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STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

Case No. 23580

Moderated by Felicia Orth  
Thursday, November 14, 2024  
8:33 a.m.

Pecos Hall  
Wendell Chino Building  
1220 South Saint Francis Drive  
Santa Fe, NM 87505

Reported by: James Cogswell  
JOB NO.: 6962991

A P P E A R A N C E S

List of Attendees:

Gerasimos Razatos, Acting Director - State of New Mexico Oil Conservation Division

Greg Bloom, Commissioner - State of New Mexico Oil Conservation Commission

Dr. William Ampomah, Commissioner - State of New Mexico Oil Conservation Commission

Sheila Apodaca, Law Clerk - State of New Mexico Oil Conservation Commission

Madai Corral, Law Clerk - State of New Mexico Oil Conservation Commission

Brandon Powell, Deputy Director - State of New Mexico Oil Conservation Commission

Nicholas R. Maxwell, Participant from Lea County (by videoconference)

Joan Brown, Member of Public (by videoconference)

Todd Wynward, Member of Public (by videoconference)

Clara Sims, Member of Public (by videoconference)

Penelope Mainz, Member of Public (by videoconference)

Abby Shepard, Member of Public (by videoconference)

Jeanette Iskat, Member of Public (by videoconference)

Anita Amstutz, Member of Public (by videoconference)

Alejandria Lyons, Member of Public (by videoconference)

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A P P E A R A N C E S (Cont'd)

List of Attendees:

Giuliana Funkhouser, Member of Public  
(by videoconference)

Marlene Perrotte, Member of Public  
(by videoconference)

Avis Kerns, Member of Public

Dr. Christina Castro, Member of Public

Dr. Kristen Hansen, Witness (by videoconference)

Sarah Knopp, Member of Public (by videoconference)

Dr. Stephen Conrad, Member of Public  
(by videoconference)

Dr. David Munoz, Member of Public (by videoconference)

Wendy Volkmann, Member of Public (by videoconference)

Beth Enson, Member of Public (by videoconference)

Eileen O'Shaughnessy, Member of Public  
(by videoconference)

Chris Peskuski, Member of Public (by videoconference)

Lauro Silva, Member of Public (by videoconference)

Stephanie Camfield, Member of Public

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A P P E A R A N C E S (Cont'd)

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A P P E A R A N C E S (Cont'd)

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1 P R O C E E D I N G S

2 THE HEARING OFFICER: Good morning. My  
3 name is Felicia Orth. I'm a hearing officer appointed  
4 by the Oil Conservation Commission to conduct the  
5 hearing in the matter of proposed amendments to the  
6 Commission's rules addressing chemical disclosure and  
7 the use of PFAS substances for oil and gases  
8 extraction. Docketed as case number 23580. We have  
9 come to another -- I think we're on the third day of  
10 hearing and we've come to another opportunity to offer  
11 non-technical public comment.

12 Just a few things. And we'll call on  
13 anyone in the room who's present to offer public  
14 comment. We're going to go to the platform first and  
15 we'll take comment from the platform as well. For  
16 each of you, please be sure you haven't already made a  
17 comment this week, to comment once from you orally.  
18 You can add whatever you'd like to say in writing and  
19 send that to Sheila Apodaca who will be providing to  
20 the Commission for their deliberations. Oral public  
21 comment is limited to three minutes and before I start  
22 the stopwatch, I will ask you to state and spell your  
23 name.

24 UNIDENTIFIED SPEAKER: Madam Hearing  
25 Officer, can you just pause just one second?

1                   Someone in the audience has their  
2 volume on on your laptop or on a computer. Is it from  
3 a phone? Is it from online? If we can get everybody  
4 to please mute on your end unless you're going to be  
5 talking.

6                   THE HEARING OFFICER: Well, yeah, and I  
7 hope everyone will stay mute until Madai goes to you  
8 to unmute.

9                   MR. RAZATOS: Sorry, Madam Hearing  
10 Officer, I think we're back online.

11                   THE HEARING OFFICER: Yeah. Thank you  
12 very much.

13                   Also, if you are more comfortable  
14 offering your public comment in Spanish, we will have  
15 an interpreter available at the 8:30 session tomorrow  
16 morning. Please rejoin us then if you would prefer to  
17 offer your comments in Spanish. So let's see, the two  
18 parties who signed up in advance were Sister Joan  
19 Brown. I think I saw you -- are you no. 6 there?

20                   MS. BROWN: Yes.

21                   THE HEARING OFFICER: All right. Thank  
22 you. Do you swear or affirm to tell the truth?  
23 You're muted. Hold on. Can you unmute?

24                   MS. BROWN: Yes.

25                   THE HEARING OFFICER: Oh, there you

1 are. Thank you.

2 MS. BROWN: Sorry. I didn't know which  
3 mic you were using. Can you hear me now?

4 THE HEARING OFFICER: Yes. I can. So  
5 I have your name and I will start your three minutes.  
6 Please go ahead. Oh, sorry. I said, "Do you swear or  
7 affirm to tell the truth?" Yes?

8 WHEREUPON,

9 JOAN BROWN,  
10 called as a witness and having been first duly sworn  
11 to tell the truth, the whole truth, and nothing but  
12 the truth, was examined and testified as follows:

13 THE HEARING OFFICER: I'll start your  
14 two minutes.

15 THE WITNESS: Okay. Thank you, Hearing  
16 Officer Commission.

17 My name is Joan Brown, a Franciscan  
18 Sister. I'm with Interfaith Power and Light, New  
19 Mexico, El Paso. And thank you for this hearing and  
20 also thank you for offering Spanish translation at  
21 least for tomorrow for folks. I'm here because we  
22 really believe that the Commission has statutory  
23 authority to adopt these rules and therefore, create  
24 transparency equitable access to -- to data to address  
25 public health, environment, and the freshwaters which

1 we're very, very concerned over. I'd like to read  
2 just a couple sections from a -- a faith leader letter  
3 where we've gathered more than 40 faith leader  
4 signatures. I will send this in electronically and  
5 I'll also be sending in electronity -- electronically  
6 a number of petitions that people have signed in  
7 general.

8 So regarding care of creation, the  
9 National Association of Evangelicals issued a report  
10 in 2022 calling followers to worship God by caring for  
11 creation. And then Pope Francis has called for  
12 radical change in how people interact with water in  
13 particular as that access to safe drinking water is  
14 not a commodity and that everyone should have access  
15 as we work to address the climate crisis and care for  
16 our common home. We know about the report from  
17 Physicians for Social Responsibility that confirms  
18 that oil and gas industry gives us PFAS and hydraulic  
19 fracturing operations in New Mexico.

20 And I think everyone here is very aware  
21 of the -- the chemicals, the high toxicity and the  
22 effects on human health and water and that this will  
23 last forever. I'd like to mention just a couple of  
24 stories. Interfaith Power and Light works closely  
25 with impacted communities and people of faith and

1 faith leaders in the Permian Basin. And so going down  
2 there many times over the last more than ten years,  
3 I've heard a number of stories.

4 I'd like to just highlight two short  
5 stories. One was from a gentleman that I met wanted  
6 -- who remained anonymous who drove produced water  
7 trucks. I said, "What --" I said, "Do you drive  
8 produced water trucks?" He says, "Oh, I don't call it  
9 that. I call it nasty stuff. That's not water." And  
10 then he also -- I said, "Well, where do you -- where  
11 do you put this?" He said, "Anywhere." The second  
12 story that I'd like to share was from a mother and a  
13 -- a wife and a very dedicated brave woman who lives  
14 with her family down there and her husband works in  
15 the oil field and he works with these chemicals. And  
16 she said he comes home at night and his clothing is  
17 just caked. It stands up by itself. And -- and the  
18 children want to hug him and he says, "No. You  
19 cannot. I have to take these off first."

20 So they're trying to protect their  
21 children, their families. All that ran through my  
22 mind when I heard this story were the stories from our  
23 -- my Navajo and Laguna and Acoma friends who had  
24 worked in the uranium mines. Would take off their  
25 clothing, the women would wash it and then the people

1 there are dying of cancer in the past and currently  
2 and into the future because they did not know and they  
3 were not protected. I feel we're in --

4 THE HEARING OFFICER: Sister, would you  
5 wrap up, please?

6 THE WITNESS: Yes. I will. So just in  
7 closing, it is a moral responsibility that there be  
8 transparency and accountability to protect public  
9 health and the environment. So we urge you adopt --  
10 to adopt disclosure rules and to increase  
11 decision-making capabilities that will help our  
12 impacted communities, our sacred water and all of us  
13 across the state. Thank you so much.

14 THE HEARING OFFICER: Thank you very  
15 much.

16 The other person who signed up in  
17 advance for this morning is Todd Wynward. And I  
18 believe I saw him on the platform. Todd Wynward.

19 MR. WYNWARD: Hi there. Are you able  
20 to see me?

21 THE HEARING OFFICER: Yes. Thank you.

22 MR. WYNWARD: Okay. Good.

23 THE HEARING OFFICER: If you would  
24 please spell your last name.

25 MR. WYNWARD: It's W-Y-N-W-A-R-D.

1 THE HEARING OFFICER: Thank you.

2 WHEREUPON,

3 TODD WYNWARD,

4 called as a witness and having been first duly sworn  
5 to tell the truth, the whole truth, and nothing but  
6 the truth, was examined and testified as follows:

7 THE HEARING OFFICER: I will start your  
8 three minutes.

9 THE WITNESS: Thank you in advance for  
10 deep listening to this.

11 And I wanted to -- I'm a -- I'm a  
12 licensed Mennonite minister up at the headwaters of  
13 the Rio Grande a little farther north and just really  
14 the idea of doing unto those downstream as you would  
15 have those upstream do unto you is a real motto for  
16 myself and others. And we have a multicultural  
17 alliance up here who is really dealing with the  
18 problem of plastic pollution. And I bring that up to  
19 you because I hope with the PFAS forever chemicals,  
20 like plastic, once you know, it's our moral duty to do  
21 something about it.

22 And so being transparent in my own life  
23 up here, I began to realize how addicted I was to --  
24 to petroleum and to plastic and it became a throwaway  
25 culture that I don't want to be part of. And I -- I

1 gathered with my other people who see ourselves as  
2 responsible stewards of the land because we live here  
3 and are blessed by the land to take care of the land  
4 for the seventh generations as well as today. And so  
5 I myself have taken on responsibility to be  
6 transparent about my own plastic and the addiction our  
7 community has to plastic and what can we do about it.

8           And so we're naming out loud and being  
9 transparent about things that once we now know the  
10 damage to plastic, we're teaching our children to not  
11 use plastic in the way that we have. And so I  
12 encourage you all to really think about that. Now  
13 that you know, there's no excuse for us to keep going  
14 the way we've been. And to be transparent is the only  
15 honest solution and to reduce our use of things that  
16 we know are toxic. It's the most community-based  
17 thing I can imagine.

18           So I thank you for listening to that.  
19 I just have a simple request, to let's be responsible  
20 for our own -- our own waste management. Let's be  
21 responsible for sleeping in the -- not -- not pooping  
22 in our own bed and let's please be responsible about  
23 forever chemicals so that we don't inherit a legacy of  
24 -- of toxicity for the future. Thank you for  
25 listening and thank you for considering changes and

1 practices and policies and transparency.

2 THE HEARING OFFICER: Thank you,  
3 Reverend Wynward.

4 A third person I had sign up earlier  
5 was Clara Sims. I believe she's also on the platform.

6 MS. SIMS: Hello. Yes.

7 THE HEARING OFFICER: Hello.

8 WHEREUPON,

9 CLARA SIMS,

10 called as a witness and having been first duly sworn  
11 to tell the truth, the whole truth, and nothing but  
12 the truth, was examined and testified as follows:

13 THE HEARING OFFICER: And your last  
14 name is spelled with one M?

15 THE WITNESS: Correct.

16 THE HEARING OFFICER: All right. I'll  
17 start your three minutes.

18 THE WITNESS: Thank you.

19 Good morning, Commissioners. My name  
20 is Clara Sims. I was born and raised in Los Lunas and  
21 I serve as assistant minister of First Congregational  
22 United Church of Christ in Albuquerque and as the  
23 assistant director of New Mexico Interfaith Power and  
24 Light. And as a faith leader, I speak in solidarity  
25 with those who have spoken before me, uplifting the

1 sacred gift of water and our collective responsibility  
2 to -- to protect the health and integrity of water is  
3 that which gives life to all life. Water is not a  
4 commodity to be manipulated at the whims of profit.  
5 Water is sacred. It is our most commonly held need,  
6 the most basic and essential element of our shared  
7 humanity.

8 Banning the use of PFAS and other  
9 nondisclosed chemicals proven toxic to human and more  
10 than human health for generations is, I pray, an  
11 obvious choice for the common good of people and  
12 planet alike. Implementing chemical disclosure  
13 requirements for the use of PFAS and other  
14 nondisclosed chemicals is, I pray, an obvious choice,  
15 of public accountability for the protection of people  
16 you have been commissioned to serve. New Mexicans  
17 want and deserve to celebrate the lives of future  
18 generations without fearing the impacts of PFAS and  
19 other toxic chemicals leaching into our groundwater  
20 from oil and gas operations and spills.

21 As people of faith, we understand the  
22 moral imperative to protect the most vulnerable among  
23 us, including people and the land and water that gives  
24 us life. By any measure of justice, a few people  
25 profiting from trade secrets should never be more

1 important than protecting our lives and our children's  
2 lives. Thank you for hearing my comment and those of  
3 everyone who has chosen to participate in this  
4 hearing. For the common good of us all, please ban  
5 the use of PFAS and other nondisclosed chemicals and  
6 ensure that transparency and accountability are at the  
7 very least upheld in all chemical use and oil and gas  
8 operations going forward. Thank you for your time.

9 THE HEARING OFFICER: Thank you,  
10 Reverend Sims.

11 That is the three folks I had sign up  
12 ahead of time.

13 Madai, if you would just like to go  
14 one, two, three, we'll do it that way. Let's see.  
15 This is Penny Elena M.

16 MS. MAINZ: I'm sorry. I'm on here  
17 twice and I didn't know how to get rid of that first  
18 one. I'm Penelope Mainz.

19 THE HEARING OFFICER: Okay. Thank you.  
20 And if you would please spell Mainz for us.

21 MS. MAINZ: M-A-I-N-Z.

22 //

23 //

24 //

25 //

1 WHEREUPON,

2 PENELOPE MAINZ,

3 called as a witness and having been first duly sworn  
4 to tell the truth, the whole truth, and nothing but  
5 the truth, was examined and testified as follows:

6 THE HEARING OFFICER: Thank you. I'll  
7 start your three minutes.

8 THE WITNESS: I've been a resident of  
9 New Mexico for 42 years. You have heard about the  
10 study and report by Physicians for Social  
11 Responsibility, the dangers of PFAS they have and  
12 other very important facts. I'll get a little  
13 personal. I was born in the 1940s before PFAS were  
14 commonly used in manufacturing. I have had good  
15 health, but I am mourn for the people coming behind me  
16 who may meet life's many challenges with the added  
17 burden of poor health or even shortened lives due to  
18 PFAS in our water here. So, yes, we need a ban on  
19 PFAS.

20 Poison is defined as a substance  
21 capable of causing illness or death to living organism  
22 when introduced or absorbed. PFAS obviously poisons  
23 and trade secrets can also be called poisoned cloaks  
24 or poisoned covers. So, yes, we need a ban on PFAS.  
25 The idiom -- idiom, poison the well came from ancient

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1 warfare when warriors would poison the drinking water,  
2 the well of the opposing army, so the poisoned  
3 warriors could be more easily beaten. In a switch on  
4 history, the oil and gas companies are walking away  
5 with a victory in profits leaving New Mexicans with  
6 weakened health and futures. So, yes, we need a ban.  
7 I believe we need a ban on PFAS and undisclosed  
8 chemicals in oil and gas drilling in New Mexico  
9 because oil and gas profits, trade secrets, and  
10 efficient technology are less important than the  
11 health and futures of New Mexico residents.

12 And let's use some of the state's money  
13 to employ enough people to thoroughly enforce the ban.  
14 Because nothing is more important than the health and  
15 futures of New Mexicans. Frances Oldham Kelsey was a  
16 pharmacologist and physician who stopped the sale of  
17 thalidomide in the United States in 1960. She stood  
18 up to intense pressure but saved thousands of babies  
19 from being born with serious deformities. She'd want  
20 the State of New Mexico to protect its residents.  
21 Yes, we need a ban on PFAS and undisclosed chemicals  
22 and oil and gas drilling in New Mexico. Thank you.

23 THE HEARING OFFICER: Please wrap up,  
24 Ms. Mainz. Oh, well, thank you.

25 All right. Next, we have Abby, let's

1 see here, Shepard.

2 MS. SHEPARD: Yes. Hello.

3 THE HEARING OFFICER: Hello. A-B-B-Y  
4 and if you would spell Shepard, please.

5 MS. SHEPARD: Yeah, S-H-E-P-A-R-D.

6 WHEREUPON,

7 ABBY SHEPARD,

8 called as a witness and having been first duly sworn  
9 to tell the truth, the whole truth, and nothing but  
10 the truth, was examined and testified as follows:

11 THE HEARING OFFICER: I'll start your  
12 three minutes.

13 THE WITNESS: Thank you.

14 And thank you, Commissioners, for being  
15 here and for listening to these comments.

16 I'm calling from Santa Fe County, New  
17 Mexico. And I'm here today to support this proposed  
18 rulemaking that would prohibit the use of PFAS and oil  
19 and gas drilling development and production and  
20 further prohibit the use of any disclosed chemicals  
21 and fracking operations. PFAS and the oil and gas  
22 industry's undisclosed chemicals don't just pose a  
23 risk to the communities and the water surrounding the  
24 industry's operations, the chemicals pose a risk to  
25 all of us here in New Mexico because we are all

1 connected. And our water is a clear demonstration of  
2 that connection. Water flows through the earth and  
3 through our bodies. We are 60 percent water. Water  
4 is life.

5 Yet every day, the oil and gas industry  
6 endangers our water, averaging four -- a day that  
7 includes PFAS and hundreds of other unknown chemicals  
8 slowly seeping into our groundwater and into our  
9 bodies. New Mexicans are especially vulnerable to  
10 these spills, given 87 percent of our public water  
11 supply comes from groundwater. And it's terrifying to  
12 me that even the smallest amount of PFAS can lead to  
13 very damaging health impacts, kidney cancer,  
14 testicular cancer, thyroid disease, high cholesterol,  
15 reproductive and developmental toxicity and more. As  
16 someone who watched their mother fight breast cancer,  
17 I can tell you firsthand that it's an experience that  
18 I wouldn't wish on anyone. Cancer is brutal and it's  
19 imperative that we do everything we can to stop known  
20 carcinogens like PFAS from entering our environment.

21 And that starts with this rulemaking.  
22 We must stop PFAS from entering our environment in  
23 every way we can and we must know what other toxic  
24 chemicals might be entering our water so we can  
25 adequately protect it. That means we need the oil and

1 gas industry to disclose what other chemicals are used  
2 in fracking if we have any shot at living in healthy  
3 environments. So-called trade secrets only serve to  
4 protect the industry's profit and its contamination of  
5 our health, land, air, and water. And among many  
6 things, I am also a student of Buddhism and yoga. One  
7 of the core teachings in these traditions and in the  
8 traditions of many of the Pueblo people here in New  
9 Mexico is that we are all interconnected. There's no  
10 separation between me and you, between us and the  
11 earth. What affects one affects all. So what happens  
12 in one part of our state affects us all.

13 When our water is contaminated in  
14 Clovis or Holloman Air Force Base, it can affect us  
15 all the way up here in Santa Fe, in Farmington, even  
16 across state and country lines. Regardless of what  
17 zip code we live in or the color of our skin, we all  
18 deserve the freedom to drink clean water and live in  
19 healthy communities. This rulemaking is a step in  
20 this direction so I urge you to pass it. Thank you.

21 THE HEARING OFFICER: Thank you,  
22 Ms. Shepard.

23 Next, we have Jeanette, let's see here,  
24 Iskat.

25 MS. ISKAT: It is Iskat. Thank you so

1 much.

2 THE HEARING OFFICER: If you would  
3 spell that, please.

4 MS. ISKAT: I-S-K-A-T.

5 THE HEARING OFFICER: Thank you.

6 WHEREUPON,

7 JEANETTE ISKAT,

8 called as a witness and having been first duly sworn  
9 to tell the truth, the whole truth, and nothing but  
10 the truth, was examined and testified as follows:

11 THE HEARING OFFICER: I'll start your  
12 three minutes.

13 THE WITNESS: Thank you.

14 So my name's Jeanette Iskat. I live in  
15 San Miguel County in Villanueva. And you can maybe  
16 see the mesa behind me. This place is also -- was  
17 known as el valle de los arboles amarillos, the valley  
18 of the yellow trees. So what you see behind me is  
19 arboscas [ph] on the Pecos River. We have been  
20 dealing with the aftermath of Hermits Peak and the  
21 Calf Canyon fires, even downstream. We see how our  
22 watershed is so impacted by the chemicals.

23 We are protesting the Tererro potential  
24 mine up there where, again, the resources, there's a  
25 superfund site up there that's been untreated for

1 decades, right. When I tell people where I'm lucky to  
2 live in Villanueva, I hear these stories of place,  
3 beauty, relations, and that sense of galencia [ph]  
4 place, right? How we hold this land together, whether  
5 we are new, like me, right, 15 years here so people  
6 are like, "Gosh, you might stay." Or whether you are  
7 of indigenous people who have been here for millennia,  
8 right. I don't know what they used to say hundreds of  
9 years ago, right, but I know here, what we say now is  
10 "Agua es vida." Water is life.

11 We see these false energy solutions.  
12 We sit in a state and you can see this beautiful warm  
13 sunshine I'm under. We have so much power here. We  
14 could be literally powering our state and beyond with  
15 sun, but instead, we're putting the profits into the  
16 pockets of oil companies and destroying this beautiful  
17 sacred land and earth. The shirt I'm wearing says,  
18 you know, it's by a activist, Tara Trudell. And her  
19 father was an activist. She is an activist and it  
20 says "Stop fracking mother earth." Right.

21 We see the implications of climate  
22 change. We watched the flooding. We see the car  
23 CarSoups [ph]. I believe as New Mexico goes, so could  
24 the United States. The history of this America, this  
25 U.S. starts here. We have this potential to be

1 leaders. We really do. And we have to fight these  
2 companies. We have seen the history of how New Mexico  
3 has been a dumping ground and a test -- literal test  
4 site. We have seen Los Alamos come in, destroy  
5 villages, move people out, destroy water tables. We  
6 have seen them attempt to bring with that after all of  
7 their bad practices, destroying the water of the Tewa  
8 peoples, right. We see the people of Trinity still  
9 uncompensated, decades deep, generational -- loss.  
10 These oil companies with their false promises, their  
11 junk science, they buy the best that they can buy.  
12 And we see --

13 THE HEARING OFFICER: Ms. Iskat, would  
14 you wrap up, please?

15 THE WITNESS: Sure. Sure.

16 I just wanted to say thank you -- thank  
17 you very much to the elected representatives of this  
18 commission. We need you to band with us. We will --  
19 we will watch you, you know. We won't forget your  
20 choices and we thank you for being in alignment with  
21 us.

22 THE HEARING OFFICER: Thank you, Ms.  
23 Iskat.

24 Let's see. Next we have Anita Amstutz.

25 MS. AMSTUTZ: Yeah. Anita, A-N-I-T-A,

1 Amstutz, A, M as in moon, S as in sun, T-U-T-Z.

2 THE HEARING OFFICER: Thank you.

3 WHEREUPON,

4 ANITA AMSTUTZ,

5 called as a witness and having been first duly sworn  
6 to tell the truth, the whole truth, and nothing but  
7 the truth, was examined and testified as follows:

8 THE HEARING OFFICER: Thank you. I'll  
9 start your three minutes.

10 THE WITNESS: Yes. I want to thank the  
11 Commission for -- community witness. I trust that not  
12 only your ears are open but your hearts are still open  
13 as well to what the people are speaking. I want to  
14 thank you my fellow citizen sister, community leaders,  
15 and citizens who have spoken -- spoken up. What  
16 really spoke to me was Penelope's words about  
17 poisoning a well as a warfare tactic and that's what  
18 we're facing right now.

19 Why would we wantonly allow industry or  
20 any other entity to poison our watershed or ecosystem?  
21 I speak as a founder and director of thinklikeabee  
22 which is a profit -- nonprofit pollinator advocacy  
23 group. We have been working for over a decade. And  
24 as you can imagine, we are deeply engaged and care  
25 about our food system. So our food health is at risk

1 when we allow PFAS and any other forever chemical to  
2 get into our watershed. It affects all of us. And I  
3 -- this rulemaking in -- in a new administrative time,  
4 we have a new administration in the federal government  
5 and they will not be overseeing or enforcing any water  
6 -- clean water, clean air and they will be tearing  
7 that down.

8 So I would say the onus is upon you as  
9 a commission who has been vested with the trust of the  
10 community to oversee and make the public servants of  
11 our own health to ensure what we can do here in this  
12 state. And I would agree that we have one of the most  
13 beautiful state in the country and the water and the  
14 land is a gift given to humans. It is not -- it is  
15 not something that we -- well, it is a gift. And when  
16 a gift is given, you honor it and you give thanks.

17 So it is our -- our job as citizens to  
18 continue to speak out and watchdog our water and our  
19 land and it is your job as a commission to oversee  
20 that the public health is ensured and making sure we  
21 don't have ongoing chemicals continuing to leech or  
22 just be poured directly into our water because we know  
23 that industry and corporate interest will always  
24 override any kind of public health. Profit is most  
25 important. Profit is king in this country and it

1 continues to be that way.

2 And so we are speaking out and asking  
3 you to create safeguards so that we might live and --  
4 and the next generation will live as well as the  
5 wildlife and the animals and every being that is  
6 absolutely dependent on water. So I thank you for  
7 your time, for listening, and I ask that you act in  
8 the best interest of our public health, not in the  
9 interest of for-profit industries.

10 THE HEARING OFFICER: Thank you,  
11 Ms. Amstutz.

12 THE WITNESS: Thank you.

13 THE HEARING OFFICER: Next we have  
14 Alejandria, let's see here, Lyons. Yes. All right.

15 MS. LYONS: Yes. Alejandria.

16 THE HEARING OFFICER: Alejandria.  
17 Thank you. L-Y-O-N-S.

18 WHEREUPON,

19 ALEJANDRIA LYONS,  
20 called as a witness and having been first duly sworn  
21 to tell the truth, the whole truth, and nothing but  
22 the truth, was examined and testified as follows:

23 THE HEARING OFFICER: All right. I'll  
24 start your three minutes.

25 THE WITNESS: Thank you.

1           Good morning, Commission. My name is  
2 Alejandria Lyons. I am the coalition coordinator for  
3 New Mexico No False Solutions. We are also  
4 participants of the Defend NM Water Coalition. We  
5 thank you for having and holding this hearing and  
6 listening to the citizens of New Mexico. I really  
7 want to uplift the previous commentor, Anita's  
8 comment, because we are in the midst of a war on  
9 regulation.

10           We are going to see mass deregulation  
11 in our lifetime, in my lifetime. I am only 30-years-  
12 old. I have thyroid issues. My mother had thyroid  
13 issues. We have breast cancer in our family. And my  
14 -- all the way down to my great grandmother. I'm a  
15 Chicana. We are tied to a acequia in Peralta and all  
16 of these things are -- are going to go upstream,  
17 downstream. Water is life in New Mexico and we have  
18 some of the best rules in the -- in the state, in the  
19 -- the United States to protect our water, not only  
20 the water rights but also our groundwater.

21           Everything is connected. I appreciate  
22 everybody who has spoken about not only how this  
23 affects humans but also our plants, our animals 'cause  
24 they are all our relatives in New Mexico. This is a  
25 sentiment that I think it doesn't matter where you

1 come from, what your race is, in New Mexico we love  
2 our water. We care about our water. And that's why  
3 we're here. And we want you and we ask you to join us  
4 in this fight. Polluters, they spread disinformation.  
5 They believe in things such as chemical phobia. They  
6 believe that it is more important to keep these  
7 chemicals disclosed from the public rather than giving  
8 us this information because they believe that we don't  
9 know what to do with that information.

10 Those are the same sentiments that  
11 somebody echoed -- this is what happened with Trinity.  
12 They said that there weren't enough people to let them  
13 know, let us New Mexicans know, that it's important to  
14 know that we are being a testing site for nuclear  
15 power. We have seen how that has opened the doors to  
16 the rest of the world to continue to contaminate their  
17 -- their land, air, and water. New Mexico will no  
18 longer be a testing ground. Information leads to  
19 power. Dishonesty and misinformation leads to abuse.

20 Today, we ask you all to join us  
21 because this is not just going to be about me, this is  
22 not going to be just about my children's generation  
23 but those to come. And we have really great books on  
24 the laws in New Mexico. I think back in maybe was it  
25 2020, we passed a mini NEPA in New Mexico. Let's

1 protect our water. The Clean -- Safe Water Drinking  
2 Act is not going to be enforced. We are seeing  
3 Chevron deference being struck down. This Supreme  
4 Court is not going to be in our favor when it comes to  
5 us protecting our air, land, and water. So we ask you  
6 to join us in this fight for all New Mexicans for  
7 futures to come. Thank you.

8 THE HEARING OFFICER: Thank you, Ms.  
9 Lyons.

10 Next, we have, oh, Sister Marlene  
11 Perrotte. Would you spell your last name, please?  
12 You're still muted. No, you're still muted.

13 UNIDENTIFIED SPEAKER: The mic should  
14 be along the top there. You can't find it?

15 Neither of the mics will unmute on her  
16 computer so she's going to come to mine. But  
17 actually, Giuliana or Giuliana is ahead of her anyway.  
18 So maybe she could go first.

19 THE HEARING OFFICER: Alrighty. Thank  
20 you.

21 Giuliana. Let's see.

22 MS. FUNKHOUSER: Funkhouser.

23 THE HEARING OFFICER: Funkhouser.  
24 Alrighty. Thank you. If you would spell both of  
25 those, please.

1 MS. FUNKHOUSER: Sure. G like giraffe,  
2 I-U-L-I-A-N-A, and Funkhouser is F like Frank,  
3 U-N-K-H-O-U, S like shark, E-R.

4 THE HEARING OFFICER: Thank you.  
5 WHEREUPON,

6 GIULIANA FUNKHOUSER,  
7 called as a witness and having been first duly sworn  
8 to tell the truth, the whole truth, and nothing but  
9 the truth, was examined and testified as follows:

10 THE HEARING OFFICER: I will start your  
11 three minutes.

12 THE WITNESS: Hi, everybody. Thanks  
13 for having me here. My name is Giuliana Funkhouser.  
14 I'm an artist and resident of Utuado, Puerto Rico. In  
15 2018, I participated in several investigations through  
16 the Resolana Art Collective to better understand how  
17 toxic waste from industrial and military activities  
18 were being utilized, stored, and dumped around the USA  
19 while our project focused on commonalities between  
20 management and subsequent leaks associated with such  
21 activities along Hunters Point in San Francisco,  
22 California, and Carlsbad, New Mexico, I privately  
23 noted the similarities, the chemical weapons and  
24 herbicide development and testing around the  
25 rainforests of Puerto Rico as well.

1           A through line connecting each of these  
2 cases is an effort to reuse or simply dump industrial  
3 refuse without properly comprehending or sharing  
4 information about its chemical makeup to locals. Even  
5 lists in a format similar to ingredient labels affixed  
6 to food products around the USA could help protect  
7 people from a -- people, animals, and the environment  
8 from a variety of health and -- health and  
9 environmental hazards.

