 26, 2019, for, quote, all records related to form C 129 received by the agency from January 1st, 2019, until the present, including the forms and any supplemental information provided by operators in applying for exceptions and by OCD in acting on applications.

In response -- received approximately 800 records from 2019, including from the Hobbs district for January through March of that year, and -- and September, and from the Artesia district for January through June.

To obtain evidence of routine flaring, it was necessary to examine individual well file details for the wells listed on the C 129, to determine the total number of forms filed, when the applications were filed, and the period of -- periods of time for which flaring was authorized.

This slide is an example of the well file for one of the XTO well files on the C 129. This C 129 has multiple wells on it.

It shows 21 C 129s that were filed. There are three duplicates.

So the next side, please.

The same slide shows the 18 consecutive C 129s submitted for this group of wells. It was necessary to examine each form to identify an account for any additions or deletions of wells covered, gaps in the time periods when flaring was authorized, or changes in the reasons given for flaring.

An examination of the two most recent

months of these forms from the Hobbs district, consisting of 87 records from March 2019, and 46 records from September 2019, revealed numerous examples of wells that have been flaring gas for very long periods of time, continuing into the present.

As shown in the next slide, several major oil producers have submitted essentially continuous applications for flaring at wells that spanned years.

And I'll walk you through this slide.

The first column identifies the operator.

The second column identifies the wells that are included together on the C 129s.

The third column shows the date of the first C 129 application.

The next column shows the date of the most recent application.

The fifth column shows the total number of applications submitted for these wells.

The sixth column shows the total period of time for which flaring was authorized, and that accounts for gaps in the approvals.

And the last column summarizes the reasons -- summarizes the reasons given for flaring.

But I think it reasonably represents the reasons given on the C 129s.

I'll just walk through the results.

XTO began seeking authorization to flare at a group of four wells beginning in April of 2015, with flaring approved virtually continuously through December of 2020.

Overall, XTO submitted 18 applications for these wells, spanning four years and one month, with three four-month gaps in 2015 and 2016, two one-month gaps in 2018, and one 10-month gap from June 2019 through March of 2000.

The reason for the need to flare given in each application was midstream compressor issues and/or third-party pipeline constraints.

EOG began seeking authorization to flare two wells beginning in August of 2015, with approvals running continuously through March 2021. Over this period, EOG has submitted 21 non duplicate applications spanning four years and eight months with one 10-month gap in 2018.

The reasons for the need to flare given in each application was third-party compressor issues and/or midstream volatility.

CIG began seeking authorization to flare

at two wells beginning in February of 2016, with approvals running essentially continuously through this month. Overall, COG submitted 16 applications spanning 3 years and 11 months, citing line pressure issues, and unplanned midstream curtailment as the reasons for flaring.

Matador began seeking approval to flare two wells in March of 2018, adding two additional wells to its applications in February of 2019, and another two wells in August 2019, with flaring approved through February of 2021, and only two one-month gaps in 2020.

Over this time, Matador has submitted 15 applications spanning two years and eight months, citing gas plant and pipeline issues.

Among the wells seeking authorizations to flare, well 30-25-44013 provides an example of a well apparently flaring for its entire productive life.

Its first production date was January 26, 2018, according to the completion report, or C 105, filed in March of that year.

Matador began seeking exceptions to the no flare rule for this well on March 15, 2018. And it again submitted 15 requests, subsequently, over

two years and eight months, which has essentially been the entire lifetime of this well.

Finally, Marathon began seeking approval to flare four wells in March of 2019, with flaring approved into March of 2021.

During this period, Marathon has submitted eight applications spanning one year and 10 months, with one two-month gap.

The reasons given for the need to flare include high sales line pressure and gas line problems.

Well 30-25-44165 provides another example of a well apparently flaring for most of its productive life. Its first production date was October 23, 2018, according to the completion report filed in November of that year, with the first application to flare four months later.

Now, I also want to compare these results with the Hobbs district data.

I am sorry. From the Hobbs district, with data from the Artesia district.

And I'll summarize this much more quickly.

Examination of the most recent C 129 form submitted to District 2 in June -- just to June, one month's data, 2019, there were a total of 43 wells

for which authorization was sought for long-term routine flaring.

COG sought flaring approval for seven wells over periods ranging from two years and seven months to a full four years, citing high line pressure and one planned midstream curtailment as reasons.

EOG sought authorization for flaring for 23 wells over periods spanning three to four years due to abnormal system pressures and midstream volatility.

Marathon submitted C 129s for three wells over three years, due -- for three wells spanning three years, due to upset conditions, high line pressure, and unplanned short-term needs.

Matador filed C 129s for seven wells for flaring for periods spanning two to three years due to high line pressure and compressor and gas plant issues.

And Murchison sought authorization to flare for two to three years for three wells due to compressor problems, and also short-term operational needs.

These findings offer clear evidence of long-term routine flaring at wells operated by

New Mexico oil and gas producers and provide support for OCD's proposal to end this practice.

And while the proposed rule would shift the purpose of the C 129 from authorization to flare to a notification of venting and flaring events, both the new C 129s, and monthly reporting of vented and flared volumes on the new C 115Bs, will give OCD the tools to track wells that vent or flare repeatedly over time and take action so that venting or flaring does not become routine.

Now, I would like to turn to a recent report by the global oil and gas consultants of GaffneyCline, who was commissioned by EDF, about the efforts of -- in which -- the efforts of several leading Permian Basin operators to develop and use best practices to prevent long-term routine flaring -- venting and flaring, are documented.

The GaffneyCline report, titled "Tackling flaring: Learnings from leading Permian operators," concluded that, quote, flaring has reached such a sufficient scale that the premise of, sub quote, burning gas to allow oil extraction is really wasting one resource to produce another, close quote.

Yet, operators have many feasible

alternatives to routine venting and flaring, including acquiring existing available takeaway capacity, aggregating production to draw investment and new infrastructure, installing additional compression, reinjecting gas, using gas on site for power generation, transporting compressed or liquid natural gas to market, and more.

Beyond front-end planning, to ensure that adequate takeaway capacity is available before a well is completed, is leading Permian operators, who have also adopted production curtailment or well shut ins, to prevent routine venting and flaring, as I will describe in this report.

Now, these five companies profiled include New Mexico operator Chevron, EOG Resources, and Occidental Petroleum. And I'd like to set forth for the commission a few of the most powerful findings in the report that are applicable to OCD's proposed methane waste rule.

I'm just going to read these quotes, and read along with me.

Each producer we spoke to attributes their top tier performance with the strategic decision to require a gas line be connected on all new wells, eliminating the need to flare associated gas in the

first place.

Thus, each producer mandates that infrastructure takeaway be in place before a well comes on line.

This is coupled with the willingness to shut in the wells if the infrastructure is not in place.

Next slide.

Another finding from GaffneyCline.

Interestingly, these producers don't consider the lack of takeaway as a barrier, but as constraint, a condition that needs to happen before a project is successful.

One producer offered an insightful analogy. Just as permitting is built into the process as an additional constraint, meaning the producer would not drill a well without a permit, a producer should not drill a well without takeaway.

Next slide.

Another important point is the necessity of takeaway is in no way an unexpected event. It takes planning, communication, and coordination, which implies the need for time.

However, producers suggested there is plenty of time, usually years in advance,

considering the months it takes to create a production schedule and budget, construct a pad, and then drill and complete the well.

Next slide.

Although the terms of these takeaway contracts are confidential, producers shared with us that they provide timing and location of well development and projected production volumes well enough in advance to enable midstream companies to respond with adequate gathering and processing capacity.

In the spirit of partnership, midstream companies shared existing and planned future capacity additions and constraints to better align drilling schedules.

Now, I have one more quote from GaffneyCline that I neglected to put in this exhibit, but I will read it now.

This refers to existing wells.

Further, the report found that companies can also integrate existing wells into gathering system expansions, to serve new wells that can end routine flaring at both.

This facilitates a comprehensive, rather than piecemeal approach, that rightly acknowledges

that individual wells and other infrastructure projects are elements of a broader integrated upstream and midstream production system.

According to the report -- now, I'll quote from GaffneyCline -- Occidental cited a recent example where they completed a development program tying 395 wells into a single gathering system to prevent flaring from both in-field development and existing wells.