10           Not disclosing details about the  
11 contents of polluted fracking water may result in  
12 offloading the inconvenience of costly cleanup by  
13 companies involved with the burden of toxic  
14 carcinogens placed on the lands and peoples of the  
15 areas affected. Between 2013 and 2022, oil and gas  
16 companies injected more than 3,600 New Mexico wells  
17 with -- with pollution and classic chemicals that  
18 includes multiple PFAS.

19           Without disclosure requirement such as  
20 the ones put in place in Colorado and California  
21 already, there is no way for regulators to verify or  
22 enforce a prohibition of PFAS in oil and gas  
23 operations. I'm here in solidarity with my fellow New  
24 Mexicans who kindly invited us to share and celebrate  
25 life through music and art. My perspective has deeply

1 moved and shifted while pondering the effects of a  
2 decade of fracking activities on ancient lakes and  
3 rivers flowing through the Carlsbad Caverns while  
4 closing off parts of the caverns to protect visitors  
5 from polluted water exposure is unfortunate, what's  
6 devastating is already documented health issues being  
7 detected, especially in younger generations of New  
8 Mexicans living within areas of high exposure due to  
9 local groundwater contamination with PFAS and other  
10 chemicals.

11 Carcinogens, immune system effects,  
12 changes in blood chemistry, and kidney toxicity are  
13 all health effects associated with chronic early  
14 exposure to such chemicals. Currently, oil and gas  
15 industry refuse is exempt from hazardous waste  
16 regulations under state and federal law. So the  
17 amount of toxic chemicals disposed of in special waste  
18 landfills accepting these materials across New Mexico  
19 is unknown. It is imperative that the Commission  
20 prohibit the use of PFAS in oil and gas industry  
21 operations. Doing so will regulate the disposal of  
22 these waste products which will be a huge leap towards  
23 ensuring considerate water management for a healthy  
24 carcinogen-free environment for New Mexicans and their  
25 neighbors to thrive in. Thank you for your time.

1 THE HEARING OFFICER: Thank you,  
2 Ms. Funkhouser.

3 I'll take one more comment from the  
4 platform from Sister Marlene and then are you here to  
5 offer public comment? I will come to you in the room.  
6 Let's see.

7 UNIDENTIFIED SPEAKER: Joan Brown.

8 THE HEARING OFFICER: Yes.

9 You're muted. There you are.

10 MS. PERROTTE: Okay.

11 THE HEARING OFFICER: There you are.  
12 If you would please spell your last name.

13 MS. PERROTTE: P as in Peter,  
14 E-R-R-O-T-T-E.

15 THE HEARING OFFICER: Thank you.  
16 WHEREUPON,

17 MARLENE PERROTTE,  
18 called as a witness and having been first duly sworn  
19 to tell the truth, the whole truth, and nothing but  
20 the truth, was examined and testified as follows:

21 THE HEARING OFFICER: I'll start your  
22 three minutes.

23 THE WITNESS: Good morning, Commission.  
24 I am Sister Marlene Perrotte and a woman of faith and  
25 very concerned about water. When President Bush and

1 Cheney came into the government, Vice President Cheney  
2 had a gathering of oil and gas industries and they  
3 brought forth the Halliburton exemption for the Clean  
4 Water Act. And I have been so concerned about that  
5 for so many years because they did not have to  
6 disclose the chemicals that they were using in  
7 hydraulic fracturing.

8 So I am so happy to participate today  
9 in demanding a ban and a disclosure of these  
10 chemicals. Because you have the authority, the  
11 statute authority to protect us from unknown chemicals  
12 being put into our waters, I thank you because it also  
13 helps us to understand what is going on with so much  
14 produced water. All these chemicals are coming up and  
15 a lot of them we do not know what they are. So I am  
16 very, very glad that the Commission is going to  
17 protect our waters, for chemical disclosure, and to  
18 update chemical disclosure requirements so that the  
19 public knows when the dangerous chemicals are used  
20 around our state.

21 The Commission does have that statutory  
22 authority to adopt these rules and I urge the  
23 Commission to protect the United States and the New  
24 Mexico waters from all of these abuses and that are  
25 bringing forth multiple negative health effects,

1 including cancer, birth defects, reproductive  
2 problems, decreased vaccine response. These forever  
3 chemicals must be banned.

4 I urge you to adopt the PFAS and  
5 Chemical Disclosure Rule to increase decision-making  
6 capabilities for frontline communities, elected  
7 officials, emergency first responders, regional  
8 authorities, and others and let us remember, we are  
9 impelled to love our neighbor rather than the oil and  
10 gas industry over health and wellbeing of our earth  
11 community. It is a moral responsibility, finally, to  
12 be transparent and accountable to protect public  
13 health and the environment. Thank you so very much.

14 THE HEARING OFFICER: Thank you,  
15 Sister.

16 All right. Let me come into the room  
17 here. If you would, please, come to the microphone at  
18 that stand.

19 Thank you, Madai.

20 If you would state and spell your first  
21 and last name, please.

22 MS. KERNS: My first name is Avis,  
23 A-V-I-S, and my last name is Kerns, K-E-R-N-S.

24 THE HEARING OFFICER: Thank you.

25 //

1 WHEREUPON,

2 AVIS KERNS,

3 called as a witness and having been first duly sworn  
4 to tell the truth, the whole truth, and nothing but  
5 the truth, was examined and testified as follows:

6 THE HEARING OFFICER: I'll start your  
7 three minutes.

8 THE WITNESS: As you know, my name is  
9 Avis Kerns. I'm a member of the Santa Ana Pueblo. I  
10 was born and raised in Albuquerque and I live there  
11 now. New Mexico is my home and I love it with my  
12 whole heart. From the land itself to all of the life  
13 that inhabits it, it is precious to me. I'm here to  
14 represent myself, the people I care about, the people  
15 I don't know, and all of the voiceless life forms that  
16 cannot represent themselves. The fact that there's  
17 fracking in New Mexico at all is irresponsible,  
18 selfish, and dangerous.

19 The least the State could do for  
20 allowing companies to destroy our land is require  
21 those companies to use or to be open and honest about  
22 what they are using to do it. Access to knowledge  
23 about what chemicals will be in food, air, and water  
24 should be a human right, especially when those  
25 chemicals are carcinogenic and toxic. No economic

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1 benefits are worth the devastating impacts on the  
2 environment these companies will cause.

3 I know we live in a world that values  
4 money over life, but New Mexico does not have to  
5 participate in that ideology. The people who live  
6 here trust the people they chose to represent them to  
7 represent them, to care about their lives, their  
8 families, and their home. If there is one thing I  
9 love about living in America, it is that each state  
10 has the right to decide what is best for their  
11 citizens, even when the country fails to protect them.  
12 I want to be proud to live in New Mexico, especially  
13 in times like these. That's all. Thank you.

14 THE HEARING OFFICER: Thank you very  
15 much, Ms. Kerns. And thank you for your patience.

16 If you would state and spell your first  
17 and last name.

18 DR. CASTRO: I'm Dr. Christina M.  
19 Castro, C-A-S-T-R-O.

20 THE HEARING OFFICER: Thank you.

21 WHEREUPON,

22 CHRISTINA CASTRO,  
23 called as a witness and having been first duly sworn  
24 to tell the truth, the whole truth, and nothing but  
25 the truth, was examined and testified as follows:

1 THE HEARING OFFICER: Thank you. I'll  
2 start your three minutes.

3 THE WITNESS: Good morning, Commission.  
4 As mentioned, my name is Christina Castro. I am here  
5 representing the communities of Tes Pueblo, Jemez  
6 Pueblo and all land-based Nuevo Mexicanos. It's nice  
7 to see another indigenous person in the room. I have  
8 recently come off of ceremonies in our Pueblo at Jemez  
9 on November 12th. Many indigenous people in New  
10 Mexico don't even know about these commission  
11 hearings. It's almost a very privileged position to  
12 even know that these go on. It's not that we don't  
13 care. We just have a different worldview. Our feast  
14 day this past Tuesday was a purple ceremony that has  
15 been going on since time immemorial to pray and  
16 advocate in our own way for our lands and our waters  
17 and our communities.

18 It's hard to come and do this, to keep  
19 coming to these kind of testimonies to what I feel is  
20 stating the obvious. I'm also a birth advocate and I  
21 have a grassroots organization here in town, Three  
22 Sisters Collective. I'm wearing the sweatshirt today  
23 for Birth of my Heart -- Breath of my Heart Birth  
24 Center in Espanola. It's the only indigenous-led  
25 birth center I think in the nation and we often talk

1 about water being the first environment for any -- any  
2 human.

3 And so when we think about it from that  
4 level of we all come from the water, we're a part of  
5 the water, we're connected to the water, it really  
6 moves me to present myself in these spaces to advocate  
7 in ways that most of my community members either can't  
8 because they don't have the capacity to do that, they  
9 have to work, or because they just simply don't know  
10 that these venues exist. So, you know, just thinking  
11 about coming off of these ceremonies, our people have  
12 been living in -- in alignment with the environment  
13 since time immemorial.

14 And it's interesting to note that  
15 within less than 100 years, we've had to face all  
16 these onslaughts of environmental degradation at the  
17 hands of colonialism, nuclear colonialism, extractive  
18 industry. And so we have been taking care of the land  
19 forever and it was pristine and it was beautiful and  
20 we were a part of the land and the land was us and the  
21 water is us. And here we are within less than 100  
22 years having to face this onslaught of ongoing assault  
23 on our people, our life ways, our spirituality.

24 This is a hard path to walk as an  
25 advocate for the people. But here I am again doing

1 this. And I ask for you all to think about your  
2 future generations. I dropped my daughter off at  
3 school at Wood Gormley this morning and I came in here  
4 today. I have lots of other things to do, but I have  
5 to come because who else will do that for my people?  
6 So I ask you all to think with your hearts and to not  
7 be -- fall to corporate interests in your  
8 decision-making because you all are living here now.

9           Wherever you came from, somehow you  
10 ended up here in New Mexico and now you have positions  
11 of leadership and you have the opportunity to do  
12 what's right for your children, your children's  
13 children. And also, when you think about New Mexico,  
14 it's -- it's a tourist -- it's -- it's a tourist  
15 economy here. Santa Fe is a huge tourist-driven city.  
16 The whole city's economic backbone is tourism.

17           And so what do people come here for?  
18 They come here for our culture, indigenous culture,  
19 food, jewelry, aesthetics. They come to experience  
20 nature, wildlife, hunting. So when you're making  
21 decisions, you have to think about that too. It's  
22 like people are coming here to experience our natural  
23 world. And how can you promote tourism when you have  
24 communities that are so impacted negatively by these  
25 industries? You know, how -- how does that work when

1 people are suffering from cancers and miscarriages and  
2 the ongoing effects of extractive industries and it's  
3 just -- it's -- it's gross.

4 THE HEARING OFFICER: Please wrap up,  
5 Dr. Castro.

6 THE WITNESS: So, yeah, here I am and  
7 I'll continue to come and I hope you'll listen. And  
8 thank you so much. And peace and blessings to all of  
9 you and your families. Thank you. To all.

10 THE HEARING OFFICER: Thank you.

11 Is there anyone else in the room who  
12 would like to offer non-technical public comment this  
13 morning? There will be two more opportunities that  
14 I'm sure of. One will be at 4:30 this afternoon and  
15 the next -- well, approximately 4:30. And the next  
16 will be at 8:30 tomorrow morning. And at the 8:30  
17 a.m. session there will be a -- an interpreter to  
18 provide interpretation between Spanish and English.  
19 Anyone else at all?

20 All right. We're going to return to  
21 the technical case then. Let me greet Ms. Nanasi who  
22 is joining us on behalf of New Energy Economy and ask  
23 if there is anything that we need to talk about before  
24 we go back to Mr. Powell. Anything at all? No.  
25 Okay. Well, Mr. Powell, you're up.

1 MS. NANASI: Madam Hearing Examiner?

2 THE HEARING OFFICER: Yes.

3 MS. NANASI: This is Mariel Nanasi. I  
4 did bring copies of the rebuttal testimony, paper  
5 copies, for you and the Commission and the  
6 administrator. So if you'd like me to tender them, I  
7 will at whatever time is appropriate.

8 THE HEARING OFFICER: Yeah. When we  
9 get there. Thank you.

10 MS. NANASI: Thank you.

11 THE HEARING OFFICER: Or well, perhaps  
12 on the morning break.

13 All right, so, Mr. Powell, you are  
14 still sworn.

15 And Mr. Tremaine, if you would, please.  
16 WHEREUPON,

17 BRANDON POWELL,  
18 called as a witness and having been previously sworn  
19 to tell the truth, the whole truth, and nothing but  
20 the truth, was examined and testified as follows:

21 MR. TREMAINE: Thank you, Madam Hearing  
22 Officer, Commission and parties, and the public. I am  
23 going to start sharing a screen again so we can return  
24 to where we left off yesterday.

25 //

1 DIRECT EXAMINATION

2 BY MR. TREMAINE:

3 Q All right. Good morning, Mr. Powell. From  
4 your recollection, did we cover everything that needs  
5 to be address in OCD's proposed changes to 19.15.7  
6 yesterday?

7 A We did.

8 Q Okay. Thank you. Could you please -- I'll  
9 refer you to OCD Exhibit 4, page 40. If you could  
10 please summarize OCD's proposed changes represented on  
11 this slide under part 14.

12 A So part 14 regulates what is in the APDs.  
13 So for OCD we're looking at the ban of PFAS. We're  
14 not supportive of the inclusion of undisclosed  
15 chemicals as previously discussed and that this would  
16 be done through a certification to the form.

17 Q Mr. Powell, did I understand you to state  
18 that the ban would be effected through a certification  
19 process?

20 A That is correct.

21 Q Could you specifically address the changes  
22 represented on page 41?

23 A So on page 41, OCD added additives that  
24 contain PFAS chemicals. We struck down whole  
25 operations and changed it to completion or

1 recompletion. I'd like to touch on that slightly. A  
2 lot of the discussion coming up to this rulemaking was  
3 concerning downhole -- or completion and recompletion  
4 and the chemical additives used in there.

5 I believe WildEarth Guardians was looking at  
6 being more encompassing to downhole operations. OCD  
7 doesn't object to using downhole operations. It just  
8 -- because we were talking about completion,  
9 recompletion, that's why that was changed. But we  
10 don't object to the use of the language downhole  
11 operations.

12 Q Okay. So, Mr. Powell, if OCD is open to  
13 inclusion of downhole operations in this section --  
14 strike that. Let me back up. In yesterday's  
15 testimony I believe you outlined that OCD had struck  
16 downhole operations as a definition. Is that correct?

17 A That is correct.

18 Q Okay. If OCD is willing to modify this  
19 section to include downhole operations, do you believe  
20 that including a definition of downhole operations is  
21 necessary?

22 A I do not because, again, it's still a  
23 commonly used term for any operations that happen in  
24 the well.

25 Q I think we're going to cover this as we move

1 through later, but I want to clarify here. Does OCD  
2 consider water used during drilling or completions  
3 activities as a chemical additive that would be  
4 covered by this section?

5 A No. I do not.

6 Q Thank you. Moving onto section 14.10A,  
7 could you please summarize for the Commission what  
8 this section represents and the changes proposed by  
9 OCD on slide 42?

10 A So for this section, again, this is for  
11 drilling and permits. OCD is just trying to  
12 streamline this because the -- the statements and the  
13 certifications were included in 14.9 so instead of  
14 regurgitating those requirements, it's just a cleanup  
15 in reference to the prior section.

16 Q Is that summary represented on page 43?

17 A It is.

18 Q Okay. Do you have anything to add or  
19 clarify based on this slide?

20 A I don't. Well, I would say it is consistent  
21 with the way we reference the rule subsection in 5.9  
22 as a APD condition as well so it's consistent with  
23 that language.

24 Q Thank you. All right, Mr. Powell, could you  
25 please summarize for the Commission the section and

1 the changes referenced on page 44?

2 A So this section is getting into 16.17 which  
3 is over the chemical treatment shooting so the actual  
4 operations of the well. There's going to be expansive  
5 changes to this section that the OCD is proposing,  
6 both to -- as we -- to WildEarth Guardians and then  
7 we'll cover the changes to NMGAs later. So this is  
8 how the -- the rule would actually be implemented if  
9 there was a breach in integrity, those kind of things.

10 Q Thank you, Mr. Powell. Could you please  
11 specifically describe the changes on page 45?

12 A So the first one is simply lower casing  
13 completing -- let's see. The middle part, the strike  
14 of the Division is just for -- or for syntax. The end  
15 is clarifying it for the loss of containment or any  
16 damage.

17 Q Okay. So, Mr. Powell, to clarify, we talked  
18 about, in the previous section, changing the language  
19 to downhole operations. Is that change necessary in  
20 this section? And please explain your opinion.

21 A I do not believe so because downhole  
22 operations would be covered under the treatment of a  
23 well as well. So it would be complete under the  
24 completing, shooting, fracturing, or treating of a  
25 well.

1 Q Right. Mr. Powell, does OCD agree with the  
2 proposal represented on page 46?

3 A Yes. We're in agreement with that proposal.

4 Q All right. Moving on to page 47 --

5 MS. NANASI: Madam Hearing Examiner,  
6 excuse me. Could we have Mr. Tremaine go back to the  
7 last slide, please, and just state what he's referring  
8 to instead of just what page number it's on? When he  
9 asked that question, just to have a little bit more  
10 clarity for the record.

11 THE HEARING OFFICER: I'm not sure what  
12 you're asking. So if we're looking at the slide --

13 MS. NANASI: He just said -- my  
14 understanding is that Mr. Powell just answered, "Do  
15 you agree with what WildEarth Guardians proposed"?

16 THE HEARING OFFICER: Yeah.

17 MS. NANASI: But if we could have  
18 something more specific like to the change of rules  
19 proposed at 19.15.16.17.A1 NMAC, just so that the  
20 record is clear because if you don't have this slide  
21 with the record, then it's not as clear for the  
22 record. So that's all I'm asking for.

23 THE HEARING OFFICER: Okay.

24 Mr. Tremaine, I have been following  
25 along with the page numbers just fine, but I will

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1 leave it to you. The section subsection, sub, sub,  
2 sub, subsection seems long, but I'll leave it to you.

3 MR. TREMAINE: Thank you, Madam Hearing  
4 Examiner. Yeah, I was trying to not put the  
5 Commission to sleep. If someone read section numbers  
6 to me, I might struggle with that. I do agree we want  
7 to be clear for the record so I am trying to reference  
8 the OCD exhibit and slide in each one. But I'll  
9 endeavor to be as clear as possible.

10 THE HEARING OFFICER: Thank you.

11 BY MR. TREMAINE:

12 Q Mr. Powell, I'm going to ask you the same  
13 question about OCD Exhibit 4, page 47, which addresses  
14 the subsequent subsection in part 16. Could you  
15 please describe this change and OCD's reasoning  
16 represented on that slide for the Commission?

17 A So the biggest addition to this section is  
18 OCD's proposal for receiving trade secret information  
19 or proprietary information, whatever we're calling it,  
20 through the rule. Because we don't enforce or we  
21 don't endorse the ban on proprietary chemicals. So  
22 the OCD built this section in, receiving that  
23 consistent with the state statutes for receiving that  
24 information if there is an integrity breach to the  
25 well.

1 Q And, Mr. Powell, this section -- does this  
2 section contemplate disclosure of proprietary  
3 chemicals to the Oil Conservation Division?

4 A It does.

5 Q Could you please describe your thinking or  
6 reasoning for advocating for that as opposed to  
7 another form of disclosure?

8 A So to be consistent with the state statutes,  
9 we -- what we were looking at is if there is a breach  
10 to the well, the OCD would get with the operator and  
11 also look at the frack disclosures and receive all  
12 chemicals that were used in the well. The operator  
13 and their chemical companies would be the ones that  
14 would have all that information. So it lines out what  
15 that disclosure would look like, what that evaluation  
16 would look like to identify potentially harmful  
17 chemicals that would have to then be testful -- tested  
18 for.

19 Q Okay. I want to flesh that out a little  
20 bit, what get with the operator looks like. So under  
21 this section, what would happen with the well to  
22 trigger such a disclosure?

23 A A loss of integrity of the well. So if an  
24 operator's doing completion activities, this would  
25 actually be probably more inclusive if we used

1 downhole operations. If an operator's working on a  
2 well, there is a loss of containment of the well, a  
3 loss of integrity of the well, at that point there  
4 would be a review performed of all chemicals that  
5 could be in that fluid stream. Those chemicals would  
6 be evaluated for that -- in that fluid stream to see  
7 if anything is potentially harmful.

8 And then that would be the setting the --  
9 the testing methods and the test parameters to perform  
10 the investigation to see if those chemicals are in  
11 that fluid stream and further investigation needs to  
12 be performed.

13 Q Okay. And in terms of a loss of containment  
14 from the well, does that mean that the fluid stream,  
15 would it escape the casing to groundwater or what does  
16 that mean?

17 A Yes. To groundwater. If there's a  
18 potential impact to groundwater or surface water  
19 because of that loss of integrity. It wouldn't be if  
20 it was a loss of containment to the same strata that's  
21 not groundwater-related. This would be enacted on  
22 that potential impact to groundwater or surface water.

23 Q Okay. And could you please briefly discuss  
24 the last point on page 47 where the Division is  
25 distinguishing between chemicals listed which are

1 considered harmful and those that are not?

2 A So we would look at all the chemicals used.  
3 Not all of those will be harmful. I gave an example  
4 here. One of the constituents in that fluid stream or  
5 in that stream would be water. Another one would be  
6 sand. Those kind of things that the Division feels it  
7 wouldn't be harmful to the water, the groundwater. So  
8 that's not something we would be identifying as  
9 performing additional testing on.

10 Q Okay. And to clarify, does OCD consider  
11 water under this section as a chemical additive?

12 A We do not.

13 Q Mr. Powell, I'm going to move on to OCD  
14 Exhibit 4, page 48 which represents the subsequent  
15 subsection from what we've been discussing. In this  
16 section, does OCD agree with WildEarth Guardians'  
17 proposed language?

18 A We do. This section refers to how, if there  
19 is an impact to groundwater, then that investigation  
20 moves to part 29. It's not spelled out here. We'll  
21 touch it on the NMOGA's rebuttal. But 29 would then  
22 relate to part 30 if there's a groundwater impact that  
23 needs to be investigated or noticed and how that  
24 cleanup happens.

25 Part 30 is really the -- the section that

1 regulates groundwater cleanups; 29 is just that  
2 initial notification and it has that built-in chain to  
3 get to 30. And 30 is what regulates OCD's mandates  
4 under those regulations and also references the WQCC  
5 regulations.

6 Q Okay. Do I understand you to be saying that  
7 the proposed rule triggers disclosure requirements in  
8 certain cases which then triggers existing part 29  
9 which then triggers potentially existing part 30?

10 A Correct. Yeah. Part 29 and part 30 are the  
11 rules the OCD uses for actual cleanup and remediation.  
12 This is the pathway for that well integrity event to  
13 get to that section -- those sections.

14 Q Thank you. All right, Mr. Powell, I'm going  
15 to move on to OCD Exhibit 4, page 49, which again  
16 represents in the next subsection that we've been  
17 discussing. Please describe this slide and OCD's  
18 modification for the Commission.

19 A So a couple things on this one. Again, the  
20 OCD isn't endorsing the undisclosed chemicals. OCD  
21 also doesn't have a authorization to operate as a  
22 permitted function. So because of those things, OCD  
23 struck this. If PFAS is detected, that would fall  
24 under part 29, part 30.

25 If it's found and operator is using PFAS in

1 their fluid stream, contrary to their certification,  
2 that would be an enforcement mechanism the OCD already  
3 has under 19.15.5.

4 Q Thank you, Mr. Powell. We are ending part  
5 16.17 and I'd like to direct you to OCD Exhibit page  
6 50. We're moving on to 19.15.16.19 NMAC. Mr. Powell,  
7 would you please summarize for the Commission what  
8 this section does and what we're addressing in the  
9 proposed changes?

10 A So this section covers hydraulic fracturing,  
11 the disclosures for I believe horizontal wells, maybe  
12 for all wells. But mainly, we were focusing on the  
13 disclosure for the -- through frack focus, what's  
14 required in that disclosure through the CFR that was  
15 previously mentioned or that's mentioned in the rule.  
16 We're also proposing a large change to the applicant's  
17 new section for who gets disclosure of the chemicals  
18 being used downhole.

19 This was -- this provision was shortened by  
20 the agency. We kept other regulatory agencies that  
21 also oversee these permits in those and eliminated  
22 non-regulatory agencies and gave the -- those agencies  
23 the option to opt out because it may incorporate a  
24 burden on those agencies to receive that if they want  
25 to review that, if they want to incorporate those into

1 their records.

2 We didn't see anything in the application  
3 where those agencies had been approached to see if  
4 they wanted those notices or if those notices were  
5 pertinent to their activities. We kept that provision  
6 in in case they did want those but gave them the  
7 option to opt out if those notices weren't something  
8 that those agencies were looking for. The last bullet  
9 is a -- a section for timelines to perform the notice  
10 within the section.

11 Q Thank you, Mr. Powell. I'm moving on to  
12 Exhibit 4, page 51. Mr. Powell, please address the  
13 specific changes on this slide.

14 A The OCD is looking to keep the section  
15 describing what's required to be reported to the  
16 agency as part of the material safety data sheets as  
17 described in 29 CFR simply because by eliminating  
18 that, there's no standard to which the operators would  
19 comply with. The CFR, all of that is incorporated and  
20 are frack focused. That's kind of the basis of all  
21 that notification.

22 Q Does it represent a challenge for the Oil  
23 Conservation Division if operators provide disclosures  
24 or reports in different formats or inclusive to  
25 different degrees of information?

1           A       I think having clearer expectations puts  
2 everybody on the same playing field. If you don't  
3 have those clear expectations, then the Division's not  
4 sure quite what they would get and I believe the frack  
5 focus that the Division would still be using is built  
6 around the material safety data sheets and the CAS  
7 numbers.

8           Q       Mr. Powell, we're moving on to Exhibit 4,  
9 page 52 which is another subsection with the  
10 19.16.19B. And this, for the Commission's  
11 information, is actually represented on multiple  
12 slides so I'm going to scroll through as Mr. Powell  
13 needs. Mr. Powell, please describe what we're  
14 addressing here and OCD's changes. And I'm happy to  
15 scroll through.

16           A       Because this section here is so large and  
17 the changes are so broad, we put it on multiple  
18 slides. What's up now is the WildEarth Guardians'  
19 current proposal. The next slide will go over the  
20 OCD's changes, our proposed changes, just so they can  
21 be visually seen. The changes in here represent the  
22 changes to who should be noticed and not noticed.

23                   I can go through those kind of line-by-line  
24 as a whole. The very top in D is where we give those  
25 agencies the option to opt out because we are keeping

1 the State Land Office and the BLM in those because  
2 they're regulatory agencies. The owners are minerals.  
3 Those should be working with the company in the area  
4 so that would be a contractual obligation between  
5 who's drilling and who owns the minerals if they have  
6 contract -- contractual obligations in those.

7 Two, for surface owners, building unit  
8 owners, residents, we eliminated that section. As  
9 operators are using chemicals in those areas, they're  
10 typically thousands of feet underground. Those  
11 parties would not be impacted parties at that point.  
12 They would become impacted parties if there  
13 potentially if there was an impact to groundwater.  
14 Part 30 in that WQCC regulations regulate who's  
15 notified as impacted parties. So if those parties are  
16 impacted, those regulations have that notification  
17 built in as far as who's impacted. So we feel that  
18 that rule would be more applicable, noticing the  
19 impacted parties. We also don't know if those  
20 scenarios, like a building unit owners, they would  
21 have the understanding of what they were receiving. A  
22 tribe.

23 If the minerals are being developed, OCD  
24 doesn't have regulatory authority on tribal lands. So  
25 that would be up to the BLM and -- and the tribe to

1 initiate any disclosures needed there. Schools,  
2 childcare centers, again, we don't know if they have  
3 professionals on staff to evaluate those -- if those  
4 were received or -- and at this point in time they  
5 would be unimpacted parties. If they're impacted,  
6 then again, that moves to part 30 in the WQCC  
7 regulations.

8 Q Mr. Powell, is it typical in other sections  
9 of OCD rule to require notification to other agencies?

10 A Other agencies, yes.

11 Q Are you aware of any other instances in  
12 which OCD and OCD regulations require notification to  
13 members of the public or schools or any entity not --  
14 that's not an agency or not regulated by the Oil  
15 Conservation Division?

16 A The OCD does not. The only notification I  
17 know of around that is under the Surface Owners  
18 Protection Act which I am not an expert on. That's  
19 when surface owners get notified of certain activities  
20 by oil and gas. But OCD is not the regulatory body  
21 over that.

22 Q And to reiterate, Mr. Powell, in the event  
23 where there is a loss of containment and impact to  
24 groundwater, did I understand you to say there is an  
25 existing disclosure requirement on your part 30?

1 A There is.

2 Q Okay. Thank you. Mr. Powell, anything to  
3 add to the Commission on the reasoning slide here on  
4 page 54?

5 A No. I believe we covered it in our  
6 discussion.

7 Q All right, Mr. Powell, I'm moving on to OCD  
8 Exhibit 4, page 55, representing changes still within  
9 a subsection of 16.19B. Does this reflect that OCD  
10 agrees with WildEarth Guardians' proposed changes?

11 A Yes. OCD agrees with it if the Commission  
12 adopts that additional parties would like that notice  
13 or require that notice.

14 Q So to whatever extent the Commission adopts  
15 the proposals on the previous slide, the timing  
16 requirement is appropriate?

17 A Correct.

18 Q Thank you. All right. We are moving on  
19 from part 16 on to OCD Exhibit 4, page 56, addressing  
20 19.15.25.14.A NMAC. Mr. Powell, please summarize the  
21 effect of this section in OCD exchanges.

22 A So the effect of this change is just adding  
23 into part 25 the ability to use MITs in casing  
24 investigations. If there is a potential breach of the  
25 casing, how that would be performed through using

1 mechanical integrity tests.

2 Q All right, Mr. Powell, moving specifically  
3 to Exhibit 4, page 57. And again, this slide  
4 represent that OCD agrees with WildEarth Guardians'  
5 proposal?

6 A Yes. And I see typo on this slide. It  
7 should be the same rule reference that was on the  
8 prior slide. And it references 19.16 -- 19 be on this  
9 slide and it should be the 19.15.25.14A.

10 MR. TREMAINE: So for the record,  
11 Mr. Powell's referring to the header on this section  
12 that the typo's in the large font at the top of this  
13 slide. The subsection represented in the body of the  
14 slide is correct and conforms to the previous slide.  
15 BY MR. TREMAINE:

16 Q Is that correct, Mr. Powell?

17 A That is correct.

18 Q Thank you for catching that. All right. We  
19 have moved all the way through this Exhibit 4.

20 MR. TREMAINE: And Madam Hearing  
21 Officer, my inclination was to move directly onto the  
22 rebuttal slides, reflecting OCD's changes in Exhibit  
23 11 to NMOGA's redline proposal, but I wanted to pause  
24 before I moved on as we're covering a lot of grounds.

25 THE HEARING OFFICER: Yeah. No, I

1 think you had expressly stated that plan. I think the  
2 other parties were in agreement. I think we're okay.  
3 We will take a break in a little bit, our morning  
4 break. I think you can keep going.