In this system they installed both high- and low-pressure systems to maximize takeaway capacity and eliminate a need to flare gas.

The practices adopted by these leading Permian Basin operators show that routine venting and flaring of wells is unnecessary, wasteful, and preventable.

For these operators, a commitment to connecting new wells to gathering systems prevents routine flaring.

As shown in the Oxy example, extending this commitment to existing wells further prevents routine venting or flaring. And despite these efforts where infrastructure is still not available, a commitment to shutting in wells can also prevent routine venting and flaring, which I will discuss

next.

All of these practices are available to any New Mexico operator and provide evidence that the requirements proposed by OCD are achievable.

Now I'd like to talk about industry's response to the historic 2020 fall in oil prices, which provides additional evidence that shutting in wells is a feasible response for operators to prevent routine venting and flaring.

Let me just go off script here and say, I'm not saying it's preferable or it should be the first resort. But it is certainly feasible.

A critical lesson from the twin crisis that befell the oil and gas industry in the second quarter of 2020, a price crash resulting from too much oil supply and demand destruction due to the COVID pandemic, is that many operators are able to -- and this is, again, a critical lesson from these crises -- is that many operators are able to aggressively shut in production when it suits them. And in this case, to withhold reserves in an historically low price environment.

In response to the crisis, the Energy, Minerals, and Natural Resources Department, in which OCD is housed, eased rules on temporary shut ins

allowing companies, quote, flexibility in the number of wells that producers can temporarily shut in due to economic hardship, close quote, including authorization to shut in wells for up to four years.

The response from the industry to this policy change was swift and overwhelming. By late July 2020, OCD had received and approved nearly 6,000 requests to shut in wells from 25 operators.

As of mid December 2020, just last month, according to OCD, 6,224 wells remained shut in under these emergency conditions.

This represents roughly 11 and a half percent of the almost 55,000 active oil and gas wells in the state.

It is widely asserted by the industry that shutting in a well is a costly proposition for operators, and risky for the reserves, to have to shut in a well.

However, the large number of wells for which approval to shut in was sought and obtained, casts doubt about the severity or prevalence of these risks.

Next slide.

Recent survey results from the Federal Reserve Bank of Dallas, which covers 18 New Mexico

counties including Lea and Eddy, suggested in an overwhelming majority of cases, the cost of shutting in wells is not a major concern for operators.

In the Dallas fed second quarter 2020 energy survey, a special question was asked -- and I'll need to get close here -- Did your firm shut in or curtail any production in the second quarter?

Remarkably -- I'm sorry.

In response, 82 percent of the 165 exploration and production companies responding said that their firms had shut in or curtailed production in the second quarter, with 94 percent of those companies giving low wellhead prices as a reason.

The second question asked, Do you expect extra costs when putting the wells back on line?

I'm sorry. The second question asked that.

Now remarkably, in my opinion, of the 62 companies that responded to this question, 27 said no, and 61 percent said that costs would be minor. That is, the cost of restarting production was not significant for nearly nine out of ten firms, with only 11 percent expecting significant costs.

The public interest in the reasonable prevention of waste and pollution is at least as

important as an operator's private interest in protecting future profits.

The industry-driven aggressive shut ins, while brought on by unprecedented and unfortunate circumstances, provide strong evidence that shutting in wells, if necessary to comply with the new waste rules, is a mechanism available to operators to prevent routine venting and flaring. And again, provides assurances that the requirements proposed by OCD are achievable.

So to summarize, OCD's proposal has five key elements that would establish coherent, effective, and nation-leading rules to prevent methane waste from oil and gas operations.

These include operator requirements to measure and report venting and flaring; and end to routine venting and flaring; increasingly stringent requirements to capture all of the gas produced, or at least 98 percent of it; obligations to plan for and acquire takeaway capacity, or commit to alternatives while -- adopt alternatives.

I need to make a distinction here between our recommendations and what OCD has proposed. OCD has proposed identifying alternatives -- and incentives to comply with the rule's provisions or

risk suspension or denial of APDs; mandatory well shut ins, or other enforcement actions.

I strongly support this proposed structure for the rule and urge the commission to resist any temptation to add exemptions to the routine flaring ban or gas capture requirements that could end up swallowing this new rule.

I'm almost done. Two more topics.

I have a few suggestions for improving the reporting conditions for upstream operators, to provide valuable information to OCD, and transparency for the public.

Again, I support OCD's proposal to expand the requirements for reporting, to ensure that operators identify the reasons why they vent and flare and the volumes associated with each reason. We need that information.

Over time this will enable the agency to fine tune its implementation and compliance and enforcement resources, to focus on the most significant sources of waste, and better inform the public.

I have several recommendations to clarify and strengthen these reporting requirements.

First -- and Tannis is going to bring up

the redline.

First, in 19.15.27.8E1, I recommend striking "of long duration," since venting or flaring of long duration is now prohibited -- or would be prohibited by 9.15.27.8D.

Now, going down to the D1. Yes.

Second, I recommend clarifying the requirements of the revised form C 129, which sets the effective date of the rule will serve as the notification of venting and flaring events.

The new requirements specify several items of information in an open-ended manner that will make review and analysis of C 129 information by OCD and the public difficult or impossible, given the large number of producing wells in the state and the large number of C 129 forms that are likely to be submitted over time.

Providing specific response categories in the rule would clarify and reduce reporting effort for operators, as well as improve the information's quality and usability.

So specifically, I recommend the following.

For 19.15.27.8G1B7, the cause and nature of venting and flaring, I recommend requiring the

operator to identify the reporting category in 9.15.27.8G2 that caused or was the source of the event.

As I will note, NMOGA has also recommended, although I, of course, would support the reporting categories as proposed by OCD.

For 19.15.27.8G1B8, the steps taken to limit the duration and magnitude of venting and flaring, the rule should incorporate subcategories for the most common steps, rather than remain a textural description.

For example, well shut in, production curtailed, work expedited, upset condition resolved.

For 9.15.27.8G1B9, corrective actions taken to eliminate the cause and occurrence of venting or flaring, the rule should similarly incorporate subcategories for the most common corrective actions.

For example, well connected to sales line, compression installed, equipment replaced, maintenance procedures or schedule revised.

The ability to conduct data analysis on why operators are experiencing venting and flaring events requires the availability of numerical categories rather than verbal descriptions.

So OCD should require operators to more precisely identify the reasons for venting and flaring associated gas, as well as the volumes vented or flared.

This information will assist OCD in focusing their efforts on the most important causes of the waste of associated gas, and will increase transparency and accountability to the public.

As proposed, OCD's original 19.15.27.8G82G would establish a single category for, quote, insufficient pipeline availability or capacity in a natural gas gathering system.

And they originally suggested during separation phase of completion operations or production operations.

This language does not address the main reasons articulated during the map process by operators regarding why insufficient availability or capacity occurs, or the reasons commonly given by operators on the form 129s that I've examined.

So I recommend a new 19.15.27.8G2H to establish three categories, three subcategories, to identify why insufficient availability or capacity occurs.

One, lack of connection between a well and

a pipeline.

Two, lack of sufficient well pressure or compression.

And three, third-party or gathering system upset conditions or curtailment.

Fourth, I recommend that the rule provide for public notice in the event of emergency or malfunctions that pose a risk to public health or safety.

There are homes, schools, and businesses located close to oil and gas wells and infrastructure in this state that are at risk from major venting and flaring events from those operations.

When methane waste spikes because of an emergency, malfunction, or other reason, people living and working nearby need and deserve to know in realtime so that they can minimize their exposure.

Therefore, I recommend that a new Subsection 19.15.27.8G1A3 be added to require that operators use best efforts to notify members of the public whose health, safety, and property are endangered from a methane release.

Subsection 19.15.27.8G1A2 requires

operators to provide notification to OCD of such venting and flaring, as is also required in 19.15.29, the release rule, if it's -- OCD, this rule, this Subsection 2, fails to require operators to notify members of the public who are, in fact, at risk.

Under both 19.15.29 and 19.15.27.8G1A2, operators are already required to determine whether a release, quote, results in a fire or is a result of a fire may, with reasonable probability, endanger public health, or substantially endangerers property or the environment.