5 MR. TREMAINE: Thank you.

6 BY MR. TREMAINE:

7 Q Mr. Powell, I'm going to direct you now to  
8 OCD Exhibit 11, starting on page 102 of OCD  
9 submission. Did you prepare this exhibit?

10 A I did.

11 Q And this is already admitted, but please  
12 just reiterate for the Commission what you have --  
13 what's represented in this exhibit.

14 A So what's represented in this exhibit is  
15 OCD's rebuttal to the redline that NMOGA had submitted  
16 as far as again going section by section of the rule  
17 for what OCD agreed with or did not -- or didn't agree  
18 with. Just for expediency, if OCD was in agreement  
19 with a certain slide, OCD didn't provide a rebuttal to  
20 it. So it would stand as far as what was previously  
21 in the slides with WildEarth Guardians.

22 Q So just to distinguish between Exhibit 4, in  
23 Exhibit 4, OCD provided examples of agreement, but in  
24 Exhibit 11, as a rebuttal exhibit, OCD omitted  
25 sections of agreement and only addressed sections of

1 disagreement?

2 A Correct. Yeah. In -- in the prior set of  
3 slides, we included all of the redlines to the rule  
4 where this, we only addressed the things we weren't on  
5 agreement on.

6 Q All right, Mr. Powell, I'm going to direct  
7 your attention to OCD Exhibit 11, page 104. I'm  
8 skipping over 103 as it only has a header. We're  
9 addressing here NMOGA's proposed changes to  
10 19.15.2H(6) NMAC. Please describe OCD's modification  
11 and reasoning.

12 A This response and reasoning is the same as  
13 we've already addressed in the other set of slides,  
14 providing a little more example actually in the slide  
15 about OCD's discussion of the word such as like fluid,  
16 which OCD is recommending striking this definition.  
17 We feel it's unnecessary 'cause it's a common industry  
18 term that can actually try to restrict its scope so we  
19 don't want to do that. We want to keep the -- the  
20 more broader version.

21 Q All right. Mr. Powell, moving on to OCD  
22 Exhibit 11, page 105. 19.15.2.I(8), please identify  
23 or please describe OCD's changes on this slide.

24 A I'll actually read the modification  
25 reasoning on this one because I think it best

1 encompasses it. "OCD doesn't agree with using --  
2 using the term intentionally added as this creates an  
3 environment where the OCD may have access -- where the  
4 OCD may have to assess or litigate operator  
5 responsibility for information which was not obtained  
6 by the operator. For example, if a third-party adds  
7 PFAS but doesn't tell the operator or the operator  
8 doesn't make the third-party certify it, the operator  
9 could state they didn't know about it so it wasn't  
10 intentional on their part."

11 So it's eliminating that ambiguity. We want  
12 the operator to be proactive, working with the  
13 chemical companies to receive that information 'cause  
14 ultimately it's not the operator that has the chemical  
15 information. It's the chemical companies that they  
16 contract with and we want to make sure that that's  
17 being relayed to the operators appropriately.

18 Q So to clarify OCD's position in here, does  
19 this address chemical additives?

20 A Yes. It does.

21 Q But I understand from earlier testimony this  
22 does not address water as a chemical additive.

23 A Correct.

24 Q Thank you. Moving on to OCD Exhibit 11,  
25 page 106. The definition of PFAS at 15.2.P(3).

1 Mr. Powell, we've discussed this in some length on  
2 previous slides. Is there anything that you wish to  
3 address separately in the context of this slide?

4 A I think the -- the best -- we've -- we've  
5 discussed it at length. The experts have discussed it  
6 at length. I would simply add to this, in addition to  
7 what's already in the slide, as chemicals grow, as  
8 testing grows, we want to make sure it encompass --  
9 encompasses what's being used as appropriate. Using  
10 this, our definition, plus using the rule as its  
11 written of when to enact that investigation, what to  
12 look for, is encompassing of what needs to be looked  
13 for.

14 There are times when chemicals can cross  
15 from food service industry to oil and gas. It  
16 happens. Guar gum, xanthan gum, is a really good  
17 component that does that. It's used both in food and  
18 in the oil field so we don't want to limit ourselves  
19 to something that has two fully fluorinated carbon  
20 atoms when something may have one in the future. I  
21 believe that was discussed at length with the experts.  
22 I am not the expert. But what -- my testimony is --  
23 is we don't want to limit ourselves to something that  
24 may be used in the future and be discovered under the  
25 methods that we've proposed.

1 Q Is it the Division's intent to address the  
2 potential identification of toxic PFAS in the future  
3 as the science develops?

4 A It is.

5 Q Okay. Is it your opinion, understanding,  
6 that this definition is more broad than the one  
7 proposed by NMOGA?

8 A It's more broad and it may contain --  
9 contain one atom in the future instead of the two in  
10 simple terms.

11 Q One more question, Mr. Powell. We've  
12 addressed this before, but this slide still represents  
13 a list of methodologies that we've discussed. Do you  
14 recall testimony earlier in the hearing related to  
15 methods OTM-45 and OTM-50?

16 A Yes. I do.

17 Q Okay. Were these included as an attempt on  
18 the part of OCD to provide a complete and exhaustive  
19 list of appropriate testing methodologies?

20 A It was.

21 Q After discussion, do you agree that those  
22 are -- each of those methods are specific to air  
23 testing methodologies?

24 A That is my understanding.

25 Q And do you agree with the earlier testimony

1 that given the scope and authority of OCD and the  
2 purpose of this proposed rule amendment that it would  
3 be appropriate to omit OTM-45 and 50 from this  
4 definition?

5 A Yes.

6 Q Okay. So at this time, they're still  
7 included on the slide, but going forward, OCD agrees  
8 to remove those?

9 A Correct. Because we're regulating surface  
10 and groundwater and the water impacts. Removing those  
11 would be pertinent.

12 Q Thank you. I'm going to move on to starting  
13 after page OCD Exhibit 1, page 107, moving onto  
14 19.15.7.16 NMAC. Mr. Powell, I'm going to direct you  
15 to page 108 of the exhibit. Please describe the  
16 changes and OCD's reasoning on this slide.

17 A Simply OCD's rebuttal to this section is  
18 NMOGA's use of intentionally added. OCD doesn't  
19 endorse the use of intentionally added so it struck  
20 that section.

21 Q And I want to make sure this point is very  
22 clear. As we previously discussed, Mr. Powell, here,  
23 we're talking about intentionally added chemical  
24 additives. Correct?

25 A Correct.

1 Q Okay. Is it OCD's position that industry  
2 should be responsible for chemical additives, whether  
3 they are willfully or negligently added to the fluid  
4 stream?

5 A Yes.

6 Q Okay. Thank you. I'm going to move on to  
7 page 109, referencing part 7. That's 16C.

8 Mr. Powell, please describe the content of this slide.

9 A This slide goes over the 60 versus 90 days  
10 for a confidential period of completion information.  
11 We discussed this one at length in the prior slides.  
12 OCD doesn't receive the information potentially until  
13 45 days after the completion. And I think a  
14 clarifying point that this is from the completion of  
15 the well, not necessarily when OCD receives the  
16 paperwork. So that timeline starts from completion.

17 Q Does this represent the same proposal and  
18 same proposed modification that was addressed in  
19 Exhibit 4?

20 A It does.

21 Q Thank you. Mr. Powell, please address the  
22 modification and reasoning on Exhibit 11, page 110.

23 A NMOGA carried over WildEarth Guardians'  
24 proposal to keep in the retention of these forms like  
25 in the retention in the state is done by state

1 records, statutes that are outside of OCD's control so  
2 this conforms with that, even though, practically  
3 speaking, OCD keeps all records for all wells  
4 indefinitely.

5 Q All right. We are completing that section  
6 and starting on OCD Exhibit 11, page 111. We're  
7 moving on to 19.15.14.9.C NMAC and moving on to page  
8 112. Mr. Powell, please describe the modification and  
9 reasoning on this slide.

10 A So we'll break it out in pieces. The first  
11 is removing intentionally used. We've discussed that  
12 several times up to this point. It's also the second  
13 point NMOGA had in here, it was limited to hydraulic  
14 fracturing. OCD changed that to completion or  
15 recompletion 'cause there could be some completion  
16 activities that are not hydraulic fracturing. Also in  
17 discussion, OCD changed it to completion or  
18 recompletion. That may be more pertinent to change  
19 back to downhole operations.

20 Q So like in Exhibit 4, is it the same section  
21 we previously discussed where OCD was open or in  
22 agreement to a changing completion or recompletion to  
23 downhole operations?

24 A It is.

25 Q Thank you. All right, we are moving on,

1 starting on page 113 to 19.15.14.10A and on Exhibit  
2 11, page 114, again, Mr. Powell, please describe the  
3 modification and reasoning here.

4 A Again, this was performed as a  
5 simplification because it's the requirements that were  
6 added to 19.15.14.9 as far as what was required to be  
7 in a permit and if pertinent data isn't in a permit  
8 that it should be denied.

9 Q All right. Quickly moving on, starting on  
10 page 115 to 19.15.16.17 NMAC and the content starting  
11 on page 116, Mr. Powell, please summarize.

12 A NMOGA's kept what's currently in the rule as  
13 it sits today in subsection A as written in this  
14 slide. OCD doesn't oppose that process because  
15 they've moved -- well, the new information in the  
16 subsection B, subsection B describes if there's a well  
17 integrity event, this is what happens. OCD doesn't  
18 object to that process of -- of separating those out  
19 as need be because there's still the protections that  
20 we have today, plus it adds the protections that we're  
21 looking for. The only comment OCD had to that  
22 subsection B is the use of hydraulic fracturing as a  
23 limitation. OCD request either move that to  
24 completion, recompletion or as discussed more  
25 pertinent, downhole operations.

1           OCD still feels that the shorter subsection  
2 A is -- is descriptive but is not opposed to moving it  
3 to separate sections if -- if the Commission feels  
4 that that's more protective of what the -- the current  
5 protections we have today plus incorporating what  
6 we're looking at adding them to this rulemaking.

7           Q     Okay. So I want to make sure we make a  
8 clear record here, Mr. Powell. Is OCD's preferred  
9 option going with the OCD modification in the middle  
10 section of this slide?

11          A     I believe that's cleaner, but I don't think  
12 either one is a bad option. It -- it would be what  
13 the Commission prefers.

14          Q     And in the event the Commission prefers  
15 splitting this out, then OCD would recommend a edit to  
16 the hydraulic fracturing language that's not  
17 represented on this slide but that you articulate it.

18          A     It's actually represented on that slide in  
19 subsection B in the first sentence of the NMOGA  
20 proposal. It would need to be changed if a well  
21 integrity event occurred from the downhole operations  
22 of a well instead of from the hydraulic fracturing of  
23 a well.

24          Q     Apologies, Mr. Powell. OCD's recommended  
25 changes to subsection B are not represented on this

1 slide.

2 A Correct.

3 Q Thank you. We're going to move on to -- I  
4 think I slipped -- all right, Mr. Powell, we're moving  
5 on to starting on page 117 of Exhibit 11, 19.15.16.17.  
6 This is another one representing on multiple slides.  
7 So please describe for the Commission the content and  
8 modification proposed by the Division and let me know  
9 which slide you'd like to focus on.

10 A I think, high level, we'll start with this  
11 slide, go to the next slide, and then talk in depth  
12 with the third slide for this section. In this slide,  
13 it's the NMOGA's proposal to do what OCD was looking  
14 at doing with the trademark chemicals and how that's  
15 provided to the Division as well and it's their  
16 provision to do that -- perform that same function.

17 The next slide is OCD's proposal to perform  
18 that same function. As you can see, the -- the  
19 language is substantially shorter in OCD's section.  
20 OCD feels it's cleaner as far as how that's relayed.  
21 It quotes the act which NMOGA did as well, but OCD  
22 feels that's -- it's a cleaner process or easier to  
23 read. So we'll go to the modification reasoning on  
24 the next slide. There's several key words and things  
25 OCD didn't agree with in the NMOGA proposal.

1           In NMOGA subsection 2, they used to state  
2 reasonable probability to contaminate where WildEarth  
3 Guardians proposal uses potential to impact.  
4 Reasonable probability to contaminate requires that  
5 the OCD make a technical conclusion before requiring  
6 an investigation where the material must be evaluated  
7 to assess level of impact. OCD at this point in time  
8 is looking to detect the impact and would not have  
9 information to make a conclusion at the level of  
10 contamination. As a threshold to initiate an  
11 investigation, OCD believes language -- this language  
12 establishes too high of a burden and would delay or  
13 prevent appropriate testing.

14           Our second bullet point, NMOGA purposes --  
15 proposal places the initial request burden on the OCD  
16 by stating the Division may request at the start of  
17 the subsection to request additional data. This  
18 burden should be the operator that controls the  
19 situation to approach and provide the information to  
20 the OCD. So that would be the chemical disclosure  
21 list if the operator's well -- aware that there's a  
22 well integrity event that have -- could have chemicals  
23 in it. It should be the operator coming to the OCD,  
24 not the OCD trying to go to the operator to get that  
25 information.

1 Q I want to ask you a clarifying question  
2 before we move on, Mr. Powell. In the event that an  
3 operator does not report a loss of containment or a  
4 well integrity event that could impact groundwater,  
5 outside of this rule, does OCD have the authority it  
6 if it becomes of that situation to demand the same  
7 information or disclosures from the operator?

8 A It does. So those sections are covered  
9 under 19.15.5 which is enforcement role of the OCD  
10 which could include penalties, requirement of plugging  
11 the well, additional sanctions to the operator.

12 Q Does OCD have plenary authority to require  
13 testing or disclosure of data to the Division from  
14 operators?

15 A Yes.

16 Q Okay. And does OCD have subpoena authority  
17 if it needs to demand specific information from  
18 operators?

19 A It does.

20 Q Okay. So to clarify the change here, is the  
21 purpose of the change here to focus that initial  
22 burden on the operators as an affirmative disclosure  
23 requirement?

24 A It is.

25 Q Okay. Thank you for that. Please move on

1 to the rest of the slide.

2 A Third bullet, NMOGA subsection places the  
3 potential request on this -- on the Division to  
4 request the information from the supplier or service  
5 company which the OCD may or may not regulate.  
6 Historically, this burden had been on the operator as  
7 the operations on site are performed on the operator's  
8 control. It's the operator's contract with those  
9 companies. So OCD performs that investigation through  
10 the operator and it's the operator that is required to  
11 get that information from their suppliers or service  
12 companies.

13 The fourth bullet in NMOGA subsection 2 B  
14 again places the burden on the Division to request  
15 data, including sampling groundwater in the vicinity  
16 of a well integrity event. At this point in time, OCD  
17 is looking for what is included in the fluid stream as  
18 a potential contaminant and a groundwater  
19 investigation is better suited under 19.15.29 or  
20 19.15.30 NMAC. When you start looking in the  
21 vicinities, that's more of an investigation under  
22 those rules. We want to know what was in the fluid  
23 stream or as close to possible when the event  
24 happened.

25 In summary, OCD feels the NMOGA's proposal

1 places an unnecessary burden on the OCD, requires a  
2 technical conclusion prior to investigation, creates a  
3 potential bar to appropriate testing and investigation  
4 and it's not clear as to the -- it's not as clear as  
5 the OCD's draft.

6 Q So, Mr. Powell, I want to clarify that  
7 fourth bullet with the Commission here. What's the  
8 OCD's intent with this section in terms of -- strike  
9 that. Is it the OCD's intent to request a disclosure  
10 so that -- at this point in time so that the OCD knows  
11 what it needs to be looking for in sampling?

12 A Yes. OCD -- once there's an impact known,  
13 the rules regarding that impact are under 29 and 30.  
14 OCD, in their proposal, is looking for what's  
15 potentially there that could impact in those initial  
16 ones, getting all that -- getting the chemical  
17 information to know what to look for for that impact.  
18 So what OCD's looking for in their -- in their version  
19 is what could be in the fluid stream, not what the  
20 impact is. Because once that fluid enters in a water  
21 system, it could be diluted, it could have numerous  
22 things that have to be evaluated. OCD wants to know  
23 the fluid stream to know what to look for, what -- in  
24 that investigation.

25 Q Is this the section or the point in time

1 that we've discussed that triggers the SDS disclosure  
2 of potentially proprietary information to the  
3 Division?

4 A Yes.

5 Q Okay. Investigation, delineation,  
6 remediation, those would all occur under part 29 and  
7 30?

8 A Correct.

9 Q Okay. Thank you. I want to briefly draw  
10 your attention back to page 118. And this slide talks  
11 about on the fourth to last line it starts "And we'll  
12 use a third-party verified laboratory." Have there  
13 been discussions regarding that language, verified  
14 laboratory?

15 A There have.

16 Q Is that a phrase that -- do you feel that  
17 that language needs to be -- should be updated in any  
18 way upon --

19 THE HEARING OFFICER: Okay. Hold on,  
20 please. They seem to be muted. Please go ahead. And  
21 if you would find a good stopping point shortly.

22 MR. TREMAINE: Thank you, Madam Hearing  
23 Examiner.

24 BY MR. TREMAINE:

25 Q Mr. Powell, does that verified laboratory

1 language deserve any type of update?

2 A I think if the parties feel that that need  
3 to be updated, OCD's not a -- doesn't object to  
4 updating that if it's -- there's specific  
5 certification that's needed, those kinds of things.  
6 OCD doesn't certify those laboratories. We feel that  
7 they should be using a competent laboratory doing that  
8 and if there's concerns with the laboratory, those  
9 laboratories probably shouldn't be used, but OCD  
10 doesn't perform those certifications or control those  
11 certifications. So that's why it included the  
12 language it did.

13 MR. TREMAINE: All right, Madam Hearing  
14 Examiner, we have one more slide in this section and  
15 then I'll break.

16 THE HEARING OFFICER: Thank you.

17 BY MR. TREMAINE:

18 Q I'll direct Mr. Powell to Exhibit 11, page  
19 120, referencing 19.15.16.17.8.3. Mr. Powell, please  
20 summarize the modification and reasoning present on  
21 this slide.

22 A Similar to the -- the prior discussion, OCD  
23 feels that NMOGA's proposal puts a determination on  
24 the OCD that should be on the operator. In the first  
25 sentence, NMOGA's proposal, it states "If the Division

1 determines that a well integrity event caused a major  
2 release," so it puts that burden on the Division to  
3 determine that or WildEarth Guardians' proposal state  
4 -- simply states if there's an impact to surface or  
5 subsurface groundwater, the way 29 is written, if  
6 there's an impact to groundwater, it's already  
7 considered a major release. So OCD wouldn't have to  
8 make a determination. That should be a determination  
9 that the operator makes.

10 MR. TREMAINE: Madam Hearing Examiner,  
11 we're done with that section. This is a good place to  
12 pause.

13 THE HEARING OFFICER: Thank you so  
14 much.

15 Let's take 15 minutes and return at  
16 10:30.

17 (Off the record.)

18 THE HEARING OFFICER: Alrighty. We are  
19 back after a short morning break.

20 Mr. Tremaine.

21 Thank you, Mr. Powell, for coming back  
22 on the stand.

23 Please complete your presentations.

24 BY MR. TREMAINE:

25 Q All right. Resuming Mr. Powell with OCD

1 Exhibit, starting on -- Exhibit 11, starting on page  
2 121. We're moving on to 19.15.16.19 NMAC. We have  
3 another multi-slide presentation. So same deal,  
4 Mr. Powell, please describe the content starting on  
5 slide 122.

6 A Just to clarify, it's not a multi-slide.  
7 It's just a simple statement of this section. This  
8 section is over the notification of parties outside of  
9 the OCD. NMOGA moved to remove all parties from that  
10 section, in that section in its entirety. It's just a  
11 statement OCD doesn't oppose the NMOGA's proposed  
12 change to remove all parties as again we don't know if  
13 other parties were contacted to see if they wanted  
14 that notification or not. It'll simply be up to the  
15 Commission if they want to keep that section, scale it  
16 down to OCD's version, or remove it entirely.

17 Q Thank you for that clarification.  
18 Mr. Powell, I'm moving on to Exhibit 11, slide 123. I  
19 believe we've already covered this one, but please  
20 summarize for the Commission.

21 A So this one's slightly different than what  
22 we previously covered. NMOGA, by removing that  
23 previous section in its entirety struck this section.  
24 As far as how that disclosure would happen, OCD  
25 doesn't oppose that NMOGA change. However, note if

1 the Commission decides to keep the full version or the  
2 scaled down version of this section would be necessary  
3 to provide that notification.

4 Q Thank you. Now, Mr. Powell, starting on  
5 slide 124 of Exhibit 11, we're moving on to  
6 19.15.25.14.A NMAC. And on slide 125, please discuss  
7 the modification and the reasoning the OCD adopted  
8 here.

9 A So NMOGA proposed to strike four casing  
10 investigations from this section so it would read  
11 "Casing integrity for casing repairs and wells to be  
12 placed and approved TA." OCD feels that casing  
13 investigations is necessary in this section. NMOGA,  
14 in their proposal, actually called it verified casing  
15 integrity. So if you change that for -- for casing  
16 verifications, OCD wouldn't oppose that either. But  
17 either investigations or verifications is needed in  
18 this section to be included in the scope of that rule  
19 to perform those duties of using the MIT to verify  
20 casing integrity prior to actually doing the repair.

21 Q Are you able to summarize what the  
22 difference between a casing investigation or verifying  
23 casing integrity versus casing repair is so that we  
24 understand the distinction?

25 A So the investigation or verification,

1 whatever that Commission decides to call it, would be  
2 if you suspect that there's a hole in the casing or a  
3 compromise of the casing. You would go in and run an  
4 MIT to see if there is a hole or a casing integrity  
5 event in the well.

6 Casing repairs typically are after you've  
7 identified the hole, you go in and you perform a well  
8 repair for that well, whether running cement or those  
9 type of things and then verify that you have casing  
10 integrity after the repair -- ensure that the repair  
11 itself was successful. So there are different points  
12 in time that casing investigation is pre-repair, the  
13 MIT after repair is post repair.

14 Q So NMOGA's proposal could potentially omit  
15 the requirement for that testing or verification  
16 stage?

17 A Yes.

18 MR. TREMAINE: Thank you. Okay. All  
19 right. And we have reached the end of the slides and  
20 I have no further questions for Mr. Powell.

21 THE HEARING OFFICER: Thank you very  
22 much, Mr. Tremaine.

23 Ms. Mulcahy or Mr. Rankin?

24 MR. RANKIN: Morning, Madam Hearing  
25 Officer.

1                   Commission and members, good morning.  
2           Just take a moment to get myself organized.

3                                   CROSS-EXAMINATION

4           BY MR. RANKIN:

5                   Q       Good morning.

6                   A       Good morning.

7                   Q       Mr. Powell, how are you?

8                   A       I'm well.

9                   Q       Normally, this is my partner, Mike  
10           Feldewert's, job so I'm happy to take the opportunity  
11           to work with you this morning. On the questions that  
12           you addressed yesterday with Mr. Tremaine, I just want  
13           to kind of backtrack and ask you to go over a couple  
14           things. Yesterday, you testified that it's the first  
15           time, to your knowledge, that the Division, or  
16           Commission rather, is considering banning the use of  
17           the chemical or compound used in the exploration and  
18           production of oil and gas. Right?

19                   A       Correct.

20                   Q       And I think you called it an extraordinary  
21           proposal.

22                   A       Yes.

23                   Q       And Mr. Tremaine reviewed with you some  
24           pretty historic items that have been used previously  
25           in oil and gas operations that are no longer permitted

1 that had been banned by other agencies or other  
2 federal or state agencies. Right? And as for those  
3 items or materials, OCC took no action to ban them but  
4 -- and they were addressed by these other federal or  
5 state agencies. Right?

6 A Correct.

7 Q And I think I understood you to say that OCD  
8 does not currently have any staff designated as  
9 chemists or toxicologists or was it -- was it chemical  
10 hygienist? Is that what it was?

11 A I believe so. Yes.

12 Q Something like that. But the Division does  
13 have some people with background in those areas, but  
14 those fields are generally outside the experience of  
15 OCD staff. Right?

16 A That's correct.

17 Q Okay. And even I think one of his own  
18 witnesses, I think it was Dr. Brown [ph], testified  
19 that he thought the State Department of Health might  
20 be better suited for at least some aspects of  
21 regulating PFAS in the state. Do you recall that  
22 testimony?

23 A Vaguely. Yes.

24 Q Okay. Was it ever considered by the  
25 Division when this petition for rulemaking was made to

1 consider referring this to another agency to evaluate  
2 the impacts of PFAS and whether it should be banned or  
3 regulated?

4 A I don't believe that was part of OCD's  
5 deliberations. I believe the applicant submitted it  
6 before the OCC -- the OCC chose to hear it. So OCD  
7 was responding to that application.

8 Q Okay. And to your knowledge, has there been  
9 any coordination or discussion on this petition with  
10 other sister agencies in the state?

11 A We have not had direct correspondence with  
12 those other agencies that I'm aware of. I do know  
13 that other agencies are looking -- are -- are talking  
14 about PFAS. I don't know to what extent. But we did  
15 not reach out to those agencies for this rulemaking.

16 Q I'm going to move into the definition of  
17 PFAS. And I'm going to go to your rebuttal Exhibit  
18 11. Sorry. Is there a lot of background? I don't  
19 know why that is.

20 UNIDENTIFIED SPEAKER: Mr. Rankin, if  
21 you could just bring your microphone a little closer.  
22 The microphone's straining to get your voice.

23 MR. RANKIN: Is that better?

24 UNIDENTIFIED SPEAKER: Yeah.

25 MR. RANKIN: Okay.

1 BY MR. RANKIN:

2 Q On the definition of PFAS. So I'm going to  
3 move over to your slide 11, Exhibit 11. And I think  
4 it's PDF page 5 and I will pull it up so we can see it  
5 together on the screen. All right. I think this is  
6 where we talk about the definition of PFAS, where the  
7 Division responds to NMOGA's proposal for the  
8 definition.

9 And I think we've covered this pretty well,  
10 but I just want to make sure that I'm understanding.  
11 I think in response to the questions from  
12 Mr. Tremaine, you said the main difference is  
13 essentially that -- well, NMOGA's proposed definition  
14 would define PFAS as having two fluorinated carbons.  
15 The Division defines it more broadly initially as  
16 having one fluorinated carbon essentially with the  
17 additional condition that it's a -- it has to be a  
18 perfluorinated methyl group or a perfluorinated  
19 methylene group. But that -- and that would allow for  
20 future addition -- addition of future potential PFAS  
21 that's identified that would have only the one  
22 fluorinated carbon atom. Right?

23 A That's my understanding. Yes.

24 Q But for all intents and purposes, that first  
25 sentence to this definition here that I'm

1 highlighting, it would be incorrect to read this  
2 definition as PFAS being only this first sentence.  
3 Correct?

4 A Correct.

5 Q Because you need to read -- you need to  
6 understand that that PFAS is defined by -- as well as  
7 by the methods, the standardized methods adopted by  
8 the U.S. EPA.

9 A Correct.

10 Q Okay. Now, on the updates here, what's your  
11 understanding of what the process is? I mean, when  
12 EPA adopts new methods, is it your understanding  
13 that's through a promulgation, through a rule  
14 promulgation?

15 A I'm not a chemist. I don't get into that.

16 Q Not sure that would happen. Okay. So when  
17 it is updated, so by whatever methodology, whether  
18 it's a rule promulgation or some sort of announcement  
19 or notice, would there be a process by which the  
20 Division would notify the regulated community that a  
21 new method is now applicable under the rule?

22 A I think the methods are there. If there's  
23 updates to those methods, the Division does not notify  
24 parties that another agency has updated something.

25 Q Okay. So it would be incumbent on all

1 parties to track EPA's updates about what new  
2 analytical methods have been approved or authorized  
3 under the EPA's system.

4 A I would assume an operator would, when they  
5 sent the sample to the lab, it would be the lab that  
6 would be keeping up with those methods. But that  
7 would be an assumption.

8 Q Okay. This definition I understood OECD's  
9 experts to explain that this definition as proposed,  
10 at least the first sentence, came partly from a paper  
11 and I forget the author's name. But it was a paper  
12 that was prepared by scientists who were supporting  
13 the OECD, which is the Organization for Economic  
14 Cooperation and Development. Is that your  
15 understanding?

16 A That's what I heard, yes.

17 Q Yeah. Do you know if any other states or  
18 federal agencies have adopted this OECD definition?

19 A That would have been something to ask a  
20 chemist. I -- I'm not aware of that.

21 Q Okay. Same kind of general question. I  
22 presume you would defer to them, but you're not sure  
23 why they wouldn't have chosen EPA or TSCA [ph] or one  
24 of the federal agencies to adopt or follow one of the  
25 existing definitions that were proposed or followed by

1 EPA?

2 A I believe that was in their testimony, why  
3 they picked what they did. But I -- I wasn't part of  
4 that review.

5 Q Okay. And just to confirm, I think you  
6 covered it, but these two methods down here, the  
7 OTM-45 and 50, you're recommending that those be  
8 withdrawn from OCD's proposed definition. Correct?

9 A Correct.

10 Q Okay. All right. I'm going to skip around  
11 a little bit here. Want to talk about the trade  
12 secrets issues and the petitioner's disclosure  
13 requirements. The Division opposes the proposal to  
14 ban the use of any undisclosed chemicals or chemicals  
15 that fall within the protections of the New Mexico  
16 Uniform Trade Secrets Act that an operator elects not  
17 to disclose because they constitute trade secrets.  
18 Correct?

19 A Correct.

20 Q And because such a ban would prohibit the  
21 use of non-toxic chemicals, if they are proprietary,  
22 and the operator elects not to disclose them. Agree?

23 A Correct.

24 Q And the ban could extend to non-PFAS  
25 substances if they're not disclosed or if they

1 constitute proprietary information.

2 A Correct.

3 Q And you agree that petitioner's proposal  
4 would potentially prohibit the use of effective  
5 hydraulic fracture chemicals, even if they're  
6 non-toxic and non-PFAS just because they're not  
7 disclosed due to trade secret protections?

8 A Correct.

9 Q And the Division and the Commission have a  
10 duty to prevent waste of hydrocarbon resources.  
11 Agree?

12 A Correct.

13 Q And so such a ban could potentially  
14 contribute to waste of resources if operators had to  
15 use less effective hydraulic fracturing fluids.

16 A Yes, if -- if they weren't effective and you  
17 didn't get as much resource recovery, it could be  
18 deemed as waste.

19 Q And on that sort of more general position of  
20 the Division, in your testimony, you referred -- you  
21 basically I think you say that -- I'll read it to you,  
22 that -- this is OCD Exhibit 2, Bates -- page 14. "The  
23 OCD does not support the proposed ban on trademarked  
24 chemicals as this type of ban would not align with  
25 state statutes providing for the protection of

1 proprietary and trade secret information." Do you  
2 recall that being your testimony?

3 A Yes.

4 Q And do you mean by that that you believe an  
5 outright ban would be contrary to the statute?

6 A Correct.

7 Q And even against public policy?

8 A Yes.

9 Q As to a technical basis, you also state in  
10 your testimony that you don't believe there's a  
11 technical basis that would justify banning non-PFAS  
12 proprietary compounds. Agree?

13 A Correct.

14 Q Okay. And I mean, generally, we like the  
15 industry to be able to have innovation and come up  
16 with new methods, better methods, of developing oil  
17 and gas, even methods that may be more environmentally  
18 friendly. And would you agree that if operators were  
19 required to disclose their trade secrets, that there  
20 may be a disincentive to innovate?