Once operators make that determination, they should be required, in this rule, to at least use best efforts to notify members of the public whose health or property is put at risk by their operations.

Finally, the integrity of measurement reporting by operators is essential to the ability of the rule to reduce venting and flaring, and requirement for third-party verification will serve to ensure that reporting is complete and accurate.

We've heard a lot about the need for accurate reporting in this hearing.

The integrity and effectiveness of the

capture requirement as a mechanism to reduce venting and flaring will depend on accurate reporting.

To ensure that operators are reporting data accurately, in accordance with 19.15.27.8E3, I recommend two changes to the language in 19.15.27.9C.

First, I support the state land office's proposal that independent verification of vented and flared volumes be mandatory and conducted on a routine basis, to ensure that all operators are reporting accurately.

And second, I support direct submission of verification reports by verifiers to the agency, not by operators, as was clarified previously during the hearing for 9.15.27.9C, in the OCD testimony earlier.

The verification process typically involves an independent review and understanding of the measurement and estimation methodologies and data management systems used by reporting entities to track, quantify, and report gas volumes.

Verification reports include findings about the validity of reported emissions, material misstatements, and nonconformance with reporting requirements and recommendations for corrections and

improvements.

Third-party verification of greenhouse gas reporting is required in California and Massachusetts.

California credits -- accredits verification service providers and individual verifiers.

And Tannis, you can pull up the last -- I think it's the last slide -- and provides specific criteria for oil and gas system specialists.

The state also has established strict conflict of interest standards to ensure the independence of verifiers by limiting business relationships between reporters and verifiers, and setting a six-year limit on reporters retaining the same verifier.

Currently, under the California program, there are 28 companies offering verification services that have been accredited by California, and 207 accredited verifiers.

And this is an example of the California greenhouse gas reporting program website that identifies the verifiers.

And I would note that one of them, it is the second one -- maybe the first one -- yes. It's

a New Mexico company.

I believe that verification providers active in this field are well positioned to provide high quality services to New Mexico oil and gas operators.

In Massachusetts, the rationale for establishing a verification program includes providing the most accurate and complete data possible for an emissions inventory and planning purposes, better consistency of reporting across all facilities, consistency with other reporting jurisdictions, maintaining the credibility of the program, and demonstrating a commitment to addressing climate change to the public and stakeholders.

And lastly, the climate registry also requires independent third-party verification reporting.

The TRC was established in 2007 to design and operate voluntary and mandatory greenhouse gas reporting programs globally, and assist organizations in measuring, reporting, and verifying the carbon emissions and their operations in order to manage and reduce them.

In 2009 and -- in 2009 and 2010, the

climate reduction -- the climate registry's oil and gas production protocol was developed in collaboration with the New Mexico environment department, the California resources board, and the western regional air partnership, to establish calculation methodologies for GHG reporting pipeline and gas operators, including for venting and flaring of associated gas.

Thank you, members of the commission.

This concludes my testimony.

MS. FOX: Thank you, Dr. Singer.

Madam Hearing Officer, I move for admission of Climate Advocates' Exhibits 17 and 18.

HEARING OFFICER ORTH: Let me pause for a moment, in the event there are objections to Climate Advocates' Exhibits 17 or 18.

17 and 18 are admitted.

(Exhibits admitted, Climate Advocates' 17 and 18.)

MS. FOX: Dr. Singer stands for cross-examination.

HEARING OFFICER ORTH: Thank you, Ms. Fox.

Commissioner Kessler, I know you have an early departure.

Do you have any questions of Dr. Singer

while you're with us?

COMMISSIONER KESSLER: I don't.

Thank you for your presentation, Dr. Singer.

THE WITNESS: You're welcome.

HEARING OFFICER ORTH: Thank you.

Let's go to Mr. Ames.

Mr. Ames, do you have questions of Dr. Singer?

MR. AMES: I do have a couple of questions for Dr. Singer.

EXAMINATION

BY MR. AMES:

Q. So you just testified in support of the state land office's proposal for mandatory third-party verification.

Is that right?

A. Correct.

Q. And the state land office said, in its prehearing statement, that it wanted third-party mandatory verification, right?

A. That's what I'm basing my testimony off of.

Q. But the state land office didn't propose any language to do that, did it?

A. Not that I have heard in their testimony. I was relying on their statement in the prehearing statement that they -- that they supported mandatory verification.

Q. But in the prehearing statement filed by the state land office, they didn't propose any language for mandatory third-party language, did they?

A. They did not. But I might note that we did.

Q. And the witness for the state land office didn't testify about it.

Isn't that right?

A. Yes, that's correct.

Q. Okay. Now, you made a statement that says that you supported our discretion to require a third-party verification.

Isn't that right?

A. That -- if that's what is written in the prehearing statement, then that is correct. That's what the prehearing said -- statement said.

Q. So that's what your testimony is here today?

A. Well, with reliance on counsel to bail me out, I would note that the prehearing statement was

probably completed before we became aware that the land office was also supporting that provision; and, therefore, we decided that we were justified in strengthening our recommendation to OCD and to the commission.

Q. You proposed language on the third-party verification?

A. I believe we did. But subject to check, I may be mistaken.

This has been a juggling -- we're all juggling many balls at the same time during this proceeding. So let me just have a quick look.

I guess we did not.

Q. So you didn't propose any language for the parties to consider, before this hearing, regarding mandatory third-party verification.

Isn't that right?

A. Correct.

Q. So there's no -- really no way for OCD or the industry organization, or anyone else, for that matter, to evaluate how that proposal for mandatory third-party verification will work.

Isn't that right?

A. Well, I think that the plain language of a mandatory requirement for verification, you know,

stands on its own. Whether that's annual or what the period needs to be, that would be -- no, we did not provide details.

But the idea of mandatory, as opposed to at the discretion of the agency, is pretty self-explanatory.

Q. But my question, Tom, is -- WELC, yourself, did not propose any language regarding third-party -- mandatory third-party verification for the parties to consider and to understand how it would work.

Is that correct?

MS. FOX: Asked and answered.

MR. AMES: I would ask him to answer the question, Madam Hearing Officer.

MS. FOX: Objection, asked and answered. He answered that previously, that we did not submit that language.

He actually looked at our regulatory language and told Mr. Ames we did not propose language.

In fact, he was relying on the state land office's proposal.

I think -- I think it's really pretty clear what happened here.

HEARING OFFICER ORTH: I did hear that, Mr. Ames.

Please move on.

MR. AMES: I'll rephrase my question.

Q. (By Mr. Ames) And I'll ask the original question, which is: Mr. Singer, absent language to understand how mandatory third-party verification would work, there's no way for OCD or any other party to evaluate it.

MS. FOX: Objection, asked and answered. He thought it could be evaluated, because it's a very -- I can't remember the language -- the concept is out there.

That is asked and answered.

HEARING OFFICER ORTH: All right. Mr. Ames, I think he did give that testimony.

MR. AMES: Nothing further.

Thank you.

HEARING OFFICER ORTH: Thank you, Mr. Ames.

Mr. Rankin, do you have questions of Dr. Singer?

MR. RANKIN: Good evening, Dr. Singer.

Madam Hearing Officer, I have no questions for the witness. Thank you.

HEARING OFFICER ORTH: Okay. Thank you.

Mr. Biernoff?

Mr. Biernoff?

He may have stepped away.

And I'm not sure whether Ms. Paranhos has also stepped away.

Ms. Paranhos?

All right. Let's go to Commissioner Engler.

COMMISSIONER ENGLER: Thank you.

EXAMINATION

BY COMMISSIONER ENGLER:

Q. Good evening, Dr. Singer.

A. Hello, Dr. Engler.

Q. There were some statistics you said in your evaluation of the C 129s, and I want to make sure I have those.

I know you started -- you said something about 800.

Could you go through that again?

A. Sure. I was walking through my methodology, and I was trying to be as clear as I could for the commission.

Q. Well, you were clear. I'm not processing as fast as I did this morning. But anyway, go

ahead.

A. The response -- the records that we received from OCD in response to our IPRA, numbered 800 -- more or less 800 individual C 129 forms.