21 A Yes.

22 Q I'm going to move on to the heart of the  
23 proposed rule which I'm very grateful that you walked  
24 through, Mr. Powell, because it was very helpful to me  
25 and I'm sure it was helpful to the Commission. And

1 you did a very good job of going through it in fairly  
2 good detail, but there are a few questions that I want  
3 to ask because I think it's important to clarify  
4 exactly how the rules proposed to be implemented.  
5 Let's see. So looking at this provision 16.17 and you  
6 get down to the Division's redlines, I'm going to do  
7 my best to highlight the language I'm talking about.

8 Okay, first question, just for  
9 clarification, under this language here, 19.15.16.17,  
10 so part A(2), okay. If damage from the shooting,  
11 fracture, or treating of well has the potential to  
12 impact surface or groundwater, just for clarification,  
13 Mr. Powell, the reference to surface here, is it  
14 intended to be surface water? That's the intent?

15 A That was my -- my understanding. Yes.

16 Q Okay. Just want to make sure that's clear,  
17 that I understand. And would it be helpful to include  
18 the word water there just to clarify that?

19 A Yes. This is -- the red is from WildEarth  
20 Guardians so OCD didn't change that, but that was my  
21 understanding is that was surface water and  
22 groundwater.

23 Q Now, in the NMOGA's proposal, and I won't  
24 pull it up right now, but I think we had proposed to  
25 term these events where there's a potential impact to

1 the well and I think you -- as a well integrity event.  
2 Do you recall that language?

3 A I do.

4 Q Okay. So I'm just going to use that as a  
5 shorthand to describe what's described here in subpart  
6 A which is when there's a completing, shooting,  
7 fracturing, or treating event that has the potential  
8 to impact fresh water where there's a potential casing  
9 impact, okay, I'll use them to call that a well  
10 integrity event. I understood you to say that one of  
11 the reasons the Division was looking to limit this  
12 rule to well integrity events is that there's many,  
13 many occasions where operators use fluids downhole, in  
14 downhole operations and it would essentially overwhelm  
15 the Division having to review everything that comes  
16 in. Right?

17 A Correct.

18 Q And there's thousands of such operations a  
19 year or tens of thousands of operations a year,  
20 depending on how broad you look. Do you have a sense  
21 for -- and I think yesterday you testified that the  
22 well integrity events that would qualify under this  
23 rule are relatively rare. Right?

24 A That they are.

25 Q Do you have a sense for how many that would

1 be in a year?

2 A For a completion and recompletion  
3 activities, I know it was -- I believe it's probably  
4 typically once a year at most. If we expand that to  
5 downhole operations, you're still looking at probably  
6 a very small number, but it would be more than that  
7 one a year.

8 Q All right. Coming back up to subpart A  
9 under this provision, I'm going to look at this first  
10 sentence here. And I just want to ask you, it's more  
11 -- but I think I understood what you were saying, that  
12 it's the burden or the obligation is on the operator  
13 to make these determinations. But I want to make sure  
14 I understand.

15 So in the first sentence here "If completing  
16 shooting, fracturing, or treating a well has the  
17 potential to negatively impact the producing formation  
18 injection interval communicates with other strata  
19 casing or casing seep or may create underground waste  
20 or contaminate fresh water --" I'll stop there. Who  
21 makes the determination that one of those events has  
22 the potential to negatively impact? Who makes that  
23 determination in the initial instance?

24 A It should be the operator who makes that  
25 initial determination.

1 Q The operator. So if something does occur  
2 and if the operator -- it's incumbent on the operator  
3 to make that determination.

4 A Yes.

5 Q Okay. And it'll be the operator also that  
6 has the obligation to determine whether there's a  
7 potential to impact surface water or groundwater?

8 A Yes.

9 Q Okay. Now, on the question here, 'cause I  
10 also want this to be very clear, when we're talking  
11 about surface water or groundwater, as I understood  
12 you to say, this rule is connected through later  
13 provisions to parts 29 and part 30 of the Division's  
14 regulations. Correct?

15 A Correct.

16 Q And parts 29 and part 30 are promulgated, as  
17 you understand, under the Oil and Gas Act. Correct?

18 A Correct.

19 Q Okay. And under part 30, is there a  
20 standard by which the Division determines what fresh  
21 water or rather what groundwater is protectable?

22 A I didn't review 30 as far as extensively for  
23 that but protectable waters of the state are 10,000  
24 TDS or less.

25 Q And when the rule here refers to fresh water

1 or groundwater, is it your understanding that it would  
2 be referring to waters that are below 10,000 TDS?

3 A Yes, those are the protectable waters in the  
4 state.

5 Q Now, I think -- I want to make sure I  
6 understand some other elements here as we talk through  
7 this. The changes that the Division made here in  
8 blue, I'm going to highlight this language, in the  
9 applicable fluid stream, the way I understood  
10 WildEarth Guardians' proposal to read is that they  
11 would require the operator of the well to disclose all  
12 fluids ever put into the well. Do you agree?

13 A Yes. That's the way it was phrased.

14 Q And the Division is proposing to limit that  
15 to only the fluid stream that was being used during  
16 the operation that may have immediately preceded the  
17 well integrity event?

18 A Yes. They -- the Division's looking for  
19 what fluids could have impacted the water so it'd be  
20 the fluid stream at the time of the well integrity  
21 event.

22 Q So when I -- under this highlighted language  
23 here where it says "In the applicable fluid stream,"  
24 that would be limited to only what was being used at  
25 that moment or right before the well integrity event?

1 A Yes.

2 Q Okay. And as Mr. Tremaine ably elicited  
3 from you, what is -- oh, shoot. What did I just do?  
4 Did I delete the whole page? I don't know what I just  
5 did. It's the problem with not having a mouse. I  
6 just did. Control C? Oh yeah. Let me just see what  
7 I did. Sorry. I apologize. This is why not having a  
8 mouse is bad.

9 Would you mind sharing it? I'm so  
10 frustrated with this.

11 Sixteen-seventeen. What did I just do?  
12 That's all right. I like to be able to drive.

13 Do you have it up? Okay. Okay.

14 BY MR. RANKIN:

15 Q Okay. So in that same sentence there, it  
16 refers to -- and Mr. Tremaine pulled this out in your  
17 testimony, but what the Division is focused on  
18 regulating here are the additives that are used in the  
19 stream. Right?

20 A Correct.

21 Q Okay. And that term additives, the Division  
22 has not proposed a definition for that term. Right?

23 A Correct.

24 Q Okay. I'm going to come back to that 'cause  
25 I have a separate line of questions on that, but I

1 want just to have everyone kind of put a pin on that  
2 term. Okay? And then in addition in the same  
3 provision, the Division talks about what is  
4 potentially harmful. Right?

5 A Say that again, I apologize.

6 Q Sorry. Let me pull up this. The Division  
7 references -- the focus here on the Division's  
8 investigation would be what would be potentially  
9 harmful. Correct?

10 A I believe so. I am the blue section of two.

11 Q Yeah.

12 A Towards the end of the main paragraph.  
13 That's in blue?

14 Q Yeah. It's hard when I don't have it right  
15 in front of me. Let me pull it up again. I'll get to  
16 it.

17 MR. RANKIN: Thank you, Jesse, for  
18 allowing me -- trying to help me. Okay. Do you mind  
19 if I go back to sharing? I've recovered my -- okay.

20 BY MR. RANKIN:

21 Q So in the provision in subpart paragraph 2,  
22 the Division has proposed this language, potentially  
23 harmful chemicals. Agree?

24 A Correct.

25 Q Okay. And my question to you is, and I

1 don't recall you touching on this with Mr. Tremaine,  
2 but what does The Division mean by potentially  
3 harmful? How is that determined?

4 A It would be determined through discussions  
5 between the operator and the Division looking at all  
6 chemicals, if there's chemicals that are deemed that  
7 could be potentially harmful to the water. Those  
8 would be what we would test for, you know, such as the  
9 PFAS constituents under the methods could be  
10 potentially harmful. So that would be something to  
11 test for. Something that isn't inert wouldn't be  
12 potentially harmful. That wouldn't -- you -- it would  
13 be not needed to test for those.

14 Q Okay. And in addition to the PFAS chemicals  
15 referenced, you also referenced some testing  
16 requirements under part 29. Right?

17 A Correct.

18 Q And that part 29 that you referenced gives  
19 the Division some additional discretion to identify  
20 additional chemicals that aren't necessarily listed by  
21 any regulation. Agree?

22 A Correct. Yes.

23 Q So if the Division could require -- it's  
24 fairly expansive what the Division could require the  
25 operator to review or to sample for, to look for.

1 Agree?

2 A Correct.

3 Q But the intent here is to base the  
4 investigation off what is in the additives. Correct?

5 A Correct.

6 Q Okay. And the triggering event for this  
7 investigation would be what I've been calling a well  
8 integrity event. Right?

9 A Yes.

10 Q And that would be, as I understand it, it's  
11 sort of a two-part question, no. 1, if damage from the  
12 shooting, fracturing, or treating of a well, so no. 1,  
13 you have to have damage. Correct?

14 A Correct.

15 Q No. 2, it would be from shooting,  
16 fracturing, or treating of a well. Correct?

17 A Correct.

18 Q And then three, it has to be -- have the  
19 potential to impact surface water or groundwater.  
20 Correct?

21 A Correct.

22 Q And that groundwater that would be  
23 potentially impacted would be water less than 10,000  
24 TDS. Agree?

25 A Correct.

1 Q And I think I heard you say that it would be  
2 -- it's only -- an investigation would only be  
3 triggered when the impact was outside of the strata  
4 that's being targeted for development for oil and gas.

5 A For this provision, yes.

6 Q This provision.

7 A Yeah.

8 Q Okay. Just going through. You addressed a  
9 lot of these questions so I'm ticking off ones I don't  
10 have to ask. So even while -- it feels like it's  
11 taking me a while, it's actually saving a lot of time.  
12 Okay. Now, under this rule, as proposed -- under this  
13 rule with the modifications proposed by the Division,  
14 when these events are triggered and there's an  
15 investigation triggered, the disclosure requirements  
16 provided here by the Division, the only disclosure  
17 would be to the Division. Correct?

18 A Correct.

19 Q Okay. And the disclosure would be only the  
20 additives you used in the applicable fluid stream  
21 which we described would be the fluid stream that was  
22 being used in the well immediately preceding the well  
23 integrity event.

24 A Correct.

25 Q Okay. Now, next in the step, I'm just going

1 to try to step through the process here. Assuming all  
2 the triggers are met that we just referred to, the  
3 operator will then test for all identified potentially  
4 harmful chemicals and will use a third-party verified  
5 lab to conduct any appropriate testing to verify any  
6 potential impact. Agree?

7 A Correct.

8 Q Okay. What I want to make sure is clear,  
9 because I don't think it was clear, but I -- exactly  
10 clear. It came out very well I think in your  
11 testimony. It may not be as clear in the language of  
12 the rule. But what's being tested here is the  
13 applicable fluid stream or rather what's being tested  
14 here is the applicable fluid stream. Is that correct?

15 A Correct.

16 Q Not the formation fluids.

17 A Correct.

18 Q Okay. So looking at this proposed rule, the  
19 Division's language, with the language from WildEarth  
20 Guardians, I'm looking at subpart A, sub paragraph 2  
21 where it says "The operator will test for all  
22 potentially harmful chemicals." Would it help clarify  
23 the intent if we put in some language there, "We'll  
24 test the applicable fluid stream" or something along  
25 those lines so it's clear what the Division is

1 expecting the operator test?

2 A In the first part of blue, it has the  
3 additives used in the applicable fluid stream. But if  
4 -- if you want to restate that down lower, I don't  
5 think it would hurt anything.

6 Q I guess that's a separate sense. And it  
7 wasn't clear to me when I'm reading these senses  
8 together what is being tested, what the intent is for  
9 the operator to test.

10 A Okay.

11 Q Yeah.

12 A Yeah.

13 Q Okay. That's why I'm asking the question,  
14 just to be clear that the Division's intent here is  
15 that the test would be of the applicable fluid stream.  
16 Right?

17 A Correct.

18 Q Okay. Now, I just want to pin that thought  
19 too, okay. So we're talking about additives. Pin  
20 that thought. Which is the focus of the Division's  
21 regulation here, right, because we're worried about  
22 what's in the additives. And I also want to pin this  
23 idea of having to sample the applicable fluid stream.  
24 Right? Okay. Okay. Now, one thing I heard  
25 yesterday, I just want to kind of touch on this 'cause

1 I want to -- I think I heard it, I want to make sure I  
2 understood what you're saying. I think I heard you  
3 say yesterday that in this process of evaluating or  
4 assessing a potential impact, that the Division might  
5 require an operator to engage a third-party, a  
6 consultant or a third-party to help evaluate the  
7 potential -- to do the potential sampling. Is that  
8 correct?

9 A Depending on the additives you used and how  
10 extensive that list would be, it may be appropriate  
11 through OCD's other investigation powers to request an  
12 operator get a third-party to help perform that  
13 evaluation.

14 Q Okay. All right. I'm going to come back to  
15 both concepts of testing of regulating the additives  
16 and then also sampling the applicable fluid stream,  
17 okay, but I'm going to move on to a couple different  
18 topics first. And I'm going to talk just briefly  
19 about produced water. Mr. Powell, you agree that it's  
20 the policy of the state and the Division to encourage  
21 the reuse and/or -- to reuse and recycle produced  
22 water within oil and gas operations in the field.

23 A Correct.

24 Q 'Cause that allows operators to replace use  
25 of fresh water resources and instead use recycled or

1 reused produced water for their well operations.

2 A Correct.

3 Q And the Commission promulgated a rule back  
4 in 2015, which was updated in 2020, that addresses the  
5 reuse and recycling of produced water under 19.15.34  
6 NMAC.

7 A Correct.

8 Q And under that rule, operators are not  
9 required to have a permit or register if they want to  
10 just reuse produced water in the field for certain  
11 things, including drilling, completing, producing,  
12 pressure maintenance, secondary recovery, or enhanced  
13 recovery.

14 A The only restriction to that would be if  
15 you're drilling through a fresh water zone. OCD  
16 requires that that be done with fresh water.

17 Q Okay. But there's no other restrictions on  
18 the reuse or recycling of produced water in oil, field  
19 operations for the provisions enumerated under that  
20 rule. Right?

21 A Correct.

22 Q Okay. And that's because the Division and  
23 the state encourage the reuse of produced water and  
24 the state.

25 A Correct.

1 Q Okay. I think you heard you say that  
2 Division is not supporting a screening or testing or  
3 produced water prior to reusing or completing wells  
4 under this rule.

5 A Correct.

6 Q And that produced water rule is not being  
7 addressed or sought to be modified under this  
8 proposal.

9 A Correct.

10 Q Yeah. All right. On produced water, I want  
11 to talk about -- I'm going to move to NMOGA's proposal  
12 which was to address limit this proposed rule to PFAS  
13 that was intentionally added. Okay. So we talked  
14 about the Division's proposal for the definition and  
15 what NMOGA did is they proposed to further limit  
16 essentially the definition of PFAS to -- for purposes  
17 of regulation under this rule to PFAS that was  
18 intentionally added.

19 And I'm going to pull it up on your rebuttal  
20 slide. It's probably the best place to review it.  
21 Let's see if I can get to that. There we go. The  
22 mouse. I'm missing my mouse. No, the Division does  
23 not agree with this proposal, right, to further limit  
24 it to what's intentionally added.

25 A Correct.

1 Q Okay. And this slide essentially gives your  
2 explanation 'cause the concern is that we get into an  
3 argument over whether it was merely negligent or  
4 whether it was willful or -- and the concern is if  
5 this sort of sets a threshold that if it's not willful  
6 then it can be allowed.

7 A Correct.

8 Q Right? Okay. That's understandable. Now,  
9 in your explanation here, you offer the example that,  
10 you know, you guys don't have authority over the  
11 suppliers of these chemicals and the authorities limit  
12 it to the operators of the wells. Agree?

13 A Correct.

14 Q And so my question to you is, you know, and  
15 here I'm highlighting this language, that as proposed  
16 by NMOGA, we're not proposing that the supplier  
17 certify that the chemical additives do not contain  
18 PFAS. Right?

19 A We're not. We're requiring the operator to  
20 certify.

21 Q Would it make a difference if instead NMOGA  
22 were to propose or the rule would have proposed that  
23 the certification included a certification that the  
24 supplier had confirmed that PFAS was not in the  
25 chemical additives?

1           A     I think for what OCD, as far as our  
2 enforcement, we're looking for that certification from  
3 the operator. And if the operator wants to -- for  
4 their legal purposes wants to have the chemical  
5 company certify that to the operator for the operator  
6 to make that certification, I'm not opposed to that.  
7 But ultimately, for the OCD, we want the operator to  
8 provide us that certification.

9           Q     Okay. So if the operator were to provide a  
10 certification that confirm that the additives being  
11 used were -- are certified to be PFAS free from the  
12 supplier, that might suffice from the Division's  
13 perspective?

14          A     As long as the operator still provides that  
15 certification, that they certify it.

16          Q     As long as it's the operator that -- because  
17 the operator's the one who's subject to the Division's  
18 regulations. Right?

19          A     Correct.

20          Q     Okay. Now, the reason I'm interested in --  
21 there's lots of reasons I suppose I'm interested in  
22 this intentionally added language and I was interested  
23 to hear the OCD's own experts engage with that  
24 concept. And I recall them saying that it's an  
25 important thing to consider, right, whether to

1 regulate it as an intentionally added component or  
2 not. And you know, they just kind of touched on it  
3 and they didn't go into too much detail about why it's  
4 important or why that's an important consideration.

5 But I understand that rather than address  
6 the regulation through what's intentionally added or  
7 not for the concerns I think you've identified in your  
8 slide, the Division took a different approach to try  
9 to narrow the target of the regulation. Right?

10 A Correct. The Division looked at the  
11 chemical additives added to the fluid stream.

12 Q Okay. Now, as I mentioned, I wanted to come  
13 back to it and here I am, coming back to it. The  
14 Division, by targeting the additives to the chemical,  
15 to the stream, you didn't define the term additives.  
16 Right?

17 A No. We did not.

18 Q What does the Division mean by additives?

19 A They're chemical additives. So I want to  
20 use those two synonymously. In the description that  
21 was given and the definition, it would be chemical  
22 additives that's added in their general form.

23 Q So maybe it might be helpful if I asked you  
24 what it's not. That may be a good way to do it. I'm  
25 going to walk you through and maybe we'll see what we

1 can do on that. Okay? I'm going to go back to your  
2 testimony and I'm going to pull up -- oops. One  
3 second. Okay. Yeah, 58, that's the one I'm going to  
4 get to. Okay. This is one of your exhibits,  
5 Mr. Powell. I think it's -- this is a FracFocus  
6 disclosure. Do you recognize it?

7 A Correct. Yes.

8 Q And this is starting at Bates page -- OCD  
9 Exhibit 5, Bates page 58. And basically, you pulled  
10 this from FracFocus. Correct?

11 A Correct.

12 Q And it's representative of the types of  
13 disclosures that are made by companies when they  
14 complete a well.

15 A Correct.

16 Q And it lists out the components of the  
17 applicable -- this would be determined to be the  
18 applicable fluid stream if there were a well integrity  
19 event.

20 A Correct.

21 Q Okay. So on this list of items identified  
22 in the disclosure, I've highlighted three things that  
23 I think Mr. Tremaine pulled this out from your  
24 testimony that Division does not consider water to be  
25 an additive. Correct?

1           A       It would be an additive but not a chemical  
2 additive.

3           Q       Not a chemical additive. So the target of  
4 this regulation would not be targeting water as  
5 identified in this FracFocus disclosure. Agree?

6           A       Correct.

7           Q       So a chemical additive that the Division is  
8 targeting in its regulation would be essentially  
9 everything but the water that I've highlighted on this  
10 exhibit.

11          A       I probably wouldn't include sand in that  
12 either.

13          Q       Okay. Okay. That's very helpful. Now,  
14 this water that's used in these FracFocus  
15 disclosures, it doesn't discern between municipal  
16 water, produced water, well water. Doesn't discern.  
17 Right?

18          A       Not in this notice. No.

19          Q       And as far as the Division's concerned, the  
20 Division isn't distinguishing between those sources  
21 either. Agree?

22          A       The Division under their water use reports  
23 actually get a division of different water types. But  
24 the Division didn't include any of that into this  
25 rule. Produced water's regulated under 19.15.29 as

1 far as its impacts if there's a release. So that  
2 wasn't something that Division included into this rule  
3 because it was already included in another rule.

4 Q Okay. Thank you for clarifying that. I  
5 guess I should say the Division maintains, it will  
6 continue to maintain the authority to regulate  
7 produced water throughout oil and gas operations.  
8 Right? No matter how it's used or where it's used.

9 A Correct.

10 Q Agree? Okay. But for purposes of this rule  
11 and evaluating impacts under this rule, banning PFAS  
12 and regulating PFAS, the Division is intending to  
13 regulate only the chemical additives that are put into  
14 the applicable fluid stream. Agree?

15 A Correct.

16 Q Okay. Now, we're going to go back to the  
17 rule. Sorry for my slowness. That same approach is  
18 used for the same understanding of what the Division  
19 is regulating would be applicable under -- let me get  
20 to the language -- 19.15.7.16A as well where you talk  
21 about -- sorry -- 6. Apologize. Okay. Here it is.

22 So under this 19.15.7.16 subparagraph A,  
23 under the second sentence here. "In addition, the  
24 operator shall file a certification that no PFAS  
25 chemicals were added to the fluid used in the

1 completion or recompletion of the well." The  
2 Division's not proposing to use the word additive  
3 here, but you're using a similar word, added, right?

4 A Correct.

5 Q And the intent here is it would be to target  
6 what you're defining as or referring to as chemical  
7 additives. Right?

8 A Correct.

9 Q Okay. And it wouldn't be the water we  
10 discussed. Right?

11 A Correct.

12 Q Okay. And on that section dealing with  
13 applications, the same thing here, as I understand,  
14 where, again, you are using the word additives but in  
15 a different context that the Division's limitation  
16 here would be that it's only chemical additives, if  
17 any, used during drilling operations or any downhole  
18 operations would be --

19 A Correct. Correct. That was the intent.

20 Q Okay. And this one's a little bit -- just  
21 kind of walk through a couple examples and see if you  
22 can help me out. But, you know, drilling mud, would  
23 that be a chemical additive or would drilling mud be  
24 the base and anything that might be added to the  
25 drilling mud would be a chemical additive?

1           A       I would not consider drilling mud a chemical  
2 additive.

3           Q       Okay. And just to be clear, the water you  
4 used, right, would not -- any water you used during  
5 the drilling operations would not be deemed to be a  
6 chemical additive unless there was additional  
7 additives added to the water. Right?

8           A       Correct.

9           Q       And brine, brine's being used, same thing,  
10 brine would not be a chemical additive.

11          A       Correct.

12          Q       What about oil-based muds, if there's  
13 oil-based muds being used during drilling operations?

14          A       I would say whatever oil or what type of oil  
15 you add would be an additive.

16          Q       Okay. Are there any other circumstances you  
17 can think of, Mr. Powell, where you would want to  
18 distinguish between what is a chemical additive or not  
19 during drilling operations?

20          A       Not that I can think of.

21          Q       Okay. Now, I'm going to circle back to the  
22 intentionally added here because this is where I think  
23 it's important for the Commission to understand why  
24 NMOGA was concerned about or promoted or proposed this  
25 language. And the issue I guess, Mr. Powell, is you

1 understand -- is I understand you to say is that the  
2 Division is focused on regulating the chemical  
3 additives that are applied to the applicable fluid  
4 stream prior to a well integrity event. Correct?

5 A Correct.

6 Q But what the Division is requiring operators  
7 to test or sample after a well integrity event is the  
8 entire fluid stream which would include any water used  
9 for that operation. Agree?

10 A I would be the fluid stream, the mixed fluid  
11 stream is what would be test.

12 Q Agree. Right?

13 A Yes.

14 Q And so while the Division is focused solely  
15 on regulating and preventing the addition of PFAS as a  
16 chemical additive, operators are being required,  
17 nevertheless, to sample the entire mixed fluid stream.  
18 Agree?

19 A Correct.

20 Q And as we heard from all these experts and  
21 we'll hear from our experts, the PFAS out and about in  
22 the world are fairly ubiquitous. Agree?

23 A Correct.

24 Q They're in our food. They're in municipal  
25 water streams. They're in almost every well that's

1       been tested.    Agree?

2           A       That's what was testified to earlier.

3           Q       And so the concern, I guess, Mr. Powell, is  
4       that if the operators are being required to do all  
5       this work and potentially, you know, if there's a well  
6       integrity event that they have to sample for or  
7       review, how do we distinguish between what may be in  
8       the municipal water versus what is a chemical  
9       additive.

10          A       I think it's important to understand OCD's  
11       proposed rule that what we're testing for isn't for  
12       everything that's there as far as or could be there.  
13       It's testing for specific potential harmful chemicals  
14       that have been added through that review of that  
15       information.    So if in that review of that information  
16       it shows that there could be PFAS that was added  
17       through the chemicals that the operator used, then  
18       that's what we'd be testing for.    And if there's a  
19       hit, then that's what we would be looking at.    But it  
20       would -- it's based on the chemical additives in the  
21       review at the well integrity event that OCD would be  
22       looking for.

23          Q       Okay.    Now, as we sit here today, you know,  
24       we don't have a very good understanding just yet about  
25       whether or not any of the -- I mean, what chemicals

1 are out there and how there may be any overlap.  
2 Right? I mean, I think we -- let me see how to phrase  
3 this. Okay. Let me stop there and I may shift off to  
4 a different set of questions.

5 MR. RANKIN: Madam Hearing Officer, may  
6 I take a brief break to confer with my client about a  
7 couple different additional questions I may want to  
8 ask.

9 THE HEARING OFFICER: Yeah. The other  
10 thing we could do is break early for lunch and come  
11 back. What's your preference?

12 MR. RANKIN: I think an early lunch  
13 would be great because I don't think I have very many  
14 questions left, but I want to make sure that I have  
15 everything covered.

16 THE HEARING OFFICER: All right. Let's  
17 come back at 12:30 then.

18 MR. RANKIN: Okay. Thank you.

19 (Off the record.)

20 THE HEARING OFFICER: Let's come back  
21 from lunch break, please. When we broke for lunch,  
22 Mr. Rankin was asking his questions of today's  
23 witness, Brandon Powell.

24 I know, Ms. Nanasi, you said that your  
25 witness would be available at 1 p.m., going forward

1 from that time. I would certainly prefer not to  
2 interrupt, you know, a witness to take another  
3 witness. Is your witness available as well tomorrow  
4 if we couldn't finish for today?

5 MS. NANASI: No. She has prior  
6 commitments, which is why I asked for this time  
7 certain, you know, from one o'clock all the way 'til  
8 the public comment. And so I'm wondering if we could  
9 finish with NMOGA if there's a chance that somebody  
10 else could do cross-examination of Mr. Powell and then  
11 at one o'clock we start with Dr. Hansen?

12 THE HEARING OFFICER: Okay.

13 Parties? It's a small window.

14 MR. RANKIN: Madam Hearing, so I'll  
15 defer to the Division as Mr. Powell is their witness.  
16 I think having the questions fresh in the Commission's  
17 mind might be helpful to have them be able to question  
18 Mr. Powell, but I'll leave it to the Division. It's  
19 their witness.

20 MR. TREMAINE: Madam Hearing Examiner,  
21 I don't think it's ideal. Mr. Powell is available for  
22 the rest of the week and we serve at the pleasure of  
23 the Commission. So I do -- my only contribution would  
24 be that based on previous questions and the amount of  
25 material that we covered, I do expect that -- I mean,

1 won't speak for the Commission, but I do expect many  
2 more questions for Mr. Powell. I think this is going  
3 to go for a while. So if it's absolutely necessary  
4 and this is what the Commission wants to do, we will  
5 accommodate.

6 THE HEARING OFFICER: All right. Yeah,  
7 I think the Commission, based on the previous  
8 questions I've had of previous witnesses and some of  
9 the discussion there, that there will be extensive  
10 questioning by the Commission of Mr. Powell.

11 All right. Let's keep going,  
12 Mr. Rankin and we'll find a good stopping point around  
13 one.

14 MR. RANKIN: Madam Hearing Officer,  
15 thank you very much. Commission, members of the  
16 Commission. Good afternoon. I've had an opportunity  
17 review my copious notes. I believe that Mr. Tremaine  
18 had listed most of the questions that I myself would  
19 have asked. I believe I've covered all the topics  
20 that I had intended in my cross so I have no further  
21 questions of Mr. Powell. I appreciate the  
22 opportunity.

23 THE HEARING OFFICER: Thank you.  
24 Mr. Maxwell, do you have questions of  
25 Mr. Powell?

1 MR. MAXWELL: Your Honor, I do not.  
2 Thank you.

3 THE HEARING OFFICER: Okay. Thank you.  
4 I saw Ms. Kessler in the room earlier.  
5 I don't see her right now. She may be on the  
6 platform.

7 Ms. Kessler, if you can hear my voice,  
8 do you have questions of Mr. Powell? Okay.

9 Let's move then to Ms. Nanasi.  
10 Ms. Nanasi, do you have questions of Mr. Powell?

11 MS. NANASI: I do. I don't think that  
12 I will be able to finish within 25 minutes or --

13 THE HEARING OFFICER: Let's make good  
14 use of this time.

15 MS. NANASI: Excellent.

16 CROSS-EXAMINATION

17 BY MS. NANASI:

18 Q Good afternoon, Mr. Powell. First, my name  
19 is Mariel Nanasi. I represent New Energy Economy.  
20 Good to meet you in this setting. First, I'd like to  
21 discuss the statutory provisions governing OCD's  
22 authority. You are familiar with these laws.  
23 Correct?

24 A Generally. I didn't prepare anything for  
25 this hearing, but I'm generally aware of them.

1 Q And pursuant to 70-13-3, the statute says  
2 "It is the jurisdiction of the Oil Conservation  
3 Division of the Energy, Minerals and Natural Resources  
4 Department to regulate produced water as provided in  
5 the Oil and Gas Act." Is that your general  
6 understanding of that part of the law?

7 A Yes. Yes.

8 Q This gives the OCD broad authority to make  
9 rules and orders to regulate produced water on the oil  
10 and gas field. Correct?

11 A Yes.

12 Q You are familiar with NMSA 1978 sections  
13 70-2-12(B)(7). Is that correct?

14 A Not to memory, but it sounds like part of  
15 the Oil and Gas Act.

16 Q If it states the Oil Conservation Division  
17 may make rules and orders for the purposes and with  
18 respect to the subject matter stated in this  
19 subsection, that's sort of the broad 70-2-12(B) and  
20 then there's many subsections, that's what your  
21 recollection is. Is that right?

22 A Yes.

23 Q Okay. And so part 7 of that is "To require  
24 wells to be drilled, operated, and produced in such  
25 manner as to prevent injury to neighboring leases or

1 properties." Does that sound correct?

2 A That sounds correct.

3 Q Do you agree that under 70-2-12(B)(7), the  
4 law gives the OCD broad authority to make rules and  
5 orders requiring wells to be drilled, operated, and  
6 produced in such a manner as to prevent injury to  
7 neighboring leases and properties?

8 A I'm not a lawyer, but I would say in whole  
9 it would contingent on the other parts of the Oil and  
10 Gas Act.

11 Q And I'm not asking you as a lawyer, sir.  
12 I'm just asking you in your capacity as the director.

13 A I understand that.

14 Q Okay. Thank you. Referring you now to  
15 70-2-12(b)(15), "The Oil Conservation Division may  
16 make rules and orders for the purposes 'to regulate  
17 the disposition, handling, transport, storage,  
18 recycling, treatment, and disposal of produced water  
19 during or for reuse in the exploration, drilling,  
20 production, treatment, or refinement of oil or gas,  
21 including disposal by injection pursuant to authority  
22 delegated under the Federal Safe Drinking Water Act in  
23 a manner that protects public health, the environment,  
24 and fresh water resources.'" Does that sound like  
25 what you understand section (B)(15) to state?

1           A     I believe you're reading it and that sounds  
2 familiar.

3           Q     As an expert for the OCC, can you explain  
4 what authority you believe OCD has under that  
5 provision that I just read to you to regulate produced  
6 water?

7           A     I would say I'm not expert on OCC. I'm an  
8 expert for Oil Conservation Division so I would flip  
9 those acronyms a little bit. As far as being an OCD  
10 professional, our charge is to enforce the rules that  
11 the OCC promulgates.

12          Q     Okay. And with that caveat, and I thank you  
13 for that clarification, can you explain what you  
14 believe the OCD's power to regulate produced water is?

15          A     The power to regulate produced water is  
16 through the rules that the OCC promulgates. So the  
17 Produced Water Recycling Rule, the Spills Rule,  
18 anywhere where produced water is used in the -- the  
19 OCD's rules that have been promulgated.

20          Q     And so that's a broad -- again, broad  
21 authority, the overarching meta rule and then a more  
22 specific thing about how do we deal with produced  
23 water, whether it's with disposition or handling or  
24 transport or storage or recycling, treatment and  
25 disposal. That broad authority regarding produced

1 water is under the OCD's purview.

2 A Correct.

3 Q Referring you, Mr. Powell, to another  
4 section, which is 70-2-12(B)(21). And this also says  
5 that "The Oil Conservation Division may make rules and  
6 orders for the purposes" and then section 21 or  
7 paragraph 21 states quote "to regulate the disposition  
8 of non-domestic wastes resulting from the exploration,  
9 development, production, or storage of crude oil or  
10 natural gas to protect public health and the  
11 environment." Does that sound correct?

12 A Yes.

13 Q Could you please tell us, how do you define  
14 non-domestic wastes?

15 A I didn't prepare that for this. I would say  
16 non-domestic waste are handled I believe under  
17 19.15.35. That's going to be your pit liner, your  
18 filters, those kind of things.

19 Q Drill cuttings. Right?

20 A I don't know if those fall under the  
21 non-domestic or domestic. I would have to look  
22 through the rules. That's not something I prepared  
23 for this.

24 Q Okay. As an expert for the OCD, can you  
25 explain what statutory authority you believe OCD has

1 under 70-2-12(B)(21) to regulate non-domestic wastes?

2 MR. TREMAINE: Objection. Calls for a  
3 legal conclusion.

4 THE HEARING OFFICER: Yeah, I think I  
5 understand your questions of Mr. Powell as a  
6 regulator. But a lot of the questions have skirted on  
7 legal conclusions.

8 So, Mr. Powell, you know how to answer  
9 that question, which is that you're not answering as a  
10 lawyer. To the extent you have some other answer as a  
11 regulator, for example, you can answer it.

12 THE WITNESS: My general understanding  
13 is the Oil and Gas Act provides the overarching  
14 statutory language that the OCC follows and  
15 promulgating the rules. So that would allow the OCC  
16 to promulgate rules which then the OCD would enforce.

17 BY MS. NANASI:

18 Q Perfect. So then this subsection  
19 specifically 21, when it says "To regulate the  
20 disposition of non-domestic wastes resulting from the  
21 exploration, development, production, or storage of  
22 crude oil or natural gas to protect public health and  
23 the environment," as a regulator, could you explain  
24 what your job to regulate the disposition of  
25 non-domestic waste, what does that mean?

1           A       I -- I go back to I think it's really hard  
2 as a regulator saying how I utilize that to regulate  
3 that provision because that's not a provision I  
4 directly regulate. It's a provision that gives us  
5 authority to create rules. And to know what rules  
6 were created using that provision, I would have to go  
7 back and look through the rule book to see which rules  
8 were promulgated as part of that act.

9                   I would say for non-domestic waste is part  
10 35. The exploration stuff may be part 36 which is  
11 your surface waste management facilities. But knowing  
12 extensively how the OCD uses that to enforce, we don't  
13 use that statute to do that direct enforcement. We  
14 use the rules promulgated from that. And each time we  
15 do rule making, we use what statutes are that  
16 overarching authority to promulgate the rule. But OCC  
17 or OCD doesn't use the act as far as enforcement.

18           Q       Okay. Would your answer be generally the  
19 same for the last provision under that section, which  
20 is 2270-2-12(B)(22) which states "To regulate the  
21 disposition of non-domestic waste resulting from the  
22 oil field service industry, the transportation of  
23 crude oil or natural gas, the treatment of natural  
24 gas, or the refinement of crude oil to protect public  
25 health and the environment"? Would your answer be the

1 same?

2 A Yeah, it would be the same. That's the  
3 overarching authority granted to the OCC and the  
4 division through the OCC for those rules and OCD  
5 enforces the rules promulgated from that.

6 Q Thank you. Is it OCD's position that an  
7 operator shouldn't have to certify that it is not  
8 using PFAS-contaminated produced water in its  
9 operations under this proposed rule?

10 A OCD is not looking for certification that  
11 they're using PFAS-free produced water under this  
12 rule.

13 Q Why not?

14 A It's not seen as a chemical additive. It's  
15 also regulated under -- specifically under 19.15.29  
16 which is the release rule that regulates produced  
17 water as a whole. And it's very explicit in its  
18 regulation of produced water. So therefore, we didn't  
19 extend that to this rule because it's already  
20 regulated by another rule. And it wasn't a rule that  
21 WildEarth Guardians proposed to modify as part of this  
22 rulemaking so it wasn't under the purview of the OCD  
23 to look at that change.

24 Q Do you think that that is potentially a huge  
25 loophole though?

1           A       I would say it -- produced water was  
2 specifically looked at by the Commission under  
3 19.15.29 at that time. And the Commission designated  
4 what produced water when there is an impact would be  
5 tested for. So it wasn't something that we look into  
6 because it was already addressed by another rule.

7           Q       Do you have an opinion about whether there's  
8 more PFAS in municipal treatment facilities versus  
9 produced water?

10          A       I have not studied PFAS in any of the  
11 waters.

12          Q       It appears that NMOGA is concerned about the  
13 ubiquitous nature of PFAS in water, whether the water  
14 comes from municipal treatment facilities or produced  
15 water, wouldn't it be easier to identify what  
16 chemicals are additive if the operators were required  
17 to disclose them upfront rather than having to  
18 distinguish where the PFAS chemicals came from in the  
19 event of a spill or a well blowout or a well casing  
20 failure?

21          A       I think that would be extremely broad. For  
22 example, municipal water supplies are regulated by the  
23 Department of Health. If there's testing of those  
24 waterways, those things that would be something that I  
25 would expect the Department of Health to do,

1 otherwise, potentially Oil and Gas would be testing  
2 for something that people may be drinking.

3 Q Do you know that PFAS laboratory analysis is  
4 expensive and time-intensive?

5 A I don't know that.

6 Q I'd like to propose a scenario. There's a  
7 well blowout and then the OCD demands that all  
8 chemicals, including what NMOGA claims is trade  
9 secrets must be divulged to the Commission. And PFAS  
10 is detected in significant amounts. So just assume  
11 that scenario. If OCD sought to hold the operator  
12 accountable without initial disclosure, there may be a  
13 fight between the operator and OCD as to whether the  
14 PFAS contamination was additive in the fracking fluid  
15 or whether the PFAS pollution was inherent in the  
16 PFAS-contaminated fresh or produced water. Correct?

17 MS. MULCAHY: I'm going to -- I'm  
18 sorry. I just need to object here. I'm going to  
19 object to that question. One, it calls for  
20 speculation. Two, it's a compound question. And  
21 three, I'm not even really sure what's being asked.

22 THE HEARING OFFICER: All right.  
23 Mr. Powell, I certainly would instruct you not to  
24 speculate in your answer to the question. To the  
25 extent -- well, let me ask you. Did you follow it?

1 It was compound. Did you follow it?

2 THE WITNESS: I believe I followed it.  
3 I -- to answer it, there would be a clarification I  
4 would need to make to be able to answer it, but I  
5 think it's what authorities OCD would take. And I --  
6 I followed that portion so if that's what we're  
7 looking for, I can answer that.

8 THE HEARING OFFICER: All right. Go  
9 ahead.

10 THE WITNESS: The first question though  
11 I do need clarification on, as you mentioned well  
12 blowout, we're talking well integrity, a well blowout  
13 potentially is something entirely different. So I  
14 would ask if you want it for a well blowout, what kind  
15 of event are you talking about?

16 THE HEARING OFFICER: Okay. Let's do  
17 what you just said instead. Well integrity.

18 THE WITNESS: Okay. So if there's a  
19 downhole well integrity event and there is an impact  
20 to water, OCD has jurisdictional powers under the Oil  
21 and Gas Act for subpoenas, request investigations. So  
22 ultimately, if the operator is fighting OCD, the  
23 director I believe has emergency powers to take action  
24 and then there's also enforceability powers that the  
25 OCD has that they could take.

1 BY MS. NANASI:

2 Q Well, what I'm trying to get at is if that  
3 scenario were to happen and OCD did use its  
4 enforcement powers and did get, at that time, the  
5 operator to divulge the chemical constituents, whether  
6 they were alleged trade secrets or not, couldn't there  
7 be or wouldn't this situation invite like a fight  
8 between the operator -- and let's say there was lots  
9 of PFAS that were found. Wouldn't it invite a fight  
10 between --

11 MS. MULCAHY: I'm sorry. I have to  
12 object. Again, I'm not sure what's being asked when  
13 she says, "Lots of PFAS being found." It's also a  
14 compound question. And I think he's, the witness, has  
15 already stated that he's answered the question to the  
16 extent that he can.

17 THE HEARING OFFICER: All right.

18 So, Ms. Nanasi, if we could get to the  
19 question perhaps more directly.

20 Mr. Powell, do you have the  
21 clarification you wanted?

22 THE WITNESS: I did -- did receive the  
23 clarification to provide the last answer.

24 THE HEARING OFFICER: All right. So  
25 this is a new question. All right. Go ahead.

1 BY MS. NANASI:

2 Q If there was significant PFAS that was  
3 discovered, wouldn't the fact that there wasn't  
4 initial disclosure invite a fight between the operator  
5 saying, "Hey, this just came from the municipal water.  
6 We didn't add it"?

7 A I think under the OCD's proposal, looking  
8 for PFAS as a whole comes from the chemical  
9 disclosures that OCD would receive so we would be  
10 testing that based on if it was disclosed as one of  
11 those chemicals. So if it's found then it -- I don't  
12 think it would be a surprise and at the same time, I  
13 believe any like remediation efforts, those kinds of  
14 discussions, would be under part 29 and part 30 and  
15 would not be under this rule as far as evaluation,  
16 enforcement actions, and where to go with it would be  
17 under other rules.

18 Q In my scenario, wouldn't systematic initial  
19 disclosure actually be more protective for both  
20 operators and first responders, health professionals,  
21 and the public?

22 A I don't believe so. As -- as we stated  
23 before, this rulemaking isn't creating additional  
24 personnel for OCD to perform this. So even if OCD  
25 received all of those disclosures upfront, OCD doesn't

1 have the manpower to address those. We feel if that  
2 type of disclosure is being pursued, that needs to be  
3 a legislative proposal which OCD could respond to and  
4 ask for additional personnel if passed.

5 Q And if the OCD felt that initial systematic  
6 initial disclosure was more protective of human health  
7 and the environment, couldn't the Division go to the  
8 legislature like in a couple months and ask for some  
9 more money to make sure that you had proper staffing  
10 in order to regulate on behalf of New Mexican's health  
11 and the environment?

12 A I think at this point OCD hasn't made that  
13 determination because roughly 2,000 wells are drilled  
14 every year and we're talking completions,  
15 recompletions. Very few of those, if ever, have a  
16 direct impact to water or surface water, ground water,  
17 surface water. So those notifications wouldn't be  
18 going to an impacted party in those scenarios.

19 Q But I'm not talking about notifications.  
20 I'm talking about initial disclosure of chemicals used  
21 in the downhole operations.

22 A But that would be the initial disclosure  
23 that -- initial disclosures would be unneeded in say  
24 99.9 percent of the time.

25 MS. NANASI: I see that it's 12:58 and

1 I would go into a different line of questioning if you  
2 want to switch. Thank you, Mr. Powell.

3 THE HEARING OFFICER: Do you have a lot  
4 more questions or can you estimate?

5 MS. NANASI: I have -- I didn't number  
6 them, but I have 18 or so.

7 THE HEARING OFFICER: Okay. Well,  
8 let's turn then to Dr. Hansen. Do we have her in the  
9 room or on the platform?

10 Mr. Powell, thank you very much.

11 MS. NANASI: Thank you.

12 I do have an opening statement, Madam  
13 Hearing Officer, but we could wait. I could postpone  
14 that until after Ms. Hansen if you'd like or --

15 THE HEARING OFFICER: Yeah. Let's move  
16 to Dr. Hansen. Oh, I'm sorry. An opening statement  
17 which would I think probably help the Commission get  
18 an idea of where you're headed.

19 MS. NANASI: Correct. May I approach?  
20 And I do have copies of it.

21 THE HEARING OFFICER: For the opening  
22 statement?

23 MS. NANASI: Yes.

24 THE HEARING OFFICER: I did distribute  
25 the hard copies of Dr. Hansen's rebuttal that you

1 handed me earlier.

2 MS. NANASI: Thank you. But this is a  
3 copy of my opening statement which I would like to  
4 give to you and the Commissioners and I will give it  
5 to the court reporter.

6 THE HEARING OFFICER: Yes. Thank you.

7 MS. NANASI: May I proceed?

8 THE HEARING OFFICER: Yes, please.

9 Thank you.

10 MS. NANASI: May it please the  
11 Commission, I am Mariel Nanasi, lead counsel and  
12 executive director for New Energy Economy. I would  
13 like to address certain issues with you: the need to  
14 ban PFAS, the importance of the definition of PFAS  
15 that WildEarth Guardians, which I will be referring to  
16 as Guardians throughout, proposes and why full  
17 chemical disclosure is necessary to protect public  
18 health and the environment. But first, I'd like to  
19 address NMOGA's rather combative and disingenuous  
20 stance in this case.

21 Right off the bat, NMOGA is challenging  
22 your authority, never mind that the legislature has  
23 explicitly endowed this Commission with the authority  
24 and responsibility to regulate produced water and non-  
25 domestic waste to "protect public health and the

1 environment." And to protect landowners and  
2 properties in "such a manner as to prevent injury."  
3 What this means is that if you find that PFAS pose  
4 harm to human health and the environment because of  
5 its toxicity, mobility and persistence and PFAS  
6 contaminated-produced water and non-domestic waste can  
7 cause the degradation, if not permanent contamination  
8 of property, and it is your regulatory authority to do  
9 everything in your power to ameliorate these dangerous  
10 threats. Twenty-three states have done just that and  
11 we should join them.

12 This case raises the very critical  
13 question if a claimed trade secret where secrecy is  
14 generally preserved for the sake of business  
15 competition must yield to a more paramount concern,  
16 the health of our bodies, our waters, our water, and  
17 our communities. New Energy Economy submits that it  
18 must. Colorado and California have already made this  
19 sound determination. As Dr. Hansen, New Energy  
20 Economy's expert witness, stated in her rebuttal,  
21 "Between 2010 and 2024, the numbers of self-reported  
22 spills by the oil and gas industry indicate over  
23 10,000 instances of produced water spills totaling  
24 over a million gallons of produced water spilled. Of  
25 those spilled, 187 reached water course and 99 spills

1 affected groundwater. Given that PFAS has been  
2 demonstrated to be present in produced water and the  
3 persistence of PFAS compounds in the environment, it  
4 is likely that essentially all the PFAS ever spilled  
5 in surface or groundwater during this 14-year  
6 reporting period is still present and mobile in the  
7 environment or present in a living being, either in  
8 its original form or as a terminal PFAS degradation  
9 product."

10 It is your moral and legal duty to  
11 disrupt the pathways of further contamination. Given  
12 that according to the New Mexico Environment  
13 Department, 78 percent of New Mexicans depend on  
14 groundwater for drinking water, 81 percent of New  
15 Mexicans are served by public systems with water  
16 derived from ground water sources and over 170,000 New  
17 Mexicans depend on private wells for drinking water.  
18 The Commission must embrace this opportunity despite  
19 -- this opportunity -- excuse me -- to use its  
20 authority to protect New Mexicans and our water from  
21 even greater dangerous contamination.

22 The public is counting on you. No. 1,  
23 NMOGA's first objection is baseless. Well within the  
24 Commission's authority is the regulation of PFAS in  
25 non-domestic wastes and produced water. The

1 Commission is authorized to prevent oil and gas waste  
2 from contaminating New Mexico and to protect public  
3 health and the environment. NMOGA's pre-hearing  
4 statement alleges that Guardians' application and  
5 proposed amendments seek to have the OCD regulate "the  
6 generation" as opposed to the "disposition" or non-  
7 domestic wastes or produced water, arguing that  
8 because section 70-2-12(B)(15) provides the Commission  
9 with the authority to regulate disposition and other  
10 activities associated with it but doesn't specifically  
11 use the word generation in the statute, thereby, OCD's  
12 regulatory authority is limited and may not act to  
13 regulate the "generation" of PFAS contaminated  
14 produced water.

15 In other words, according to NMOGA, the  
16 OCD is free to regulate produced water once it emerges  
17 from a well but cannot regulate or even learn the  
18 content of the fluid that becomes produced water that  
19 represents a threat to our health and the environment.  
20 No one involved in this proceeding, including NMOGA,  
21 is confused about the process that results in produced  
22 water and waste. Drillers use fracking fluid made up  
23 of water and chemicals, set off explosions underground  
24 to release gas and oil. What comes back out of the  
25 earth as a result is fracking waste or produced water

1 which includes all the chemicals and the fracking  
2 fluid, plus whatever else comes up from below.

3 NMOGA's position is that despite the  
4 Commission's explicit responsibility to regulate  
5 produced water and its explicit authority to regulate  
6 its disposition to prevent injury, protect public  
7 health and environment, it does not include the  
8 authority to regulate what goes downhole in oil and  
9 gas operations. NMOGA's position is wrong for several  
10 reasons. First, as this Commission understands, the  
11 only way non-domestic waste or produced water exist is  
12 via oil and gas production.

13 Guardians' application and proposed  
14 amendments do not ask the OCD to exceed their powers  
15 or exceed its statutory authority by regulating  
16 generation of produced water and non-domestic waste.  
17 Guardians' application and proposed amendments seek to  
18 ban PFAS-contaminated produced water and  
19 PFAS-contaminated non-domestic waste. How is that  
20 accomplished? By banning PFAS and oil and gas  
21 downhole operations.

22 If PFAS is banned and downhole  
23 operations then when produce water and non-domestic  
24 waste is disposed, handled, transported, stored,  
25 recycled or treated, it won't contain PFAS. Even

1 NMOGA concedes that the "common understanding" of  
2 disposition is the disposal or discarding of  
3 something, the power to make decisions about disposal.  
4 The OCD has the power to make decisions about produced  
5 water and non-domestic waste disposal, including what  
6 is in them. And whether they are contaminated with  
7 PFAS.

8           Second, NMOGA's trying to sow confusion  
9 when there is none. Pursuant to section 70-13-3, the  
10 legislature gives OCD broad discretion to regulate  
11 produced water and OCD may make rules and orders  
12 explicitly pursuant to 70-2-12(B)(7) to require,  
13 require, wells to be drilled, operated and produced in  
14 such a manner as to prevent injuring to neighboring  
15 leases or properties, to regulate the disposition,  
16 handling, transport, storage, recycling, treatment,  
17 and disposal of produced water during or for reuse in  
18 the exploration drilling, production, treatment, or  
19 refinement of oil or gas, including disposal by  
20 injection to authority delegated under the Federal  
21 Safe Drinking Water Act in a manner that protects  
22 public health, the environment and freshwater  
23 resources.

24           70-2-12(B)(21) "To regulate the  
25 disposition of non-domestic waste resulting from the

1 exploration, development, production or storage of  
2 crude oil or natural gas to protect public health and  
3 the environment." And 72-12(B)(22) to regulate the  
4 disposition of non-domestic waste resulting from the  
5 oil field service industry the transportation of crude  
6 oil or natural gas, the treatment of natural gas, or  
7 the refinement of crude oil to protect public health  
8 and the environment.

9 Third, it is beyond dispute that PFAS  
10 is a toxic substance that is harmful to public health  
11 and the environment. And Guardians' application and  
12 proposed rule amendments seek to ban PFAS used in  
13 downhole operations. "NMOGA supports the  
14 science-based prohibition on the use of PFAS." How  
15 that is accomplished is important and a legitimate  
16 area of legal debate. But for NMOGA to challenge this  
17 Commission's authority to regulate PFAS with such  
18 sweeping language and via confusing and baseless  
19 arguments should be rejected. No. 2, NMOGA's second  
20 objection is another red herring injected to confuse  
21 and sow doubt. And two, is without merit.

22 The Commission and Guardians understand  
23 the difference between produced water and non-domestic  
24 waste. NMOGA claims that "WEG is attempting to  
25 implicitly or explicitly redefine or reframe produced

1 water as either a waste or non-domestic waste through  
2 this rulemaking process and any such attempt is  
3 legally and procedurally improper. Despite this  
4 baseless claim, Guardians is not trying to conflate  
5 these terms, redefine, or reframe these different oil  
6 and gas waste streams. This bogus claim should be  
7 dismissed without further ado.

8 Guardians is requesting a rule change  
9 to prohibit the intentional use of PFAS by the oil and  
10 gas industry in downhole operations so that there will  
11 be no further PFAS in both produced water and  
12 non-domestic waste. NMOGA is trying to create legal  
13 chaos, conflating two different waste streams when  
14 there is actually none. Three, NMOGA's third  
15 objection is Guardians' reference to the Colorado law  
16 that prevents any further PFAS use by the oil and gas  
17 industry and requires chemical constitute disclosures.  
18 NMOGA makes an obvious point. Legislative action is  
19 not equivalent to rulemaking, yet its point is  
20 irrelevant here.

21 The vast body of scientific peer  
22 reviewed science points to research about the health  
23 impacts of PFAS. Exposures to PFAS may lead to  
24 decreased fertility, developmental delays in children,  
25 and raise the risk of certain cancers, including

1 kidney, testicular and breast cancers and more. Our  
2 body's immune and vaccine response and hormones may  
3 also be negatively compromised. Guardians points to  
4 Colorado laws regarding a PFAS ban and a chemical  
5 disclosure as critical precedent, not to confuse the  
6 difference between statute and rulemaking. But  
7 critically, because the oil and gas industry, just  
8 across the border, has adapted to a PFAS ban and  
9 chemical constitute disclosure and continues to  
10 operate and profit. "Anything Colorado did or failed  
11 to do in its most recent legislative action is  
12 irrelevant to the present rulemaking" says NMOGA.

13 Colorado's law is not irrelevant  
14 because it demonstrates that when our neighbor to the  
15 north required a PFAS and chemical constitute  
16 disclosure to protect public health and the  
17 environment, the oil and gas industry was able to  
18 accommodate the more stringent standards. There is no  
19 evidence that NMOGA has submitted the changes  
20 Guardians proposed -- that the changes Guardians  
21 proposed to ban PFAS and require chemical disclosure  
22 can't be accomplished here in New Mexico or that the  
23 changes are not well within OCD's broad regulatory  
24 authority granted by our legislature.

25 Four, NMOGA urges rejection of many of

1 Guardians' definitions, but these are necessary to  
2 effectuate the proposed rules. I will not go through  
3 why each of these definitions are necessary to  
4 implement the proposed rule changes and their  
5 respective legal underpinnings. I will save that for  
6 a briefing. But I would like to highlight one very  
7 important one that is critical for you to ponder as  
8 you go through this hearing process. That is the  
9 definition of PFAS.

10 NMOGA urges the Commission to reject  
11 Guardians' definition of PFAS chemical, though this is  
12 the definition that has been adopted in 23 states and  
13 has been used by Congress in promulgating laws.

14 Guardians' definition, which is the widely accepted  
15 definition, is PFAS chemicals means Perfluoroalkyl or  
16 Polyfluoroalkyl substance which with at least one  
17 fluorinated carbon atom. Dr. Hansen testifies that  
18 the definition "ensures an accurate understanding and  
19 monitoring of PFAS risk."

20 NMOGA argues for an extremely limited  
21 definition of PFAS in the rulemaking and attempt to  
22 exclude thousands of toxic compounds in this class of  
23 chemicals from the rule. Again, Dr. Hansen testifies  
24 against both NMOGA and OCD's definition. She explains  
25 that their definitions are "too narrow to be

1 protective of humans and the environment. The  
2 specific PFAS used by the oil and gas industry are not  
3 pure compounds but are available with measurable  
4 levels of residuals, imparities and break down  
5 products. It is environmentally and chemically  
6 simplistic to say that adequate control is achieved  
7 using a definition only relevant to a particular  
8 industry. PFAS are exceptionally stable in the  
9 environment. Most are highly mobile. Recent research  
10 suggests the toxicity of PFAS compounds is additive.  
11 These characteristics of the class indicate a need for  
12 a broad inclusive definition to describe existing and  
13 potential risk."

14           You will have a world class expert  
15 testify before you. Dr. Hansen's research has been  
16 cited thousands of times by other scientists and  
17 researchers and I urge you to explore why Dr. Hansen  
18 is empathetic about a clear and broad definition of  
19 PFAS and believes that inclusion of PFAS, even  
20 compounds lacking in robust taxological information is  
21 necessary. It is critical that we get this right.  
22 And Dr. Hansen's testimony provides the substantial  
23 evidence that you need to adopt a rule that is  
24 comprehensive and the most protective of human health  
25 and the environment just as the legislature instructed

1 is to be done. And this is last.

2 Chemical disclosure is needed to verify  
3 compliance with the PFAS ban and to provide  
4 information necessary for risk assessments and  
5 monitoring by regulators, first responders, health  
6 professionals and the public. As you are aware,  
7 Guardians' rule changes require the disclosure of all  
8 chemical constituents in downhole operations. That  
9 means the oil and gas industry would have to divulge  
10 their chemical ingredients, not their recipe. Why is  
11 this necessary?

12 No. 1, the stakes are high and we must  
13 disrupt PFAS pathways. The health of our bodies, our  
14 water, and our communities is at stake. Scientific  
15 studies have linked exposure to PFAS with high  
16 cholesterol, ulcerative colitis, testicular, liver,  
17 pancreatic, and kidney cancer, preeclampsia, liver  
18 damage, thyroid disease, decreased vaccine response,  
19 asthma, decreased fertility, low birth weight, delayed  
20 mammary gland development, developmental problems,  
21 effects on brain development and diminished immune  
22 system response.

23 As NMED cabinet secretary James Kennedy  
24 [ph] has repeatedly stated "Given the toxicity,  
25 mobility and persistence of PFAS, we must disrupt the

1 pathways of further PFAS contamination because it is  
2 more advantageous to prevent PFAS pollution than to  
3 try and clean it up at enormous cost." No. 2, right  
4 to know. One of the fundamental underlying policies  
5 behind the idea of environmental protection in this  
6 country is that the public has a right to know certain  
7 things, such as basic health information about  
8 substances and compounds to which our residents are  
9 being exposed.

10 When regulations compel disclosure of  
11 such substances and health studies thereof, the public  
12 can actually better protect themselves by making an  
13 informed decision about whether or not they want to  
14 voluntarily expose themselves to such a risk or how  
15 best to manage the risk of involuntarily exposure.  
16 No. 3, accountability. Disclosure is the chief method  
17 of holding fracking companies accountable. With  
18 chemical disclosure, it is easier to identify and  
19 quantify chemicals that may be present in spilled  
20 fluid. Without chemical disclosure, one has to use  
21 non-targeted methods which are harder to measure and  
22 do not allow for quantification until they are  
23 positively identified.

24 In other words, with chemical  
25 disclosure, it is easier to know what you are looking

1 for and increases the ability to characterize human  
2 health risk. No. 4, policy driven by science. Full  
3 chemical constitute disclosure will provide the agency  
4 and the public with more data. The more data we have,  
5 the better equipped we will to make  
6 scientifically-based policy decisions to protect our  
7 waterways from contamination and protect the health of  
8 New Mexicans and our environment.

9 I'll close by acknowledging that PFAS  
10 are pernicious threat to wildlife and human health  
11 because of their long-term stability,  
12 nonbiodegradability in the environment, bio  
13 persistence in tissues and documented serious health  
14 effects. New Energy Economy thanks you, Madam Hearing  
15 Officer and Commissioners for your attention to this  
16 extremely important matter. We would never want to  
17 look back at this moment and say that when we had the  
18 chance to reduce toxicity in the environment and  
19 reduce harm that we did not act. And with that, I  
20 present you with Dr. Hansen.

21 THE HEARING OFFICER: Thank you,  
22 Ms. Nanasi. That was exactly 20 minutes.

23 Dr. Hansen.

24 //

25 //

1 WHEREUPON,

2 KRISTEN HANSEN,

3 called as a witness and having been first duly sworn  
4 to tell the truth, the whole truth, and nothing but  
5 the truth, was examined and testified as follows:

6 THE HEARING OFFICER: Thank you very  
7 much.

8 Go ahead, Ms. Nanasi.

9 DIRECT EXAMINATION

10 BY MS. NANASI:

11 Q Please state your name and spell it for the  
12 records.

13 A My name is Kristen Hansen, K-R-I-S-T-E-N,  
14 H-A-N-S-E-N.

15 Q Did you prepare direct technical testimony  
16 and exhibits that New Energy Economy has designated as  
17 Exhibit A?

18 (NEE Exhibit A was marked for  
19 identification.)

20 A I have.

21 Q Is it true and correct to the best of your  
22 knowledge?

23 A It is.

24 Q If I were to ask you the same questions  
25 today, would you give the same answers?

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1           A       I would.

2           Q       Did you prepare rebuttal technical testimony  
3 in exhibits that New Energy Economy has designated as  
4 Exhibit B?

5                       (NEE Exhibit B was marked for  
6                       identification.)

7           A       I have.

8           Q       Is it true and correct to the best of your  
9 knowledge?

10          A       It is.

11          Q       If I were to ask you the same questions  
12 today, would you give the same answers?

13          A       I would.

14          Q       Could you please provide a brief summary of  
15 your technical, direct, and rebuttal testimony?

16          A       Yes. I support the ban on perfluoroalkyl  
17 and perfluoroalkyl substances or PFAS defined as a  
18 class of compounds, including chemicals with at least  
19 one aliphatic peripheral carbon moiety. The EPA  
20 recognizes at least 10,000 PFAS, though experts in the  
21 field estimate the classes includes up to 15,000, many  
22 of which have not been identified, much less  
23 characterized.

24                       There are six well-characterized PFAS  
25 compounds that the EPA has recently listed maximum

1 contaminant levels for in drinking water. The list is  
2 limited to 6, not because these are the only 6 of  
3 15,000 that pose a threat to human health, but because  
4 these are the compounds for which sufficient data  
5 exist to characterize deleterious effects to human  
6 health. Other members of the PFAS class are not  
7 well-studied. However, emerging evidence suggests  
8 potential similarities in toxicity for many members of  
9 the class. Emerging evidence also suggest the  
10 potential for additive toxicity amongst different  
11 members of the class, that is exposure to more than  
12 one PFAS may result in health effects greater than  
13 exposure to a single PFAS alone.