Tannis, do you want to bring up that C 129 again? There were basically 800 of these things. And so yes, continue with your questioning.

Q. So there's 800. And that was over what time frame that you requested?

A. We requested a year to date -- that's an example of the form.

We requested year to date 2019. And our request went in -- let me just quickly turn to my testimony.

On January -- we submitted our request on March 26 of 2019. So it would have been the first quarter, essentially, of 2019.

But we -- we received -- we received responses through June of 2019.

Q. Okay. So within that, you know, one to two quarters of 2019, there were almost -- over 800 C 129s that you got, right?

A. We got -- January through March, plus September for Hobbs.

And we got January through June for

Artesia.

Q. Okay. So multiple ones?

A. Yeah. Multiple ones from those two districts, correct.

Q. And so out of the 800, how -- you had to go through -- you know, when you go into the OCD system and through images, you had to go through those image files to find -- or count the number of times that they had an exception?

A. So, Commissioner Engler, I was overwhelmed by the task. I would like to see this information automated.

I -- I -- methodologically, I decided that I would go after the most recent months and see how far I could get.

And so I did look at March and September.

March for Hobbs -- March of 2019 was -- I think it was 86 records.

And -- and for September it was 40-some-odd. And I can go get the exact numbers here.

Q. Well, that's good to know. But I think one of the questions I was -- and you kind of answered that -- is the process that you used.

And as far as I know, there's no real

automation process where you can get this information without going through all of the images.

Is that correct?

A. That is correct.

Q. And so when -- when Climate Advocates, in its rules, is asking for more details on the C 129, isn't that also -- and you may not be able to answer this -- if that's additional information on that C 129, we're still going to have this problem of lack of automation?

A. It's an excellent question, Commissioner. And I would try to answer it this way.

I would rather look at a well file and -- and aggregate Category 3s for a given operator, if I'm doing multiple C 129s, than reading the text that -- you know, whatever language the individual filing that form chooses to put in a text box.

And so there are two levels of the question here, and I think this goes to the partnership that the state has with the CART, and possibly other vendors.

If -- if a form -- unlike the C 115B, if a -- if a record isn't being entered into a system, I'm not -- I'm not an expert in accessing data.

If a record like -- like the volume in a

C 115B, that's a number. And it's easy for a data analyst to support -- to sort those numbers by any -- in any other field in the database.

What needs to happen with the C 129 is a company like Decard can take pictures, take -- create databases from the images of the C 129, which we could then manipulate by the numerical classification of the data in that form.

So that's kind of as far as I want to go. You could ask Lesley Fleischman, who absolutely got the data for us and crunched the numbers.

And I hope that answers -- somewhat answers your question.

Q. Yeah. I think that was good. I've spent a lot of time going through well file data, and I always am curious where we could automate and make things a little better.

I have a different question.

Back to your -- in your role, you wanted notification of the public, something like that. In terms of whenever there's a venting and flaring, you want the public to be noticed.

I don't remember the exact words.

A. A major event.

Q. A major event, yes.

Do you have -- when you say that, do you have a -- how -- from the event, do you have a time and distance that you could recommend?

A. The time is sort of set by the rule that we refer to. The second category of the new purpose of the C 129, for major releases, the operator has to notify OCD within 24 hours.

And we think that's reasonable, and why we want to leverage that information for the public.

The distance, we -- we don't really -- there's not necessarily a correlation between distance. There's not -- you would have to ask Adella Begaye who, unfortunately, has already went, as to what the correlation between health impacts and distance are.

So we were relying on 29 -- I'm sorry -- 19.15.29, the major release plan. That if it's defined as a major release by existing regulation.

So yes, it's a major release, and OCD knows about it quickly, and the operator should also be notifying the public.

COMMISSIONER ENGLER: That's good.

Thank you.

THE WITNESS: You're welcome.

HEARING OFFICER ORTH: Thank you,

Commissioner Engler.

Madam Chair?

CHAIRWOMAN SANDOVAL: Thanks. I just have a couple of questions.

EXAMINATION

BY CHAIRWOMAN SANDOVAL:

Q. Dr. Singer, do you support the rule?

A. I do, with -- with -- most, if not all, as many of the recommendations that Climate Advocates have made that we can get.

Q. Do you believe this was a collaborative process?

A. Extremely collaborative, yes. Appropriately collaborative.

Q. I just have maybe one or two quick questions.

So on that C 129 roll up -- I think the question where you -- the one where you listed different wells and how long.

Did you cross-reference that to see if they actually flared during any of those times?

A. Madam Chairman -- Chairwoman, I did not. I -- I took the company at their word. The way they described the reason for flaring, to my reading, implied that they were responding to real events.

But I did not correlate the time period with the C 115, to see what their volumes were during that time. That's a big research project right there.

Q. Are you familiar with how operators frequently use C 129 forms and the different reasons that they -- they do?

A. Well, I will answer that question two ways.

One, I'm certainly familiar with the volume of C 129s. Just for this first quarter, more or less -- or first half of 2019, there were 800.

And you know, the reasons that they wrote in on their reasons for flaring, which is summarized in the last column, suggest -- suggest why they were -- why they are submitting these applications.

Q. Are you familiar that most -- or maybe "most" is the wrong word -- many operators submit C 129 forms out of extreme caution, so that if a midstream interruption does happen and they are forced to flare, that they won't be out of compliance with OCD's rules?

A. I -- I will take your word for it, and your experience with it, that that could be happening. I was struck --

Two answers. I was struck by how few operators submitted C 129s during this period. It was really concentrated in a handful.

And the -- the duration of the C 129s, if that was a month or three months or six months of those kinds of forms.

But I think your question implies that companies are just submitting these forms pro forma, and preemptively indefinitely.

You can see the years -- periods on the chart. And if they do that, I was not aware that that was the common practice --

Q. Are you --

A. -- for flaring are written on the -- on the forms.

Q. Are you familiar with -- with the current venting and flaring rule that's cited in 19.15.18.12, maybe?

A. Yes, that -- that requires a submission -- an authorization to flare after 60 days.

Is that the one you're referring to?

Q. Correct.

A. Yes, I am.

Q. Is there -- so if -- I guess if an operator -- and currently, how that rule is

structured, if an operator doesn't submit a C 129 out of -- you know, ahead of time, and they had to flare, would they be out of compliance with the rule?

A. The only way I can answer that is that I saw a handful of C 129s stamped denied, with handwriting on the form that -- that it was ex-post, and that they had -- that they had not submitted the C 129 in a timely fashion.

Q. Okay.

CHAIRWOMAN SANDOVAL: All right. That's all I have.

Thank you, Dr. Singer.

THE WITNESS: You're welcome.

HEARING OFFICER ORTH: Thank you, Madam Chair.

Ms. Fox, did any of that questioning prompt followup on your part?

MS. FOX: No, it did not, Madam Hearing Officer.

HEARING OFFICER ORTH: All right.

In that case, if there's no reason not to excuse Dr. Singer, thank you very much, Dr. Singer, for your presentation.

THE WITNESS: You're welcome.

HEARING OFFICER ORTH: So, Ms. Fox, it seems to me like it would be helpful for you to identify the order of witnesses tomorrow.

MS. FOX: I think what will happen tomorrow, Madam Hearing Officer, is tomorrow -- is the day that Environmental Defense Fund is going to go out of order, because of their conflicts. And so they will -- we've actually agreed that they can put up all three witnesses.

And then after that, we -- we're going faster than anticipated, and we're going to need to get with our witnesses to decide a precise order for tomorrow in the event that we go on in the afternoon, which we anticipate us doing.

So I could send that -- as soon as we determine that lineup later today, I could send that information to you and counsel, if you'd like.

HEARING OFFICER ORTH: That would be great. Thank you.

In any event, it sounds as though we'll be hearing in the morning from the three EDF witnesses.

All right. Thank you all. We will adjourn for the evening and reconvene at 8:00 a.m.

Thank you.

(Proceedings concluded at 5:24 p.m.)

CERTIFICATE

I, Paul Baca, RPR, CCR in and for the State of New Mexico, do hereby certify that the above and foregoing contains a true and correct record, produced to the best of my ability via machine shorthand and computer-aided transcription, of the proceedings had in this matter.

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