14 The potential for additive toxicity is  
15 reflected in EPA's utilization of a health index when  
16 considering the effects of PFAS on water quality. The  
17 definition of PFAS should not be limited to those  
18 compounds for which there are specific analytical  
19 methods. Given the uncontrolled nature of PFAS  
20 manufacturing processes and the variety of PFAS  
21 chemicals in the environment, a definition limited to  
22 specific compound would leave the vast majority of  
23 PFAS unmonitored and uncontrolled. The production,  
24 utilization, and discharge of PFAS compounds includes  
25 significant PFAS impurities and residuals, all of

1 which may be present in an overall formulation  
2 discharged to the environment.

3 Many PFAS as well as the PFAS impurities and  
4 residuals present in a PFAS product contain a  
5 hydrocarbon portion which may undergo some level of  
6 degradation in the environment. The product of that  
7 partial degradation is a smaller, persistent  
8 perfluorinated compound that may have different  
9 environmental mobility and toxicity. These residuals,  
10 impurities, and degradation products, known and  
11 unknown, are covered by the definition I've proposed.  
12 A comprehensive PFAS ban will protect public health  
13 from apparent PFAS as well as the impurities,  
14 residuals, and partial breakdown products.

15 My proposed PFAS definition is not just my  
16 expert opinion but is the definition adopted in 23  
17 states and in federal legislation as well. I disagree  
18 with the non-scientifically based perspective that  
19 insufficient toxicology data for a particular PFAS  
20 should disqualify that compound from inclusion in the  
21 comprehensive ban. Such logic is characterized in  
22 social science as "Undone science." It's defined as  
23 "Areas of research that are of concern for members of  
24 the public yet are not an area of focus for industry  
25 researchers, often due to deliberate or tacit

1 avoidance."

2 Many PFAS compounds pass through the  
3 placental barrier from mother to infant via breast  
4 feeding. These are two examples of routes of exposure  
5 that have been toxicologically characterize for the  
6 first time in the last 10 years, although PFAS have  
7 been present in our consumer products and environment  
8 for over 50 years. The defining characteristics of  
9 PFAS is their environmental persistence. Many are  
10 highly mobile and many are biologically active. Many  
11 PFAS move quickly and widely from their point of  
12 discharge or disposal via air, water, dust, sediment  
13 or bioDA.

14 The potential for PFAS spills by the oil and  
15 gas industry on the ground or in waterways,  
16 volatilization of PFAS from surface ponds, spills, or  
17 discharge of produced water underscores the  
18 significant risk to communities and the environment.  
19 Any one of these PFAS exposure routes could lead to  
20 wider environmental or human exposure. It's my expert  
21 opinion that full chemical constituent disclosure is a  
22 necessary companion to the PFAS ban. This provision  
23 is necessary to verify industry compliance with the  
24 PFAS ban and to provide information necessary for risk  
25 assessments, monitoring by regulators, first

1 responders, health professional, and community  
2 members. Thank you for allowing me to provide this  
3 summary and I look forward to further examination.

4 MS. NANASI: With that, Madam Hearing  
5 Officer, I move the direct technical testimony and  
6 exhibits of Kristen Hansen as New Energy Economy  
7 Exhibit A and the rebuttal technical testimony of  
8 Kristen Hansen as New Energy Economy Exhibit B and I  
9 do have for the court reporter a copy of both of those  
10 testimonies that I can tender to him afterward. And  
11 with that, Dr. Hansen is available for  
12 cross-examination.

13 THE HEARING OFFICER: All right. Thank  
14 you.

15 Are there objections to the admission  
16 of NEE Exhibits, A or B? No? Okay? They're  
17 admitted. Thank you.

18 (NEE Exhibit A and Exhibit B were  
19 received into evidence.)

20 THE HEARING OFFICER: Ms. Mulcahy, will  
21 you be doing the questioning?

22 MS. MULCAHY: Yes. Thank you.

23 CROSS-EXAMINATION

24 BY MS. MULCAHY:

25 Q Good afternoon, Dr. Hansen. Can you hear

1 me?

2 A I can. Thank you.

3 Q Yes. Thank you for being with us in the  
4 virtual world. We appreciate it. I was just  
5 wondering, Dr. Hansen, you are not a toxicologist.  
6 Correct?

7 A That is true.

8 MS. MULCAHY: Thank you. I have  
9 nothing further.

10 THE HEARING OFFICER: All right. Thank  
11 you.

12 Mr. Maxwell, do you have questions of  
13 Dr. Hansen based on her testimony?

14 MR. MAXWELL: I do not have questions  
15 for Dr. Hansen. Thank you.

16 THE HEARING OFFICER: Thank you.

17 Ms. Kessler? There you are, okay.  
18 Thank you, Ms. Kessler shook her head no.

19 Mr. Tremaine?

20 MR. TREMAINE: No cross.

21 THE HEARING OFFICER: All right.

22 And Mr. Davis.

23 MR. DAVIS: I have a few.

24 THE HEARING OFFICER: All right.

25 //

1 CROSS-EXAMINATION

2 BY MR. DAVIS:

3 Q Hello, Dr. Hansen. My name is Tim Davis. I  
4 represent the petitioner, WildEarth Guardians. I have  
5 just a few questions for you. First, I wanted to know  
6 if you are familiar with a study that was authored by  
7 Siegel Et Al. and it's entitled "Investigation of  
8 Sources of Fluorinated Compounds in Private Water  
9 Supplies" in the oil and gas producing region of  
10 Northern West Virginia?

11 A I am familiar.

12 Q That's marked as WildEarth Guardians Exhibit  
13 53. Have you read this study?

14 A I have.

15 Q And this was a study of wells in West  
16 Virginia.

17 A Correct.

18 Q And there was some discussion a couple days  
19 ago about this study and I'm wondering if you could  
20 opine on whether and why you think this study from  
21 West Virginia would be relevant to the proposed rule.

22 A Certainly. I read the study and I feel like  
23 there are three main points that were brought out in  
24 this paper that are relevant to the discussion. The  
25 first is that the authors were able to demonstrate a

1 link between PFAS concentrations in private drinking  
2 water wells and unconventional oil and gas.

3 The second is that the authors measured non-  
4 targeted analytes, non-targeted PFAS compounds, that  
5 is specifically PFAS compounds that are not laid out  
6 by EPA methods. And in some cases found extremely  
7 high levels of these compounds in the private drinking  
8 water wells. I think that that goes to demonstrate  
9 the importance of having a very broad definition of  
10 PFAS so that we are looking for all the compounds that  
11 could potentially impact a water supply, not simply  
12 those that have been well-characterized already.

13 The third point that I thought was relevant  
14 is that as the authors tried to refine their model and  
15 understand the impact of unconventional oil and gas on  
16 private drinking water wells, they were hindered  
17 somewhat by the inability to know specifically what  
18 compounds the oil and gas industry had used. So since  
19 these compounds were uncharacterized or non-targeted,  
20 they used sophisticated analytical tools to develop an  
21 understanding of what the compounds are. But without  
22 having a specific compound named by the industry, they  
23 were unable to fully confirm those compounds.

24 As a result, the accuracy and the fidelity  
25 of their method was hampered by this lack of

1 information. So I think this also speaks to today's  
2 discussion in terms of the importance of having the  
3 industry be completely transparent with the chemicals  
4 that they are using.

5 Q And on that last point, I'd like to ask you  
6 a little bit about targeted versus non-targeted  
7 testing. Are you familiar with those terms?

8 A I am.

9 Q So can you --

10 A Oh, sorry. Go ahead.

11 Q I don't want to interrupt you. Please go  
12 ahead.

13 A No, no. I -- I wasn't sure if you just  
14 wanted me to start or you had a specific question.

15 Q Oh, the specific question related to that is  
16 when you have a sample for analysis and you have full  
17 disclosure of what's in that sample, can you talk  
18 about the accuracy of using targeted testing on that  
19 sample versus a sample in which you don't have  
20 disclosure and you must start with non-targeted  
21 testing? Can you compare those two scenarios?

22 A Absolutely. When an analytical chemist  
23 knows the compound that they are looking for in a  
24 targeted analysis, there is a standard available and  
25 there is an understanding of the structure of that

1 compound. And so it's much easier for the chemist to  
2 go in and compare what they have found to what they  
3 know they are looking for. And it is the case that in  
4 the targeted analysis currently in methods the EPA  
5 has, there are specific standards that are available.

6 In non-targeted analysis, when an analyst  
7 does not know what they're looking for, they have to  
8 use much more sophisticated analytical equipment and  
9 secondary clues to help them try and understand what a  
10 molecule can be. Even if structurally they're able to  
11 say that they know the identity of the compound,  
12 without having that absolute confirmation, it makes it  
13 difficult for them to provide accurate, quantitative  
14 data. They need a standard of that material in order  
15 to measure exactly how much is present.

16 Q Is it fair to say that when you know what  
17 you're looking for, you can more accurately identify?  
18 That can --

19 A That's a much simpler version of what I  
20 said. Yes.

21 Q Is it also accurate to say that when you  
22 know what you're looking for, you can use targeted  
23 testing to quantify a compound?

24 A Absolutely.

25 Q You hit on this a little bit in your opening

1 summary, but I just want to ask you a couple of  
2 questions about the toxicological data that we have  
3 currently on PFAS compounds. I believe you said there  
4 are six that you would consider that we have  
5 toxicological data on currently.

6 A Yeah. And I -- I mean, I want to emphasize,  
7 while I am not a toxicologist, I think that the  
8 statements that I'm making about toxicology are really  
9 -- they're conclusions that have already been  
10 well-developed by other toxicologists so it's not --  
11 not work that I've done, but it is conclusions that  
12 are well understood in the industry. And yes, the six  
13 -- the six compounds that the EPA has chosen to  
14 designate in the -- for maximum contaminant limits are  
15 compounds that I think are well-characterized  
16 toxicologically.

17 Q And so the absence of toxicological data on  
18 the universe of PFAS compounds other than those six  
19 does not mean that the ones that are other than those  
20 six are safe.

21 A Absolutely. The statement that there is --  
22 there's no evidence that this compound is toxic does  
23 not mean that there is evidence to prove that it is  
24 non-toxic.

25 Q For the PFAS compounds that have been

1 studied for toxicological purposes, those compounds  
2 have shown to be harmful to human health. Is that  
3 correct?

4 A That is correct.

5 Q Do you think it's any coincidence that the  
6 ones that have been studied have all shown those  
7 harmful properties?

8 A I don't think it's a coincidence. I think  
9 it's a very complex area to understand the toxicity.  
10 And as I -- as I stated, one of the things that  
11 toxicologists are studying right now and learning is  
12 that there are, in fact, even additive -- the  
13 opportunity for additive toxicological results amongst  
14 these compounds. It's very complicated to study them  
15 and it's very complicated to study in general chronic  
16 toxicity, which is what most of these compounds  
17 impart.

18 Q And the body of scientific literature --

19 MS. MULCAHY: So I'm sorry.

20 Madam Hearing Officer?

21 THE HEARING OFFICER: Yes, ma'am?

22 MS. MULCAHY: I'm going to object here  
23 because Dr. Hansen is not a toxicologist and I don't  
24 mind her talking about stuff that has already been  
25 found in studies. I think perhaps she has the

1 expertise to be able to read that, but once she gets  
2 off into opining on stuff about toxicology, I think  
3 that's outside the scope of her knowledge.

4 THE HEARING OFFICER: All right.

5 So, Mr. Davis --

6 MR. DAVIS: I'm happy to ask my next  
7 question within the scope of the scientific literature  
8 that exists.

9 THE HEARING OFFICER: All right. Thank  
10 you.

11 BY MR. DAVIS:

12 Q Dr. Hansen, the current body of scientific  
13 literature around PFAS toxicity, does that tell us  
14 anything about additive toxicity?

15 A The current body of scientific literature  
16 tells us that there is potential for additive  
17 toxicity. An example of how this is reflected is the  
18 EPA's decision to use a health index as part of their  
19 MCL drinking water guideline, which accounts for the  
20 potential of additive toxicity amongst four of the  
21 targeted PFAS compounds.

22 Q In the current body of scientific  
23 literature, about the toxicology of PFAS compounds,  
24 does it tell us anything about sensitive populations  
25 like infants, the immunocompromised, pregnant people?

1           A     Yes.  The current body of scientific  
2 literature does talk about those sensitive  
3 populations.  Particularly, for example, the  
4 gestational repercussions and also health implications  
5 for infants.  That's something that has been studied  
6 relatively recently because, as you might imagine,  
7 that is a difficult population to study.  And as a  
8 result of those studies, the toxicology -- the  
9 toxicological literature reflects things like  
10 preeclampsia in pregnant people, as well as  
11 developmental challenges in gestation and immune  
12 suppression of infants, for example.

13           Q     I'm going to ask you about another one of  
14 WildEarth Guardians exhibits that's labeled as WG  
15 Exhibit 88.  This is a study authored by Jiang Et Al.  
16 and it's entitled "Characterization of Produced Water  
17 and Surrounding Surface Water in the Permian Basin,  
18 United States."  Are you familiar with that study?

19           A     I -- I am.

20           Q     And you've read this study?

21           A     I have.

22           Q     With regard to the use of PFAS, what did you  
23 take away from this study?

24           A     I took away two main points.  The first is  
25 that PFAS can be linked to produced water.  The

1 authors demonstrated the presence of PFAS compounds in  
2 produced water. The second thing that I took away is  
3 that this is an area that has not been studied and  
4 requires much more study. The authors used a small  
5 number of samples and spent a good deal of time in  
6 their text documenting how additional studies are  
7 needed to better understand the -- this phenomenon of  
8 PFAS in produced water.

9 Q And the samples in this study were taken  
10 from New Mexico.

11 A True. Yes.

12 Q I want to ask you really quickly about  
13 persistence in the environment and breakdown of PFAS.  
14 You do agree that PFAS is persistent in the  
15 environment.

16 A I do.

17 Q And can you talk about the constituents that  
18 result from the breakdown of PFAS, specifically I'm  
19 wondering if the constituents break down to further  
20 PFAS compounds.

21 A So many PFAS compounds start off as  
22 molecules that have a perfluorinated component and a  
23 non-perfluorinated component. When those molecules  
24 are in the environment or in humans or BioDa, the  
25 non-PFAS component often breaks down, leaving a

1 terminal, very persistent PFAS component in the  
2 environment. So an example of this that is fairly  
3 well-known is that in the textile industry, the PFAS  
4 compounds that are used to coat a textile have  
5 molecules that are half hydrocarbon and half forever  
6 chemical.

7 And when those molecules leave the textile  
8 and end up in the environment, the hydrocarbon part of  
9 the molecule is -- falls apart, leaving the PFAS and  
10 in the case of 3M's textile, for example, that PFAS is  
11 a molecule known as perfluorooctane sulfonate that is  
12 probably present in over 90 percent of the blood of  
13 every human in the United States.

14 Q So when these PFAS break down, you often  
15 still have a PFAS after the breakdown?

16 A Absolutely. Yes.

17 Q And that new PFAS, post breakdown remains  
18 persistent in the environment?

19 A Yes. It does.

20 Q Are you aware that this rule seeks to ban  
21 PFAS in downhole oil and gas operations?

22 A I am.

23 Q And you're aware that it also seeks to ban  
24 undisclosed chemicals in oil and gas operations that  
25 are downhole?

1           A     I am.

2           Q     And you also understand under current law in  
3 New Mexico that operators do not have to disclose all  
4 chemicals that they use downhole?

5           A     I do.

6           Q     And you also understand that the basis for  
7 this proposed rule is to protect the public health and  
8 the environment?

9           A     I do.

10          Q     Do you have experience with non-disclosure  
11 of chemical compounds --

12          A     I do.

13          Q     -- that are claimed to be trade secrets?  
14 Can you tell us about that experience and how it  
15 relates to protection of human health and the  
16 environment?

17          A     Certainly. I worked at the 3M company for  
18 over 20 years and part of that time was in  
19 understanding and tracking forever chemicals in the  
20 environment. Following my employment at 3M and -- and  
21 reviewing documents that were released to the public  
22 as a result of litigation, I could understand more  
23 about what was going on around me at 3M at the time  
24 and also what happened historically.

25                 In 1975, researchers came to 3M and provided

1 a detailed chemical description of a molecule they had  
2 found ubiquitous in the U.S. population. They  
3 described that molecule to 3M and they specifically  
4 asked for disclosure of the identity of the compound.  
5 3M refused. That compound had the identity and a  
6 standard of that compound were made available to those  
7 researchers in 1975. I can tell you, as an analytical  
8 chemist, they would have immediately been able to  
9 confirm the identity of the compound that was present  
10 in the blood of the population in 1975.

11 As it was, 3M did not disclose that until  
12 2000. The result of that is that 25 years of  
13 scientific research was delayed because of 3M's  
14 unwillingness to share that confidential information.

15 Q So if there was a version of the proposed  
16 rule in which chemical disclosure was only provided to  
17 regulators, would that also prevent the type of  
18 research that you say we missed out on from 1975 and  
19 forward?

20 A Absolutely. If researchers don't have the  
21 details about the chemicals that are being used, they  
22 can't effectively study them. As an example, that --  
23 that paper we talked about at the beginning from West  
24 Virginia with contamination of private drinking water  
25 wells, that's absolutely true.

1 Q And you agree that there's a very limited  
2 amount of toxicological data on most PFAS compounds?

3 A I do.

4 MS. MULCAHY: Again --

5 BY MR. DAVIS:

6 Q So full public disclosure would allow us to  
7 start doing more science.

8 A Absolutely.

9 Q I want to ask you about WildEarth Guardians  
10 Exhibit 8. In your rebuttal testimony on page 3,  
11 lines 9 through 12, you list 23 states that used a  
12 single fully fluorinated carbon atom definition. Is  
13 that correct?

14 A That is true.

15 Q Have you looked at WildEarth Guardians  
16 Exhibit 8?

17 A I have. I skimmed it.

18 Q And that's a compilation of state law  
19 definitions that define PFAS as a substance with one  
20 fully fluorinated carbon item?

21 A True.

22 Q Is that exhibit consistent with your  
23 understanding of the 23 states that have used that  
24 definition?

25 A It is.

1 Q And is that definition consistent with the  
2 one you're proposing for this rulemaking?

3 A It is.

4 Q Are you familiar with the precautionary  
5 principle?

6 A I am.

7 Q Could you briefly explain what that is?

8 A Sure. The precautionary principle asks  
9 people who are in the position of making decisions to  
10 encourage caution in decision-making, especially when  
11 there is some evidence of risk. And with extremely  
12 persistent contaminants like PFAS, the -- the  
13 precautionary principle is especially important.  
14 There is plausible risk to the environment and to  
15 human health based on what we know about this class of  
16 compounds and so the precautionary principle would  
17 urge decision-makers to make decisions cautiously and  
18 on the side of public health.

19 Q In the context of the precautionary  
20 principle, do you believe that the one fully  
21 fluorinated carbon atom definition is consistent with  
22 the cautionary principle?

23 A I do.

24 Q And could you briefly explain why?

25 A The -- the one perfluorinated carbon atom is

1 the broadest definition that we have of PFAS and as a  
2 result, it allows us to look at the complexity of the  
3 class and to take into account the largest potential  
4 for a risk to human health and to the environment.  
5 Putting restrictions on what that definition is just  
6 narrows the view of what we can control and what we  
7 can measure and what we can monitor. And we know this  
8 is a class of compounds that carry significant risk to  
9 humans and to the environment.

10 Q Do you agree that these PFAS compounds are  
11 harmful to human health and the environment regardless  
12 of the source?

13 A Oh, I do.

14 Q So in your rebuttal testimony on page 2,  
15 lines 3 through 5, you state "It's the responsibility  
16 of the industry to control the use of both the  
17 compounds produced for their purposes and additional  
18 PFAS compounds that are part of that final  
19 formulation, including residuals and impurities." Do  
20 you remember that testimony?

21 A I do.

22 Q That's an accurate statement of your  
23 testimony?

24 A It is.

25 Q Can you explain a little bit what you mean

1 by that?

2 A Sure. The process by which forever  
3 chemicals is produced is extremely messy and hard to  
4 control. And even in the best of circumstances, we  
5 don't produce on specific compound, even when we're  
6 targeting it. We end up producing compounds that come  
7 with partially reacted or unreacted components and  
8 other things that we didn't target but that are  
9 present in those formulations. I could give you  
10 plenty of examples of products that -- that we  
11 encounter in our everyday life, product like Teflon,  
12 for example, leaves the plant carrying with it a whole  
13 series of impurities and residuals that pose human  
14 health risks. And those -- those come out even though  
15 Teflon is the product, what the consumer experience is  
16 is Teflon with these impurities and these residuals.

17 Q There's been some discussion about  
18 "background PFAS." That is -- that maybe also could  
19 be characterized as PFAS that is just present in the  
20 environment. Are you familiar with that term,  
21 background PFAS?

22 A Sure. Sure. Yeah.

23 Q And so, you know, whether -- let me start  
24 over. Strike that. If an oil and gas company injects  
25 PFAS through a frack fluid into the environment, do

1 you agree that that could be a potential pathway of  
2 exposure to PFAS?

3 MS. MULCAHY: Again, I'm going to  
4 object to any hypothetical questions about toxicology.

5 THE HEARING OFFICER: You're right.  
6 That sounded like a toxicological conclusion to me.

7 BY MR. DAVIS:

8 Q If an oil and gas company uses a PFAS  
9 containing frack fluid and it's put down the hole, not  
10 asking you about toxicology. I'm asking you about  
11 persistence in the environment of the chemicals,  
12 mobility in the environment of those chemicals. So  
13 when PFAS is injected downhole from a frack fluid,  
14 could it remain in the environment?

15 A Yes.

16 Q Could it move around in the environment?

17 A Yes.

18 Q Now, if that same PFAS compound was coming  
19 from a background PFAS source, would it persist in the  
20 environment?

21 A Yes.

22 Q Would it move around in the environment?

23 A Yes.

24 MR. DAVIS: I have no further  
25 questions. Thank you.

1 THE HEARING OFFICER: All right. Thank  
2 you, Mr. Davis.

3 Ms. Nanasi, do you have any redirect  
4 before I go to the Commission?

5 MS. NANASI: I think I just have one  
6 question.

7 REDIRECT EXAMINATION

8 BY MS. NANASI:

9 Q And that was when -- do you recall when  
10 Mr. Davis was asking you about failure to disclose  
11 means that essentially it would hamper the  
12 availability to do more science. Do you remember  
13 that?

14 A I do.

15 Q It also -- failure to disclose would also  
16 impair the ability to characterize human risk. Is  
17 that right?

18 A It is.

19 MS. MULCAHY: I'm going to object on  
20 that. She's, again, not a toxicologist and questions  
21 about doing human health risk assessments are  
22 toxicology questions.

23 THE HEARING OFFICER: Yeah.

24 Ms. Nanasi, would you rephrase that,  
25 please?

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1 BY MS. NANASI:

2 Q To the extent that you know, based on your  
3 professional expertise, do you believe that failure to  
4 disclose would also impair the ability to characterize  
5 human risk?

6 MS. MULCAHY: Again, that's a -- human  
7 risk assessments are all in the field of toxicology.  
8 Those are toxicological questions and conclusions that  
9 you need to have an understanding of human risk, human  
10 health risk assessments, exposure pathways and  
11 Dr. Hansen is not a toxicologist.

12 THE HEARING OFFICER: That was my  
13 understanding of her background was in chemistry, not  
14 toxicology.

15 MS. NANASI: Can I follow-up in a  
16 question for a foundation then?

17 THE HEARING OFFICER: Go ahead.

18 BY MS. NANASI:

19 Q Do you have an understanding of how risk has  
20 been characterized regarding PFAS?

21 A I do.

22 Q And now to ask you again. To the extent of  
23 your personal knowledge, would failure to disclose  
24 mean that that would impair the characterization to  
25 human risk?

1           A       Yes.

2                       MS. NANASI: Thank you.

3                       THE HEARING OFFICER: Okay. Is that it  
4 before we go to the Commission? I'm wondering if it  
5 would help to take a short break before we begin with  
6 Commission questioning. Alrighty. Let's come back at  
7 ten after two.

8                               (Off the record.)

9                       THE HEARING OFFICER: Let's come back  
10 from the break, please. We took a short afternoon  
11 break. And we turn now to the questions of Dr. Hansen  
12 by the Commission.

13                               Mr. Chair, would you like to start?

14                       MR. RAZATOS: I would. Thank you,  
15 Madam Hearing Officer.

16                               Thank you, Dr. Hansen, for your  
17 testimony today and for appearing before us. We  
18 appreciate the information that you shared with us.  
19 Dr. Hansen, just to get clear, I know it's been harped  
20 on that you're not a toxicologist so I got that much  
21 out of the testimony. If I understand correctly  
22 through your CV and through your testimony and  
23 rebuttal, you're an analytical chemist. Correct?

24                               THE WITNESS: That is correct.

25                       MR. RAZATOS: Okay. So a Ph.D. in

1 analytical chemistry. Is that exactly -- okay.  
2 Excellent. Thank you for that.

3 Doctor, I have a couple questions for  
4 you. And it kind of all resolves around PFAS, but  
5 let's start off. Mr. Davis had asked you about  
6 targeted analysis and if it's easier to identify the  
7 analyte if you know what's in the compound. And I  
8 think we understand that if we know that compound X is  
9 in the solution and the test can find compound X, it  
10 makes it easier for everybody. But if you don't know  
11 that compound is in the solution and yet the actual  
12 analytical procedure does test for compound X, is it  
13 really that hard to identify compound X?

14 THE WITNESS: That's a -- that's a good  
15 question. I think to -- to separate it out, if -- if  
16 you're looking for something that you -- that there  
17 isn't a standard for at all and you don't know what it  
18 is, it -- it is challenging. The paper that was cited  
19 is an interesting example of how they came to the  
20 identities that they did and they had to use several  
21 complementary analytical techniques to develop that  
22 final answer. And, you know, they use a technique,  
23 for example, called high-resolution mass spectrometry  
24 that provides the molecular weight of the molecule  
25 down to the thousandth of an AMU.

1 MR. RAZATOS: Sure.

2 THE WITNESS: So it's not trivial, but  
3 it is possible.

4 MR. RAZATOS: And when we say high  
5 resolution, are we talking mass spec mass spec with a  
6 liquid chromatograph? What are we talking about?

7 THE WITNESS: Sure. As -- it sounds  
8 like you know -- you're -- you're familiar with these  
9 techniques. So certainly HPLC and there's either high  
10 resolution mass spec, just with one mass spec or the  
11 mass spec mass spec so you can look at the -- at the  
12 fragments of the molecule as well.

13 MR. RAZATOS: Okay. But again, if the  
14 analytical procedure in front of us test for compound  
15 X, whether or not we know it's in the solution makes  
16 no difference. You can still see compound X and you  
17 can quant off of compound X. And I apologize. I said  
18 quant because I do have some chemistry experience.  
19 You can quantitate off of that particular result.  
20 Correct?

21 THE WITNESS: Yeah. If -- if I'm  
22 understanding your question correctly, I think what I  
23 -- what I'm hearing is if -- if -- if a molecule is in  
24 solution and you -- and you have a standard that  
25 you're testing for, you can quantitate the level of

1 the molecule in solution based on what you know with  
2 your standard. Is that -- is that what you were  
3 questioning?

4 MR. RAZATOS: Yes. That is. That's  
5 exactly what I was saying.

6 THE WITNESS: Okay.

7 MR. RAZATOS: So if our testing  
8 procedure can see a specific compound, it doesn't  
9 matter whether it's disclosed or not, it's still easy  
10 for the machine -- not the machine -- the instrument  
11 to see it because you're already testing for it.  
12 Correct?

13 THE WITNESS: Yeah. So, again, let me  
14 just clarify to make sure I understand. So if -- if  
15 you tell me, "I -- I have a mixture here and I want to  
16 know what's in it." And I say, "Well, compound X is  
17 likely to be present in this mixture," whether you've  
18 told me or not, I can go in and look for compound X  
19 and -- and find it because I have some other knowledge  
20 that tells me probably compound X is present. Is --  
21 is that it?

22 MR. RAZATOS: Yes. So in the  
23 questioning that Mr. Davis had given you, it was more  
24 the concern, because your answer was it does make it  
25 easier to make if it's unknown, it's we're doing some

1 screening, we're looking to find stuff. If we know  
2 that the solution has various compounds, it makes it  
3 easier on the screening, especially if the test is not  
4 necessarily a standardized test that's used across  
5 industry like an EPA test. Correct?

6 THE WITNESS: Yeah. I think so.  
7 Again, I -- I think I understand your question.

8 MR. RAZATOS: Okay. I appreciate that.  
9 Second of all, you made the statement, and I value  
10 your statement as a chemist, that these compounds are  
11 harmful. And I definitely believe in that as well.  
12 Yesterday, we had an analytical chemist tell us that  
13 some of these PFAS are inert and really don't interact  
14 with anything. Is that statement -- as an analytical  
15 chemist yourself, is that statement a correct  
16 statement? I'm trying to see as a governing body  
17 here, the information that's coming into us.

18 THE WITNESS: Sure. Absolutely.  
19 Absolutely. So it's not something that I can answer  
20 yes or no. It requires a little bit more exposition  
21 around it. And that is that there certainly are  
22 examples of polymeric PFAS compounds that are inert.  
23 However, the production of these compounds, both where  
24 they're made at the manufacturing facility and how  
25 they are -- how they are submitted as products are

1 rarely pure.

2           They come with -- with residuals and  
3 impurities and -- and I -- I was trying to use the  
4 example previously of Teflon, for example, where there  
5 are other molecules that are riding along with that --  
6 that polymeric material. And those molecules may not  
7 be nontoxic and they may be extremely mobile in the  
8 environment. So I think it's important to separate  
9 the fact that even though such a pure compound may  
10 exist, practically speaking, it doesn't really exist  
11 in the products that -- that are purchased.

12           MR. RAZATOS: Okay. Thank you for the  
13 clarification on that. I appreciate it. Another  
14 thing that you mentioned and you've relied on it and  
15 other witnesses have relied on is this Jiang paper  
16 that was published in 2021 I believe, if I'm correct.

17           THE WITNESS: I think it's '22, but --

18           MR. RAZATOS: Twenty-two, sorry, I was  
19 off by a year. My apologies. In looking at the Jiang  
20 paper, and this was a concern I had yesterday as well,  
21 when we're looking at the PFAS information that was  
22 submitted, and if you have that paper in front of you,  
23 it's page 8 of that particular paper under 3.4 PFAS  
24 analysis, they did analytical sampling. They did  
25 analysis on samples that came from produced water and

1 from the Pecos River. Now, Dr. Spear [ph] yesterday  
2 said he thought that they were 12 samples. I only  
3 read two. I reread it yesterday again and it was only  
4 two samples that they did. One and one.

5 Now, as an analytical chemist and  
6 please correct me if I'm wrong, the results that they  
7 mentioned, especially for the produced water, they  
8 noted that there were five PFAS compounds that were  
9 found in the produced water. And they state the --  
10 the levels that they found them at. But then they  
11 also said that PFAS was indicated in the blank  
12 samples. Now, as a I'm sure tenured and a professor  
13 that has written, authored professor yourself, would  
14 you literally -- would you base your data on something  
15 that also has PFAS in the blank? I mean, the blank's  
16 supposed to be zero. Right?

17 THE WITNESS: It is. And yet, within  
18 this area, as you can imagine, given the ubiquity of  
19 these compounds, that how to handle blanks in  
20 environmental analysis associated with PFAS is a huge  
21 area of study and researchers really go to -- to great  
22 lengths to define the limits of their blanks. And --  
23 and I -- I hear what you're saying, there some blank  
24 contaminations that the authors noted. Not every --  
25 not every PFAS that was found was found in the blank.

1           To me, the value of this paper, more  
2 than simply saying, oh, there's, you know, .25  
3 nanograms per liter of phahxs [ph] is more to say that  
4 there are forever chemicals in the sample and we need  
5 to do more testing. As you pointed out, one sample is  
6 not really sufficient to make any -- any great  
7 conclusions upon other than to say, "This is an area  
8 that definitely needs more study and the data  
9 indicates that there is at least the potential for  
10 risk that should be followed-up on."

11           MR. RAZATOS: And I appreciate that.  
12 Thank you, Doctor. And again, I also agree with you  
13 because you said the paper you made -- brought two  
14 main points to you. One, that PFAS can be found  
15 produced water and two, that more study is needed.  
16 And I definitely agree with no. 2. I have a hard  
17 time. I appreciate that the authors actually wrote  
18 that PFAS was in the blank. Sometimes you don't get  
19 all that information. So I appreciate their  
20 truthfulness in this.

21           But as a body, we're asked to kind of  
22 put our trust in -- or put some weight onto, not  
23 necessarily trust, but put weight into the fact that  
24 this was found. But it seems that as ubiquitous as  
25 PFAS is, unfortunately, it's in everything. You just

1 have to pull it up and you can see what it's in.  
2 It's, I think, also very difficult to be able to say  
3 with assuredness when your blanks are also  
4 contaminated with PFAS that what you're finding is  
5 really from produced water. Also, the river had it as  
6 well. And they did not indicate whether their river  
7 blanks had PFAS in them or not.

8           But I mean, in my mind, I'm trying to  
9 coalesce this paper to try to see how it's really  
10 supporting. And I'm reading it and I'm seeing -- you  
11 know, the part I get out of it that I agree  
12 wholeheartedly is more research needs to be done. I  
13 can't really put myself and say, "Well, you know, the  
14 blank has it. This could be systematic. They could  
15 have been using Teflon toppers on their vials. This  
16 could be -- the water was contaminated from some other  
17 source." There's a variety of things, but we're asked  
18 to definitely put all of our trust in it as if it's  
19 bible and I'm having a hard time kind of bringing  
20 these two things together.

21           And as I said, you're the second or  
22 third individual that has based their information on  
23 this and I don't see how as an analytical chemist you  
24 could tell me that these results are spot on when --

25           THE WITNESS: I don't -- I don't think

1 I actually said that.

2 MR. RAZATOS: You didn't. You didn't.  
3 You're right. You didn't.

4 THE WITNESS: Right.

5 MR. RAZATOS: I'm just making that  
6 extrapolation. As scientists that are basing their  
7 data on this, you're kind of telling us, "Yeah, you  
8 should put trust in this."

9 THE WITNESS: Oh, I -- I -- I feel like  
10 maybe you've put some words in my mouth because I  
11 would never use the word bible to say that this data  
12 -- that that reflects my belief in this data. I  
13 believe what I said is that this study, more than  
14 anything, demonstrated the potential for PFAS  
15 compounds to be present in produced water. And I  
16 think there is -- although it's certainly the case  
17 that of the five PFAS compounds identified, I believe  
18 two of them were in the blank, but I don't believe all  
19 of them were.

20 MR. RAZATOS: Correct.

21 THE WITNESS: I also believe that the  
22 authors, for example, said that they didn't use Teflon  
23 caps as you brought out. They -- they -- they did  
24 their best to control this.

25 MR. RAZATOS: I was trying to read

1 that. As a matter of fact, I was trying to read that.

2 THE WITNESS: And I think --

3 MR. RAZATOS: Could you tell me where  
4 that is?

5 THE WITNESS: Can I -- can I finish my  
6 statement, please?

7 THE HEARING OFFICER: Folks, one at a  
8 time, please.

9 MR. RAZATOS: Right.

10 THE WITNESS: Yeah, I thought I was  
11 talking so --

12 MR. RAZATOS: My apologies.

13 THE WITNESS: So I -- I would like to  
14 finish that and say that, you know, I -- again, there  
15 was some compounds that were not in the blank. And  
16 so, the -- the main point that these compounds -- that  
17 this analytical work reflects the potential for PFAS  
18 to be present in produced water, which I think is what  
19 I said, and that it's an area that needs more study is  
20 -- is not negated by the fact that there is some PFAS  
21 in some of the blanks and that it is, in fact, dealt  
22 with very professionally by the scientists in this  
23 paper.

24 MR. RAZATOS: And as I mentioned, I  
25 agreed with you on all of those. But we're still

1 asked to put some trust in this particular -- maybe  
2 you didn't say it, but we're being told that, by three  
3 different people, that this paper is something that we  
4 should put some trust in and that's where I'm going  
5 on. Correct. You didn't say that it was the bible.  
6 I'm saying as a whole, we're being told that we should  
7 follow this. So I appreciate your candor on that.

8           The next part that I wanted to ask you  
9 is that exhibit, let me make sure I get it, on page 7  
10 of your rebuttal, you state that the OCD definition  
11 isn't adequate. It is too narrow and leaves many PFAS  
12 compounds unregulated. Can you expound on that for  
13 me, please?

14           THE WITNESS: Yeah. You're going to  
15 need to give me a second here.

16           MR. RAZATOS: Yeah.

17           THE WITNESS: It's on page, I'm sorry,  
18 of the rebuttal, page --

19           MR. RAZATOS: Of your rebuttal, page 7,  
20 line 11. This is Exhibit B.

21           THE WITNESS: I think I must have a  
22 different -- I must have different page numbers. I  
23 apologize. So -- but nonetheless, I can find it on  
24 here. The -- the -- the OCD definition -- right,  
25 okay. I know where this is. All right. Because the

1 -- the definition went on to suggest, for the purposes  
2 of completing environmental investigations, specific  
3 PFAS chemicals that can be included and it listed  
4 several methods, several EPA methods. Those methods  
5 list several PFAS compounds but not a complete list.

6 I think I went through these methods  
7 and kind of loosely counted up and I think all of the  
8 methods listed in this definition, taking  
9 comprehensively, include on the order of about 50  
10 different PFAS chemicals. Given that, you know, the  
11 EPA recognizes that there are 10,000, 50 is a very  
12 small number. And so that's why I said that the  
13 definition proposed is too narrow.

14 MR. RAZATOS: Okay. My question then  
15 to you is, as an analytical chemist, can we see all of  
16 the compounds that the EPA is saying?

17 THE WITNESS: When you say see, are you  
18 -- do you mean like a list or can we --

19 MR. RAZATOS: Do we have targeted  
20 analytical procedures for them?

21 THE WITNESS: No. I mean, that's the  
22 point. Right? Because some of these compounds are  
23 not even characterized by the industries producing  
24 them. It's a -- it's a very messy process. And so we  
25 are forced to rely on advanced analytical techniques

1 like, for example, high-resolution mass spectrometry  
2 to try and elucidate what these compounds are. But  
3 it's not something that is necessarily the case that  
4 all of these molecules have been adequately  
5 characterized, such that they can be written into a  
6 method.

7 MR. RAZATOS: Okay. I have no further  
8 questions. Thank you. Thank you, Doctor. Appreciate  
9 it.

10 THE HEARING OFFICER: Thank you,  
11 Mr. Chair.

12 Commissioner Bloom?

13 MR. BLOOM: Good afternoon, Ms. Hansen.

14 THE WITNESS: Hello.

15 MR. BLOOM: I'm Greg Bloom, I'm the  
16 assistant commissioner of minerals from the Land  
17 Office. Thanks for your time today. Putting the  
18 Jiang study aside of produced water in the Permian  
19 Basin, would you still have concerns about PFAS and  
20 oil and gas?

21 THE WITNESS: I -- I do. I mean, and  
22 -- and the other scientific paper that we spent some  
23 time on I think is -- is actually a better example  
24 than this Jiang example. Although, I -- I recognize  
25 the geographic proximity of the other is more

1 relevant. But that other study, you know, really I  
2 think even more definitively proved the -- the risk  
3 and the potential between unconventional oil and gas  
4 and drinking water contamination. My -- my main  
5 concern with these compounds is that they are so  
6 persistent. Anywhere they end up in the environment,  
7 they're there. It's not like you spill a cup of  
8 coffee on the carpet and you can just wipe it up.  
9 Once it's in the environment and it's moving, you  
10 can't go back and -- and pull it in. So I do have  
11 concerns.

12 MR. BLOOM: So you mentioned the  
13 persistence. Does the literature around PFAS toxicity  
14 also suggest that these compounds be banned from oil  
15 and gas production?

16 THE WITNESS: Yeah. I guess the  
17 toxicologist that I work most closely with are -- are  
18 of the mind that we need to ban the use of these  
19 compounds for any non-critical use, in part because  
20 they go into the environment and they don't go away.  
21 And because of things that are, you know, around, for  
22 example, the additive toxicity. So it gets very hard  
23 to talk about the exposure of an individual when you  
24 have to take into account things like additive  
25 toxicity, what else are people coming into contact

1 with?

2 MR. BLOOM: You mentioned critical  
3 uses, what does that include? Just curious.

4 THE WITNESS: Well, the definition that  
5 -- that I support on critical uses is something for  
6 which there is absolutely no other alternative,  
7 something that is very well controlled, both in the  
8 sense of how the forever chemical is used but also how  
9 the forever chemical is produced.

10 So as an example, there may be, for  
11 example, the need to use a perfluorinated compound on  
12 some component of a medical device. I -- I don't have  
13 a specific example. I'm just using this in general.  
14 And in that case, the forever chemical that is  
15 produced for that critical need -- critical need for  
16 which there is no chemical can be produced and cleaned  
17 and all of the waste associated with that chemical,  
18 from manufacturing until use, can be controlled and  
19 captured and dealt with appropriately.

20 MR. BLOOM: Thank you. Dr. Hansen, are  
21 you familiar with the spill data that Ms. Troutman  
22 [ph] presented from WildEarth Guardians?

23 THE WITNESS: I am.

24 MR. BLOOM: Any thoughts on that? Does  
25 anything there give you pause?

1 THE WITNESS: Yeah. I mean, as I put  
2 in my I believe it was the rebuttal there, the -- the  
3 -- the spills that happened as a -- as a result of the  
4 oil and gas industry's use and the exposure then to  
5 surface water and groundwater is particularly  
6 concerning as it aids in the mobility of these  
7 compounds in the environment.

8 MR. BLOOM: And I think lastly, is  
9 there anything in the literature about PFAS entering  
10 the air through oil and gas operations?

11 THE WITNESS: There is. And, you know,  
12 there are examples of that, both from flare offs as  
13 well as from volatilization of PFAS from settling  
14 ponds and from spills.

15 MR. BLOOM: Did you cite any of those  
16 in what you provided us?

17 THE WITNESS: I -- I did not.  
18 Interestingly, I was reading about them last night and  
19 if it's possible to like add those to you now, I could  
20 certainly follow-up with that. But I did not cite any  
21 of those specifically.

22 MR. BLOOM: Is that a possibility,  
23 Ms. Hearing Officer?

24 THE HEARING OFFICER: I would ask if  
25 Ms. Nanasi would like to offer those. The other side

1 of that is then the other parties have a chance to  
2 object to it. We kind of go through another round of,  
3 if you will, rebuttal.

4 Any comments from the counsel here?

5 MS. NANASI: Madam Hearing Officer, I  
6 don't know if Dr. Hansen can cite to at least the  
7 names of the studies that she's referring to and that  
8 could, therefore, be dealt with like right now so we  
9 could avoid what you just suggested might happen.

10 THE HEARING OFFICER: Any other  
11 comments? No?

12 MS. MULCAHY: Madam Hearing Officer,  
13 first of all, I don't think it's been properly noticed  
14 under this rulemaking so I have that issue. Second of  
15 all, the Commission doesn't have any jurisdiction over  
16 air quality. That belongs to the Environmental  
17 Improvement Board in New Mexico and so I'm just not  
18 really sure of the connection here and how a  
19 discussion and rebuttal on air quality issues is  
20 appropriate.

21 THE HEARING OFFICER: It is a more  
22 attenuated connection here to the record we're making.

23 MR. BLOOM: Yeah, I think I mentioned  
24 it because I think there's been a presence in the  
25 record that PFAS can get into not only the earth and

1 water but also air and we've seen that I think  
2 throughout the record just in a couple spots. I don't  
3 know that any further information on this would change  
4 my thinking on the case so I'm fine to let this go at  
5 this time.

6 MS. NANASI: If I may, Madam Hearing  
7 Examiner.

8 THE HEARING OFFICER: Yeah.  
9 Ms. Nanasi.

10 MS. NANASI: On page 9 of Dr. Hansen's  
11 testimony, she does -- specific line 7 through 12, she  
12 does specifically mention that the way that PFAS can  
13 travel is through volitation of completely combusted  
14 PFAS during flare off, volitation of PFAS from surface  
15 ponds, spills or discharges of produced water and the  
16 presence of PFAS on and from surfaces and machinery  
17 encountered during transport use and disposal, et  
18 cetera.

19 THE HEARING OFFICER: Yeah. Okay.  
20 Thank you for pointing that out, Ms. Nanasi.

21 Commissioner Bloom, I think you have  
22 something on the record if you'd like to base some  
23 kind of conclusion on that sort of testimony. You  
24 just don.t have the, if you will, the background  
25 research on that.

1 MR. BLOOM: Yes. Thank you. And let  
2 me check. I think that was maybe my last question.  
3 That was.

4 Thank you. Thank you very much,  
5 Dr. Hansen.

6 THE WITNESS: You're welcome.

7 THE HEARING OFFICER: Thank you.  
8 Commissioner Ampomah.

9 DR. AMPOMAH: Thank you.

10 Thank you, Dr. Hansen, for being with  
11 us. I am Dr. William Ampomah, professor at New Mexico  
12 Tech. I do have a couple of questions. So in your  
13 Exhibit A, on the Exhibit A for New Energy Economy, on  
14 page 6, you made reference to EPA, including about six  
15 PFAS compounds and their ruling. I want to know, do  
16 you know why -- do you have any knowledge as to why  
17 EPA resulted in focusing on these six chemicals?

18 THE WITNESS: Yeah. So the -- this has  
19 been a very long process for EPA and those six  
20 compounds, they felt that they had sufficient  
21 information on the -- on both the presence of these  
22 compounds and the toxicology associated with these  
23 compounds, as well as enough data to understand a bit  
24 about the mechanism of action. And so the -- it was  
25 quite a -- a high bar, if you will, for these

1 compounds to have sufficient data for EPA to choose to  
2 regulate them. There was plenty of people that wanted  
3 to include other compounds and at this time EPA  
4 suggested that more data was needed. EPA also has a  
5 roadmap in place for PFAS compounds and committed to  
6 continually review this -- the limits that they have  
7 put in place as more data becomes available.

8 DR. AMPOMAH: Thank you for that. So  
9 then definitely, you believe that they base their  
10 decision on actual scientific study, you know, to back  
11 the decision that they made. Will that be your first  
12 statement?

13 THE WITNESS: Absolutely.

14 DR. AMPOMAH: Now, you talk about the  
15 definition of NMOCD, the definition that NMOCD's  
16 proposing, so if you look at EPA, they are looking at  
17 six. Now, from NMOCD's definition and based on the  
18 experts that they work with, they are thinking about,  
19 at least based on the other finish in there, looking  
20 about 40 to 70 compounds, so don't you believe that  
21 even they've really tried to include more compounds?

22 THE WITNESS: Unfortunately, no. I  
23 think that when you consider that there are ten to  
24 fifteen thousand members of this class, the -- having  
25 -- having the ability to monitor for 50 to 70 is not

1     adequate to fully address -- to fully address the  
2     class of compounds.  The -- with EPA's decision to  
3     look at only six in drinking water and requiring a  
4     huge amount of toxicological data for those six, I  
5     think that's very different than suggesting that there  
6     should be only a small subset of the overall PFAS  
7     molecules that should be monitored in the environment.  
8     As we discussed, most of these compounds, there is no  
9     toxicological data or insufficient toxicological data  
10    present for these compounds.  Because the amount of  
11    scientific effort needed to develop those profiles is  
12    -- is enormous.

13                   DR. AMPOMAH:  So even when NMOCD, based  
14    on the other finishing, they say that the list will  
15    evolve as more scientific information becomes  
16    available.  Is that still not sufficient, at least  
17    based on the current scientific knowledge?

18                   THE WITNESS:  Absolutely.  I -- and  
19    it's -- in my view, a -- a backwards looking  
20    assessment of risk to say, you know, when they're in  
21    the environment and we can detect them and they're  
22    showing up in people's drinking water, then we'll  
23    start caring about them.  Right?  That's how -- that's  
24    how I read that statement.  I feel that this is an  
25    area that we need to be proactive in because, as I

1 stated, once these molecules are in the environment,  
2 we can't call them back and we are still understanding  
3 the various ways that they can additively or with  
4 other underlying health conditions cause repercussions  
5 for humans and the environment.

6 DR. AMPOMAH: Are you familiar with any  
7 examples of PFAS that has been used in the oil and gas  
8 industry?

9 THE WITNESS: I've -- it's not  
10 something that is easy to find information on, but I  
11 have searched, I -- and I understand that molecules  
12 like Teflon, for example, and PTFE, are often used in  
13 the oil and gas industry. As I've said before, I'm  
14 not -- I'm not an expert so I'm gaining that knowledge  
15 just from what I read in the literature. I've also  
16 read that surfactants -- forever chemical surfactants  
17 are also used.

18 DR. AMPOMAH: Thank you. So in  
19 reference to Jiang's paper, Professor Xu [ph] who is  
20 the corresponding author from NMSU, that paper has  
21 been referenced a lot and the Chair more or less  
22 alluded to this. Is there any other reference that  
23 you're familiar with that supports the claim that  
24 there is PFAS found in produced water?

25 THE WITNESS: I did do a literature

1 search in prep -- in preparation for this and I could  
2 not find another peer reviewed scientific paper. I  
3 did find reference to -- to forever chemicals in  
4 produced water, but because they were not in peer  
5 reviewed scientific data, I didn't consider those as I  
6 tried to learn about this. However, I -- I guess my  
7 feeling was, in looking for this, is not that that  
8 dearth of paper is implies that there are no PFAS in  
9 produced water, but it is not an area that has been  
10 studied very much.

11 DR. AMPOMAH: Okay. So in the  
12 pre-hearing statement of New Energy Economy, I just  
13 want to understand, probably is you understand in that  
14 produced water should not be used, you know, in  
15 downhole operations. Is that your understanding too?

16 THE WITNESS: That is my understanding.

17 DR. AMPOMAH: Okay. Then let's go back  
18 to Jiang's paper one more time. So in that paper,  
19 that same paper looked at produced water samples and  
20 then also looked at some freshwater samples from the  
21 Pecos River. Now, both samples, there were PFAS in  
22 that. Right? And looking at the scarcity of water in  
23 the State of New Mexico, I mean, how do we say that we  
24 can -- we don't -- let's say the Commission should  
25 more or less not allow the use of produced water

1 because probably there might be PFAS in there. It  
2 sounds like PFAS is everywhere. So can you comment on  
3 that?

4 THE WITNESS: Yeah. I guess my feeling  
5 is that while there is low level -- well, there are  
6 low levels of PFAS in the Pecos River and other places  
7 for sure, that that doesn't give us an invitation to  
8 continue to add forever chemicals into the environment  
9 to raise those levels. So the Pecos River is an  
10 example of a water body that it's going not be  
11 extremely difficult to take forever chemicals out of.

12 We -- we can't control that wild river  
13 now. We can control the compounds that we put into  
14 the environment that will ultimately end up in a water  
15 body like that river, for example. So I think it's  
16 important to distinguish between the fact that there  
17 is damage that has been done to the environment, but  
18 that doesn't mean we should continue to do more damage  
19 to the environment and say, "You know, it's a lost  
20 cause. There's forever chemicals everywhere anyway."

21 DR. AMPOMAH: You know, the reason why  
22 I was making that point, you know, I'm trying to  
23 understand, you know, from NMOCD's point of view, they  
24 believe that, or at least based on the testimony, PFAS  
25 can be within municipal water. It can be in the

1 surface water. So they want to really focus on  
2 additives that are added to the whole operations. So  
3 don't you believe that is enough? You know, other  
4 than more or less putting strict restriction on  
5 produced water usage.

6 THE WITNESS: I -- I -- I don't because  
7 I just think that the use of forever chemicals in this  
8 industry, in produced water but also in all of the  
9 things that happen along the way, for example, spills,  
10 for example, volatilization from -- from settling  
11 ponds and that type -- type of thing. There's a lot  
12 of opportunities for environmental contamination, as  
13 had been pointed out by other experts that -- that go  
14 along with these operations and introducing forever  
15 chemicals into the environment. So that's why I think  
16 they need to be prohibited from the operations.

17 DR. AMPOMAH: Thank you, Dr. Hansen.  
18 Thank you.

19 THE HEARING OFFICER: Okay. Thank you.  
20 Is there any reason not to excuse  
21 Dr. Hansen?

22 DR. AMPOMAH: I do have one.

23 THE HEARING OFFICER: All right.

24 DR. AMPOMAH: Sorry about that. Sorry  
25 about that. Sorry about that. Are you familiar with

1 the FracFocus?

2 THE WITNESS: Vaguely. I am.

3 DR. AMPOMAH: Okay. Yeah, so I'm going  
4 to read some statement from the pre-hearing statement  
5 and then I want to get your thoughts on that. That  
6 will be on page 8 of the pre-hearing statement.  
7 "Lastly, as you are aware, Guardians' rule changes  
8 require the disclosure of all chemicals completion  
9 with downhole operations. That means the oil and gas  
10 industry would have to divulge their chemical  
11 ingredients, not their recipe." Now, I want to ask  
12 you, so did you disclose some information or yeah, on  
13 the FracFocus? So how do we do this? Let's say as a  
14 Commission, how do we more or less enact this rule,  
15 enact this rule, and still maintain trade secrets  
16 provisions without a legislative change?

17 THE WITNESS: I think it's a -- it's a  
18 very pertinent point that what is -- what is being  
19 requested is disclosure of the ingredients as you say  
20 and -- and not the recipe. And so this isn't, you  
21 know, tell me exactly how to make the -- the -- the  
22 fluids that you're using. It's just disclosure of the  
23 chemicals that go into those.

24 I -- I also think it's important to  
25 recognize that the designation of confidential

1 business information is ostensibly put in -- in place  
2 to protect competitive information from other people  
3 in the field. But it's my understanding that, for  
4 example, in Colorado, it's not allowed to protect  
5 this.

6 So the competitors are already -- are  
7 already exposing all of their ingredients. And so it  
8 really seems to -- to lower the risk for anything that  
9 is truly of proprietary value to be released to  
10 competitors if simply a chemical profile is shared so  
11 that the chemicals can be monitored by community  
12 members.

13 DR. AMPOMAH: So when NMOCD says that  
14 they do not have the authority to support that unless  
15 through a legislative change, what will be your  
16 response to that?

17 THE WITNESS: Yeah, unfortunately, I  
18 don't know enough about the legislative process to be  
19 able to comment on that.

20 DR. AMPOMAH: Okay. Thank you.

21 THE HEARING OFFICER: Thank you.

22 Mr. Ampomah.

23 No reason not to excuse Dr. Hansen at  
24 this time? Nope? All right.

25 Thank you very much for your testimony,

1 Dr. Hansen.

2 THE WITNESS: Thank you.

3 THE HEARING OFFICER: Let's go back to  
4 Mr. Powell.

5 THE HEARING OFFICER: Mr. Tremaine.

6 MR. TREMAINE: I do have some redirect  
7 for Mr. Powell if it's possible, but I think it's --

8 THE HEARING OFFICER: Actually, you  
9 know what, sorry. I just messed up. I just looked at  
10 my notes and I realized I messed up. Ms. Nanasi was  
11 questioning Mr. Powell and then of course we go to  
12 Mr. Davis and the Commission. Yeah. Right? Yeah.

13 CROSS-EXAMINATION

14 BY MS. NANASI:

15 Q Good afternoon again, Mr. Powell. Referring  
16 you now to page 1 of your direct testimony. You  
17 stated line 19 "New Mexico has been very proactive  
18 regarding PFAS and the OCD sees this proposal as the  
19 next necessary step in protecting the citizens and  
20 natural resources of New Mexico. Is that a fair  
21 reading of your statement there?

22 A It is.

23 Q Can you elaborate how New Mexico has been  
24 proactive regarding PFAS?

25 A As a whole, I don't have all the details,

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1 but I do know that it was EMNRD's initiative. I  
2 believe the Department of Health has been active and  
3 this Commission itself took upon the rulemaking when  
4 requested.

5 Q So you are familiar with the fact that the  
6 governor, Governor Lujan Grisham advocates for "All  
7 New Mexico communities to have reliable access to  
8 clean drinking water."

9 A I don't know that I've reviewed that  
10 statement or where that statement came from.

11 Q But --

12 A But generally, that's my understanding.

13 Q Do you also understand that Governor Lujan  
14 Grisham calls for "science-based health standards" and  
15 that this policy principle is consistent with both  
16 EMNRD, E-M-N-R-D, and the Division itself.

17 A I didn't cite any of those because I would  
18 take you for what you're saying on it.

19 Q But generally, that's what EMNRD follows as  
20 well as OCD, which is science-based health standards.

21 A Correct. Correct.

22 Q Okay. And that it would be consistent for  
23 -- if the governor says that that's what she wants,  
24 which is science-based health standards, that that  
25 EMNRD and OCD should act consistent with that

1 principle.

2 A Generally, yes.

3 Q Are you aware that Governor Lujan Grisham  
4 has advocated to "require mandatory disclosure of what  
5 chemicals are used in hydraulic fracturing to better  
6 protect groundwater"?

7 A I have not seen that statement.

8 Q Is it your position that OCD doesn't have  
9 regulatory authority to require chemical disclosure  
10 except in the instance if an oil and gas company has  
11 already violated the PFAS ban by poisoning the water  
12 and then it can mandate disclosure of trade secrets  
13 pursuant to OCD's enforcement authority?

14 MR. TREMAINE: Objection. Compound and  
15 misstates the record.

16 MS. MULCAHY: And I'm going to join in  
17 that objection.

18 THE HEARING OFFICER: Yeah.  
19 Ms. Nanasi, where's the basis for that question?

20 MS. NANASI: Well, I believe then --  
21 well, I can just break it down and ask Mr. Powell.

22 THE HEARING OFFICER: You can give it  
23 another try.

24 BY MS. NANASI:

25 Q Let's just first start with: is it your

1 position that OCD doesn't have regulatory authority to  
2 require chemical disclosure?

3 A I don't think we stated that we don't have  
4 regulatory authority to ask for chemical disclosure to  
5 the OCD.

6 Q Great. Is it your understanding that in the  
7 human body, modest tissue concentrations --

8 MS. MULCAHY: Objection. Again --

9 MS. NANASI: I haven't even finished my  
10 question.

11 MS. MULCAHY: She's asking -- well,  
12 she's asking -- first of all, she's asking Mr. Powell  
13 questions about chemicals and human body tissue. A,  
14 that's not in his direct nor in his rebuttal that he  
15 gave. It's outside the scope of both of those. And I  
16 don't believe he's been presented as a toxicologist.

17 THE HEARING OFFICER: Right.

18 Ms. Nanasi, if that's where you're  
19 going is human tissues, I think that is outside the  
20 scope of Mr. Powell's experience and education.

21 BY MS. NANASI:

22 Q What is your understanding of the effects  
23 that PFAS has had in the human body?

24 MS. MULCAHY: Objection.

25 THE HEARING OFFICER: Ms. Nanasi, I

1 have to ask you to move on.

2 BY MS. NANASI:

3 Q On page 1 of your direct testimony, you  
4 state at line 21 "The primary goal of the OCD's  
5 modification to the proposed amendments is to ensure  
6 that changes are protective." Can you explain why you  
7 believe that that is the primary goal?

8 A I think with the roles that OCD performs and  
9 what we ask the OCC to adopt is generally protective  
10 of human health and the environment.

11 Q And the reason why you support, to some  
12 extent, the PFAS ban, is because you believe that that  
13 would be more protective of human health. Is that  
14 right? And the environment.

15 A Correct.

16 Q On page 3 of your direct testimony, you  
17 state at line 21 "The final, but most important  
18 change, is OCD's proposed definition of PFAS  
19 chemicals." Has this definition shaped the  
20 implantation and effect of the remaining rule changes?  
21 OCD attempted to address the PFAS definition using two  
22 general criteria.

23 "First, the definition must be a technical  
24 definition to detail what PFAS is chemically while  
25 allowing the division to appropriately implement the

1 definition as the scientific understanding of PFAS  
2 continues to develop." Is that your testimony?

3 A Yes. It is.

4 Q Is it your testimony that Dr. Hansen's  
5 definition of PFAS is not chemically accurate?

6 A I --

7 MR. TREMAINE: Objection. Outside the  
8 scope of Mr. Powell's direct.

9 THE HEARING OFFICER: Yes. Sustained.

10 BY MS. NANASI:

11 Q You stated earlier that you're not a  
12 chemistry expert. Correct?

13 A Correct.

14 Q I noticed on your CV that you had hazardous  
15 waste management certification. Is that true?

16 A Yes. Roughly 20-some odd -- roughly 20  
17 years ago.

18 Q Are you familiar with the New Mexico's legal  
19 definition of hazardous waste?

20 MS. MULCAHY: Objection.

21 THE HEARING OFFICER: Ms. Nanasi, where  
22 are you going or what of his testimony are you  
23 referring to?

24 MS. NANASI: Well, it was in his CV and  
25 so I'm following up on it.

1 THE HEARING OFFICER: Okay. He said he  
2 had hazardous waste training 20-some years ago. All  
3 right. And now, you're looking for a definition of  
4 hazardous waste?

5 MS. NANASI: Well, I could provide a  
6 definition to him. I haven't gotten there yet.

7 THE HEARING OFFICER: Okay. But then  
8 what line of questioning would you be pursuing on the  
9 basis of that definition?

10 MS. NANASI: Well, if he has a  
11 certification in hazardous waste management, what I  
12 wanted to ask him was if this is the definition of  
13 hazardous waste that has been adopted by the New  
14 Mexico legislature, which I would then read, and then  
15 I would ask next does PFAS fall within this  
16 definition.

17 MS. MULCAHY: So I'm going to object to  
18 any line of questioning about this on multiple  
19 grounds, the first of which is it's not in either his  
20 direct or his rebuttal. It's also irrelevant. The  
21 Commission has no jurisdiction over hazardous waste.  
22 That rests entirely with the Environmental Improvement  
23 Board and, Mr. Powell, while incredibly knowledgeable  
24 on a ton of things, has not been qualified here today  
25 to speak about hazardous waste. And the fact that he

1 has a HAZWOPER certification does not mean that he's  
2 familiar with the New Mexico specific definition of  
3 hazardous waste.

4 THE HEARING OFFICER: And he's not a  
5 lawyer. So for all four of those reasons, I'm  
6 sustaining the objection.

7 Please move on.

8 BY MS. NANASI:

9 Q I'd like you to refer to OCD Exhibit 11,  
10 slide 118. And there is -- I'm specifically calling  
11 your attention to the fourth line there that states  
12 that third party verified laboratory. Do you see  
13 that?

14 A I don't have the slides up. In the bottom  
15 right-hand corner, can you tell me what slide number  
16 it actually says on the slide? I don't have the  
17 exhibit up and the page numbers.

18 Q Okay.

19 A I believe I know roughly what you're  
20 referencing. I believe it's in 16 -- rule 16, 17. Is  
21 that correct?

22 Q I'll tell you in one minute.

23 A Where it states "And will use a third-party  
24 verified laboratory"?

25 Q Yes.

1           A     Okay.  I found it.

2           Q     Would the Commission -- or sorry.  Would the  
3     Division have any objection to changing that language  
4     to delete the words third party verified and insert  
5     the word accredited laboratory?  Or the word  
6     laboratory is already there.  Just delete third party  
7     verified and insert accredited.

8           A     I don't have a problem with that as long as  
9     OCD is not viewed as that a crediting agency.  And  
10    with the caveat I'm not a chemist so I don't know what  
11    accreditations are needed for the methods that we've  
12    provided in our definition.

13          Q     If the OCD bans PFAS as defined by Guardians  
14    and the oil and gas industry complies and their  
15    chemical constituents' disclosures reflect the same,  
16    why is it harder for OCD to regulate the oil and gas  
17    industry with a narrower definition of PFAS?

18          A     Can you restate that question to make sure I  
19    fully understand?

20          Q     I think that on your direct, with  
21    Mr. Tremaine, you said that it would -- if you  
22    expanded the definition of PFAS to what Guardians had  
23    suggested, that it would be harder to regulate.  Do  
24    you remember that?

25          A     I do.  And it would be harder to regulate

1 because there are, as discussed by multiple doctors  
2 that have set up here so far, there are PFAS compounds  
3 that can't currently be tested for using a known  
4 method. So with the OCD, we regulate components and  
5 rules that we can verify or find violations to without  
6 known methods and processes of what to test for.  
7 There would be no way to essentially verify whether  
8 there was a violation or not a violation without  
9 performing that testing.

10 And my understanding is the OCD, other than  
11 the air that we're asking to strike, included all the  
12 verified methods that are currently available. So the  
13 other compounds that haven't been evaluated are not  
14 included. Sounds like EPA, based on the last witness,  
15 did something similar and eliminated it down to six  
16 compounds through that process to ensure that it was a  
17 verified process. OCD is proposing a larger scope  
18 than that. It's just simply so it can be verified  
19 through proven means.

20 Q But let me ask you something. I mean, right  
21 now there's lots of chemicals that the -- let me just  
22 ask you. Strike that. Who determines what is a  
23 proprietary chemical or not? The operator. Right?

24 A I believe that determination is determined  
25 by the chemical company, not the operator.

1 Q And so OCD doesn't have that information.  
2 Correct?

3 A No.

4 Q No, OCD doesn't have that information?

5 A Doesn't have --

6 Q The proprietary information.

7 A We -- we do not have the proprietary  
8 information. We haven't asked for the proprietary  
9 information.

10 Q Right. So in that case, OCD still tries to  
11 regulate oil and gas. Right?

12 A I would state OCD still does regulate oil  
13 and gas.

14 Q And so if this Division determined that to  
15 have the most protective rule, it would adopt  
16 Guardians' definition of PFAS, even though not every  
17 PFAS compound is known and --

18 A Again, I'm not a chemist. I don't know if  
19 it would be the most protected to adopt that because I  
20 don't think the literature's out there to state  
21 whether those other compounds are -- are studied to  
22 see if they're toxic and I'm not a toxicologist so I  
23 can't get into all of that. That's what the other  
24 doctors were for. So I -- I can't say if the other  
25 compounds sound -- one doctor said it was millions.

1 One doctor said it was 10,000. If those compounds are  
2 toxic or not.

3 Q Would more information help the OCD regulate  
4 the oil and gas industry?

5 A I think when it comes to PFAS, that's why we  
6 define PFAS the way we did is as more information and  
7 more testing methods are proven, they're automatically  
8 added to those lists and those methods.

9 Q On page 5 of your direct testimony, you  
10 state at line 2 "The OCD does not support the banning  
11 of trademarked chemicals." Did I read that correctly?

12 A Yes.

13 Q Unless these trademarked chemicals are PFAS,  
14 Guardians' proposed rule does not seek the ban of  
15 trademarked chemicals either.

16 A The way I read Guardians' proposal, it's  
17 banning all trademark chemicals because no undisclosed  
18 chemicals could be used.

19 Q The Guardians' proposed rule changed, seeks  
20 the disclosure of all chemical constituents but not  
21 the banning of what are trademarked chemicals.

22 A I could go in and look, but I believe it  
23 says that no undisclosed chemicals could be used in  
24 Guardians' proposal.

25 MS. NANASI: No further questions.

1 THE HEARING OFFICER: All right. Thank  
2 you.

3 Mr. Davis, you have questions of  
4 Mr. Powell?

5 MR. DAVIS: I do. And I'll just pick  
6 right up where that last line questioning left off.

7 CROSS-EXAMINATION

8 BY MR. DAVIS:

9 Q Your understanding is that the proposed rule  
10 would ban undisclosed chemicals. Correct?

11 A That is my understanding.

12 Q Is there anything that you see in the  
13 proposed rule that would prohibit a company from  
14 voluntarily disclosing a trademark chemical?

15 A No. With the caveat the operator typically  
16 isn't the one that trademarks. That's -- that's the  
17 chemical company. So the operator couldn't disclose  
18 that without authorization from the -- the company  
19 that provided it.

20 Q In that situation, the chemical manufacturer  
21 would be the holder of the trade secret.

22 A Yes.

23 Q So I'll rephrase my question. There's  
24 nothing in the proposed rule that prohibits the holder  
25 of a trade secret from voluntarily disclosing that

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1 trade secret.

2 A Not that I'm aware of.

3 Q If the holder of a trade secret voluntarily  
4 discloses the chemical identity of a chemical it wants  
5 to use in New Mexico, that chemical can then be used  
6 because it's no longer undisclosed.

7 A As it was proposed by WildEarth Guardians,  
8 that's my understanding of that proposal.

9 Q And I'm going to ask you about the Trade  
10 Secrets Act and I don't want to ask you about anything  
11 that you don't -- you know, you don't know regarding  
12 the law, but are you familiar with the fact that the  
13 Uniform Trade Secrets Act provides a cause of action  
14 for the misappropriation of a trade secret?

15 MS. MULCAHY: Objection.

16 THE HEARING OFFICER: Mr. Powell, same  
17 instruction as yesterday. If you feel like this is  
18 asking you for a legal conclusion, then don't go  
19 there.

20 THE WITNESS: I would simply say I  
21 haven't read the Trade Secret Act and I relied on our  
22 legal counsel to make those determinations.

23 BY MR. DAVIS:

24 Q Fair enough. I'll move on to a different  
25 topic. You were asked by counsel for NMOGA about

1 Dr. Brown's testimony. You were present at the  
2 hearing when Dr. Brown testified.

3 A I was.

4 Q And I believe the question earlier was  
5 whether Dr. Brown's testimony was that the DOH or the  
6 Department of Health was more appropriate to regulate  
7 PFAS. Do you remember that question?

8 A Vaguely. It's been a long day.

9 Q Would you agree that Dr. Brown's testimony  
10 on that subject was actually that the DOH would be  
11 potentially a better agency to communicate chemical  
12 disclosure and risk to the public than the OCD?

13 MS. MULCAHY: Objection. I'm sorry. I  
14 just have to object here 'cause this is calling for  
15 Mr. Powell to speculate on what Dr. Brown actually  
16 meant which I think is inappropriate.

17 THE HEARING OFFICER: Yeah.

18 Would you rephrase, Mr. Davis?

19 MR. DAVIS: And I would just respond  
20 that the original question from counsel for NMOGA,  
21 which I did not object to, was also calling for  
22 speculation of what Dr. Brown testified to.

23 THE HEARING OFFICER: Okay. Rephrase  
24 this last one if you would.

25 MR. DAVIS: You know, I'll just move

1 on. We can look at the record at what Dr. Brown said.

2 BY MR. DAVIS:

3 Q I won't test your recollection, Mr. Powell.  
4 The OCD provided in its exhibit packet some  
5 frack-focused -- sample frack-focused disclosure  
6 forms. Do you recall those?

7 A I do.

8 Q And these disclosure forms were provided to  
9 show that additives other than PFAS are declared as  
10 trade secrets.

11 A They were simply to show the Commission  
12 what's being provided currently through frack-focused  
13 or the proprietary designations are being used as a  
14 whole.

15 Q Do you agree that there are chemicals that  
16 may be present in frack fluids that are not PFAS but  
17 could be harmful to the environment, public health?

18 A There's chemicals in the FracFocus links  
19 that I wouldn't want to drink that's being reported.

20 Q There's been some discussion about the term  
21 downhole operations and I'm just going to ask you a  
22 few questions about whether something qualifies in  
23 your understanding of what downhole operations are.  
24 Are completion's part of downhole operations?

25 A Yes.

1 Q Are recompletions part of downhole  
2 operations?

3 A Yes.

4 Q Is treatment of a well part of downhole  
5 operations?

6 A Yes.

7 Q Is maintenance of a well part of downhole  
8 operations?

9 A Yes.

10 Q Is drilling part of downhole operations?

11 A Yes.

12 Q There was some earlier cross-examination  
13 about the term applicable fluid stream in the proposed  
14 regulation. Do you recall that testimony?

15 A The proposed testimony for applicable fluid  
16 stream. I -- in what part? I --

17 Q I believe Mr. Rankin was asking you about  
18 the testing protocols and the proposed rule and  
19 whether the testing would be applied to the  
20 "applicable fluid stream."

21 A Yes. I do remember that.

22 Q The applicable fluid stream would be the  
23 additives that immediately preceded a well integrity  
24 event.

25 A Yes.

1 Q Is it possible that there would be  
2 constituents downhole that were not part of that  
3 applicable fluid stream which could contaminate or  
4 pose a risk to groundwater?

5 A There would be contaminants coming from the  
6 formation. There would be -- that are coming up that  
7 may not be chemical additives. Is that what you're  
8 asking?

9 Q Well, I guess what I'm getting at is could  
10 there also be contaminants that were from a prior  
11 frack?

12 A I haven't studied it so I -- I don't know if  
13 that would be the case. Typically, when you frack a  
14 well, you pressure it up. You open the top, you flow  
15 back your frack fluids to a point where then you start  
16 flowing back your natural fluids that are in the  
17 formation. I don't know how long the frack fluids  
18 stay in that well, but the intent is to recover the  
19 frack fluids and start producing out the native fluids  
20 that's in the formation.

21 Q Is it possible that -- if I could use the  
22 word post flow back. Is it possible that post flow  
23 back that some of the constituents of the frack fluid  
24 may still remain in the well downhole?

25 A I -- I would think so for a period of time,

1 but I don't know what that period of time would be.

2 Q How many times can a well be fracked?

3 A There's no limit.

4 Q Is it -- are wells fracked multiple times?

5 A Yes.

6 Q I want to ask you really quickly about CAS  
7 numbers. Are you familiar with that term?

8 A I -- generally, I know what a CAS number is,  
9 but I don't have a lot of knowledge in that.

10 Q And the question I would ask you is whether  
11 that's a unique chemical identifier.

12 A Yeah.

13 Q It's a number that is assigned to a  
14 chemical. If you -- sorry. You agree that it's a  
15 number assigned to a chemical.

16 A Yes.

17 Q And if you have that number, you could  
18 perform a simple Google search to see what that  
19 chemical is.

20 A Yes.

21 Q I want to ask you about the FracFocus  
22 database. Is that run by a third party?

23 A It is.

24 Q And does OCD maintain the disclosures that  
25 are on that website?

1 A We do not.

2 Q So if someone wanted to see those  
3 disclosures, they couldn't get them from OCD.

4 A They're publicly available.

5 Q They would have to go to FracFocus.

6 A Yes.

7 Q If FracFocus shut down, OCD would not have  
8 that information.

9 A OCD could download that information  
10 periodically so they would have access to that  
11 information.

12 Q Is there any requirement for OCD to  
13 periodically download that information now?

14 A I believe there may be. That wasn't part of  
15 something. I looked at it in this rule, but I believe  
16 there was some language about periodically downloading  
17 that information, but I don't have that in --

18 Q And do you think that may be in OCD's  
19 records?

20 A Potentially, yes.

21 Q I'm going to ask you a question that I also  
22 asked Dr. Hansen. Do you agree that the purpose of  
23 the proposed rule is one of the proposed purpose --  
24 one of the purposes -- strike that. Do you agree that  
25 one of the purposes of the proposed rule is to protect

1 groundwater?

2 A Yes.

3 Q And do you agree that PFAS could be a threat  
4 to groundwater contamination regardless of its source?

5 A Yes.

6 Q Do chemicals that are put downhole come back  
7 up?

8 A I would assume they would come back up and  
9 the -- the fluids that weren't produced from the well.

10 Q So they could come back up and flow back?

11 A Yes.

12 Q They could be present and produce water  
13 that's brought to the surface?

14 A Yes.

15 Q Are flow back and produced water mixed  
16 together for purposes of disposal?

17 A Yes.

18 Q For the chemicals that come -- that go  
19 downhole and come back up be used for and has oil  
20 recovery?

21 A Yes.

22 Q Could they be used for further fracking?

23 A Yes.

24 Q Were you in the room during this proceeding  
25 when Ms. Troutman testified?

1 A When who? I'm sorry.

2 Q Ms. Troutman testified.

3 A Yes. I was.

4 Q Do you have any reason to dispute the  
5 numbers in her testimony and exhibits?

6 A No.

7 Q Again, I'm going to ask you about a Colorado  
8 legal provision. And if you are not aware of it, just  
9 tell me.

10 A Okay.

11 Q Are you familiar with the Colorado law that  
12 requires chemical disclosure of chemicals used in  
13 downhole operations?

14 A I am not.

15 Q Are you familiar with the California  
16 chemical disclosure law?

17 A The only statements is what I heard here  
18 earlier that both of those were done through  
19 legislation.

20 Q Your knowledge of those laws is just from  
21 what you've heard during this hearing?

22 A Yes.

23 Q You testified that OCD is concerned about  
24 the implications of holding proprietary information as  
25 that relates to the Inspection of Public Records Act.

1 Correct?

2 A Can you state that again to make sure I  
3 fully understand?

4 Q Sure. There were some questions earlier  
5 today, I believe from OCD counsel, about the numbers  
6 of disclosures that OCD would have to retain under  
7 Guardians' proposed rule. Do you recall that?

8 A I do. I believe counsel was stating that if  
9 OCD received those records and if it was conveyed on  
10 those, OCD would have to make a determination whether  
11 those were or were not trade secret.

12 Q And in that line of questioning, I believe  
13 that OSHA regulations at 29 C.F.R. 1910.1200 were  
14 mentioned and that's related to safety data sheets.

15 A I don't remember discussing OSHA sheets.

16 Q Are you familiar with safety data sheets?

17 A At a high level and not with the regulations  
18 that surround them.

19 Q Are you aware that there is also a provision  
20 for maintaining confidentiality of proprietary  
21 information on those sheets?

22 A I would take your word for it.

23 Q There was some testimony earlier today about  
24 administrative burden related to retention of those  
25 records that we just talked about. If Guardians

1 removed the provision in the proposed rule for  
2 chemical disclosure lists and the disclosures were all  
3 made to FracFocus, meaning OCD would not retain the  
4 actual chemical disclosure list, would that ease your  
5 concern of administrative burden?

6 A We actually approached FracFocus to see if  
7 that was possible and being a third-party, they do not  
8 do that for any other states is our understanding as  
9 far as keeping proprietary information in that avenue.

10 Q And I'm going to -- so I'm going to ask you  
11 to make an assumption that Guardians proposed rule  
12 related to the ban of undisclosed chemicals was  
13 promulgated. In that situation, there would be no  
14 proprietary information on FracFocus because it would  
15 be voluntarily disclosed. So making that assumption,  
16 if OCD was not holding the chemical disclosure list  
17 and receiving that information and instead the  
18 discloser was providing it to FracFocus. Would that  
19 ease your concerns of administrative burden?

20 A I -- I believe there were no -- be on  
21 administrative burden as far as holding that because  
22 it would be effective at eliminating the proprietary  
23 information.

24 Q And then I would have the same question  
25 about your IPRA concerns. Would that also alleviate

1 or resolve your IPRA concerns?

2 A Well, there would be no data to hold.

3 Q Thank you. I want to ask you about  
4 19.15.16.17.A(2) and if anybody in the room can recall  
5 that from memory, I'm going to guess it's you, but  
6 this is the part of the proposed rule that talks about  
7 the loss of integrity and disclosure in the event that  
8 there's a loss of integrity for testing purposes. Do  
9 you agree that I'm in the right section here?

10 A Yeah. As proposed.

11 Q I just want to ask you if these provisions  
12 -- strike that. Are you familiar with the recent  
13 events in West Texas in the Permian Basin where there  
14 have been well blowouts related to injection  
15 activities?

16 A I believe there have been well issues. I  
17 have not studied those to what caused them or -- or  
18 what effects they've had.

19 Q Would the provisions of the -- the proposed  
20 provisions of 19.15.16.17.A(2) apply in the event of a  
21 well blowout?

22 A As we discussed earlier, a well blowout,  
23 being an integrity loss downhole that we discussed  
24 earlier than as proposed they too would apply to that,  
25 those scenarios.

1 Q And would it also apply to the loss of  
2 integrity of a plugged well?

3 A For a plugged well, the way it's defined at  
4 the top, both in WildEarth Guardians and OCD's, it's  
5 if damaged from shooting, fracturing or treating of a  
6 well has the potential impact, a plugged well I don't  
7 believe would be treated at that point. So I don't  
8 know that a plugged well would apply.

9 Q Thank you for that clarification. And just  
10 to clarify, I think I know the answer to this, but  
11 that section also would not apply to any spills that  
12 potentially affect freshwater resources.

13 A State that again. I apologize.

14 Q Sure. The same section we're talking about,  
15 loss of a well integrity, that does not -- those  
16 proposed provisions do not apply to spills that affect  
17 groundwater or fresh water courses.

18 A Unless the spill happens because of a loss  
19 of integrity.

20 Q If an operator requests proprietary chemical  
21 information from a manufacturer and the manufacturer  
22 refuses to provide that information to the operator,  
23 does OCD have the ability to get that information from  
24 a manufacturer?

25 A I would have to check with OCD's legal

1 counsel, but OCD does have subpoena power. And that  
2 point, there would be a threat to water.

3 Q Last question. Is there currently any  
4 regulatory restriction that you know of that prevents  
5 a company from using PFAS in future downhole  
6 operations?

7 A Currently or after this?

8 Q Currently.

9 A No.

10 MR. DAVIS: And I said that was my last  
11 question and it was. Thank you so much, Mr. Powell.

12 THE WITNESS: Thank you.

13 THE HEARING OFFICER: All right. Thank  
14 you, Mr. Davis.

15 Mr. Tremaine, do you have any redirect  
16 before I go to the Commission?

17 MR. TREMAINE: I just have a couple  
18 questions. I'll be very quick.

19 REDIRECT EXAMINATION

20 BY MR. TREMAINE:

21 Q Thank you, Mr. Powell. Your testimony  
22 today, you've had some questions about produced water  
23 reuse and potential PFAS and produced water. So I  
24 want to ask you generally, like how much produced  
25 water was reused in oil and gas operations in New

1 Mexico in 2024?

2 A So far this year there's been approximately  
3 7 billion barrels reused.

4 Q Is that a B?

5 A Yes.

6 Q Billion. Reused, okay.

7 A Or no, I -- let me correct that. It's 7  
8 billion gallons, not barrels, 'cause the water use  
9 report is in gallons.

10 Q Thank you for that clarification. So  
11 barrels would be what, 7 billion divided by 40. Is  
12 that correct?

13 A Forty-two.

14 Q Forty -- okay. I shouldn't even have tried.  
15 Should have just asked.

16 UNIDENTIFIED SPEAKER: Even I know  
17 that.

18 MR. TREMAINE: Lawyer math.

19 BY MR. TREMAINE:

20 Q Do you know what percentage of total -- what  
21 percentage -- strike that. Do you know what  
22 percentage of total injected -- water was injected for  
23 completions volumes?

24 A I don't know the total volume, but I know  
25 produced water accounts for roughly 50 to 70 percent

1 of what's injected. So you could extrapolate that  
2 out. You're probably looking at 10 to 12 billion  
3 gallons that's injected, just rough numbers.

4 Q Okay. So just to clarify, 'cause I  
5 butchered my question. I was asking you for the  
6 percentage of water that is injected that was reused.  
7 Do -- do I understand you answered that as 50 to 70?

8 A Yeah. Generally, it -- it -- to my  
9 knowledge, the last couple years its averaged between  
10 50 and 70 percent.

11 Q If produced water was not available for you  
12 in downhole operations, what would an operator have to  
13 do with it?

14 A Injected downhole and in injection well.

15 Q And if operators chose not to use produced  
16 water, what would they use instead of produced water?

17 A Typically, I believe before we started  
18 reusing produced water, it was using freshwater  
19 supplies.

20 MR. TREMAINE: No further questions.

21 THE HEARING OFFICER: Okay. Thank you,  
22 Mr. Tremaine.

23 Mr. Chair, do you have questions of  
24 Mr. Powell?

25 MR. RAZATOS: Madam Hearing Examiner,

1 may we take just a few minute break?

2 THE HEARING OFFICER: Absolutely.  
3 Let's take ten minutes.

4 MR. RAZATOS: Thank you.  
5 (Off the record.)

6 THE HEARING OFFICER: All right. We  
7 are back after a short break.

8 And when you get back to your chair,  
9 I'm going to invite you to ask questions to  
10 Mr. Powell.

11 MR. RAZATOS: Thank you, Madam Hearing  
12 Officer and thank you, Mr. Powell, for your testimony  
13 today. We appreciate it. I just have a few  
14 questions. Yesterday, there was some concern that  
15 came up about being able to test for PFAS even in the  
16 future. And I believe you had said that if in the  
17 future there was some necessity to be able to do some  
18 testing on an area and we found PFAS, we would keep  
19 the original operator of the well or the last operator  
20 of the well or whoever it was that caused the spill,  
21 responsible. Can you go into that a little bit for  
22 us, please?

23 THE WITNESS: Yes. Thank you for  
24 asking that. It probably needs to be elaborated a  
25 little bit further. So as far as this role that we're

1 asking, the initial testing would be at the time of  
2 the well integrity event. If things are found in the  
3 waters later as far as part of a groundwater cleanup,  
4 groundwater investigation, that would happen 29 and  
5 30. So it wouldn't necessarily be under this rule.  
6 It would be under a separate set of rule.

7 This rule, the way it's spelled out,  
8 would be looking for that initial well bore integrity  
9 event and would be identifying the chemicals as  
10 written in this rule at that time. If things are  
11 looked for or found later, that would more than likely  
12 happen under part 29 or part 30 investigations.

13 MR. RAZATOS: Okay. Okay. Thank you  
14 for clarifying that one. Then there's a lot of  
15 conversation about the PFAS definition. And again,  
16 just so I understand and I think so the Commission  
17 understands, the PFAS definition that has been  
18 proposed by the OCD is basically a two-part definition  
19 if I kind of understand it correctly. The first part  
20 is the actual definition that chemists use across the  
21 world about what PFAS is. Is that a fair statement?

22 THE WITNESS: Yes.

23 MR. RAZATOS: Okay. And then the  
24 second part is how the OCD would be able to implement  
25 PFAS after testing. Correct?

1 THE WITNESS: Correct.

2 MR. RAZATOS: Okay. So the notion that  
3 the OCD is precluding single carbon compounds that are  
4 perfluorinated is really not true. It's there. It's  
5 just right now the OCD wouldn't be able to see it in  
6 its testing protocols.

7 THE WITNESS: I think the way the  
8 definition is there it would be a preclusion of things  
9 you can't test for at this point.

10 MR. RAZATOS: Okay.

11 THE WITNESS: In an attempt to not be  
12 arbitrary in what that definition would encompass,  
13 because we wouldn't want to encompass something that  
14 hasn't been founded, hasn't been at least studied to a  
15 certain extent and can't be tested reliably, and so if  
16 there's a concern that comes up or something that you  
17 needed test for, we want to be able to test for that.

18 MR. RAZATOS: Okay. Thank you. I know  
19 it's been mentioned that you're not a chemist, you're  
20 not a toxicologist or any of that, but you are a  
21 regulator and you are the deputy director of the Oil  
22 Conservation Division. So help this body understand  
23 how the way that the definition and the changes, just  
24 so we hear it in your voice, we saw it in your  
25 PowerPoint and stuff, but how does all of this help us

1 make this decision on which way to go? Why is the  
2 OCD's the more well-rounded?

3 THE WITNESS: So as far as in actual  
4 implementation of it is why OCD's looking there. So  
5 if you have a well bore integrity event, you're going  
6 to ask for all of that information for the chemicals  
7 that are used in that. You're going to identify what  
8 chemicals are used in that and then you're going to go  
9 test for those chemicals. With having chemicals you  
10 can't test for, it would be difficult to identify what  
11 chemicals to test for in performing that evaluation.

12 So having what chemicals were used and  
13 them comparing them to a method that can be tested for  
14 is necessary to identify those potentially harmful  
15 chemicals to then transition into the other parts of  
16 the OCD's rules and their applicability. So identify  
17 in those early chemicals if you identify something you  
18 would have a method to test for.

19 MR. RAZATOS: Okay. Okay. Thank you.  
20 And testing, and it did peak my interest as well. The  
21 OCD submitted that it would be a verified third-party.  
22 Currently, does the OCD used that phrase, verified  
23 third-part laboratory?

24 THE WITNESS: I don't believe so. I  
25 think we provide methods, but I don't know if that's

1 included in part 29 or not.

2 MR. RAZATOS: Okay. That may be  
3 something that the OCD may want to look into maybe  
4 rewording.

5 THE WITNESS: Typically, when we  
6 receive the results, we look at what's supplied with  
7 the results. We ensure that the blank, those kind of  
8 things were relayed, so if there is questions, we can  
9 look at those qualifiers. But we don't for their  
10 accreditation because I don't know if -- well, the OCD  
11 doesn't oversee any of those accreditations.

12 MR. RAZATOS: Okay. Great. Thank you.

13 And I must admit, I apologize,  
14 Mr. Davis, your question sometimes were a little  
15 compounded. I was having a hard time following so  
16 please also jump in if I've got the question wrong on  
17 this or what was said.

18 Mr. Davis had asked you about 19.15.16  
19 -- let me just start that over. He asked you about  
20 19.15.16.17.A(2). In that particular one, is the one  
21 where what purposed it starts off "If damage from a  
22 shooting, fracturing, or treating of a well has the  
23 potential to impact surface or groundwater." And  
24 Mr. Davis asked you something along the lines about  
25 blowout affecting fresh and groundwater. And I must

1 admit, I missed the answer. Do you, by any chance,  
2 remember what the question was and do you remember the  
3 answer?

4 THE WITNESS: I believe the response  
5 was if there was a well integrity event and that's  
6 what I believe it was elaborating to as a blowout, if  
7 it affected surface water or fresh water, would this  
8 rule apply during production, those kind of things and  
9 the answer was yes.

10 MR. RAZATOS: Okay. And I wrote down  
11 "Does it apply or not?" with a question mark. So  
12 thank you for answering. No further questions from  
13 me. I appreciate it. Thank you, Mr. Powell.

14 THE WITNESS: Thank you.

15 THE HEARING OFFICER: Thank you.  
16 Commissioner Bloom.

17 MR. BLOOM: All right. Good afternoon,  
18 Mr. Powell.

19 THE WITNESS: Good afternoon.

20 MR. BLOOM: Been a long day. Thank you  
21 for your testimony and sticking with this. I first  
22 wanted to look at the question of management of  
23 disposition or generation of waste. It's been brought  
24 up if the OCD -- would agree that the OCD regulates  
25 the disposition of produced water?

1 THE WITNESS: We do.

2 MR. BLOOM: Do you believe that the OCC  
3 can regulate PFAS and produced water?

4 THE WITNESS: We do.

5 MR. BLOOM: I'll leave that there.  
6 There was an issue about notice that was brought up  
7 and I don't remember if it was brought up by  
8 Mr. Tremaine so I'll ask you. But did OCD say in its  
9 opening that the OCC should not -- rethink this.  
10 Strike that.

11 THE WITNESS: I believe I know what  
12 you're asking if you'd like me to answer.

13 MR. BLOOM: Yeah, please. Go ahead.  
14 Thank you.

15 THE WITNESS: The OCD, when we started,  
16 and I believe in Jesse's opening statement, didn't  
17 feel like the downhole operations as a whole so  
18 drilling other production operations had been noticed.  
19 In rereviewing the language from WildEarth Guardians,  
20 they did use downhole operations. It was the OCD that  
21 had changed that to completion and recompletion  
22 because that's the extent of a lot of the  
23 conversations circled around. So there was a  
24 misunderstanding there. Whether downhole operations  
25 as a whole and whether they encompassed drilling or

1 production operations were encompassed, after further  
2 evaluation, as this was ongoing, we feel that that was  
3 noticed properly.

4 MR. BLOOM: Okay. And actually, I  
5 think it was a different issue that I was thinking of.  
6 But I was going to ask about that one as well so thank  
7 you. But Mr. Tremaine say in his opening or is it the  
8 OCD's belief that the OCC in this hearing process  
9 shouldn't get into issues related to disclosure of  
10 other chemicals besides PFAS?

11 THE WITNESS: Boy, I don't remember  
12 that and -- and OCD's proposed language. If there is  
13 a well integrity event, we would be looking for  
14 disclosure of all chemicals used in the well.

15 MR. BLOOM: Okay. And I think  
16 specifically my question's more along the lines of did  
17 the OCD believe that Guardians properly noticed this  
18 and I looked at the notice and saw that it said there  
19 are two points in the second one, said "That the  
20 Commission and the new chemical disclosure and  
21 reporting rules to ensure reasonable transparency  
22 around substances used by the oil and gas industry and  
23 to ensure industry compliance with the prohibition on  
24 the use of PFAS."

25 THE WITNESS: This may be a better

1 question to ask Jesse if you're asking if he stated  
2 it. But I believe OCD has under the assumption that  
3 that's what WildEarth Guardians was asking was full  
4 disclosures.

5 MR. BLOOM: Okay. Thank you.

6 I don't know, Mr. Tremaine, if you've  
7 got anything to add there, if it's proper to ask you  
8 but --

9 MR. TREMAINE: Well, I mean, if you're  
10 asking, I'll answer. Commissioner Bloom, I think it's  
11 possible that I misspoke in the opening. It's  
12 possible. I mean, we can go back to the record. I  
13 think OCD's position and just a couple different  
14 things going on, one, OCD's position as that notice --  
15 we did not support notice to like third-parties that  
16 OCD has not communicated with and OCD does not  
17 regulate.

18 To the proprietary question, OCD was  
19 supporting potentially -- upon triggering events  
20 disclosure of all proprietary information to the OCD.  
21 OCD is taking a position that it is arguably in  
22 conflict with state statute to require disclosure of  
23 proprietary information to the public. So there's a  
24 distinction there. Did that answer your question?

25 MR. BLOOM: I think so. I think so.

1 And it gave me -- led to my next question so thank  
2 you.

3 MR. DAVIS: And Commissioner Bloom, if  
4 I may, if you have any questions about Guardians'  
5 position on this matter, I'm happy to articulate it.

6 MR. BLOOM: Please, go ahead.

7 MR. DAVIS: So there has been some  
8 question about whether Guardians is requesting the  
9 banning of undisclosed chemicals on the oil field, in  
10 addition to PFAS. The answer to that is yes. And the  
11 way that would work is that Guardians is not asking  
12 for a specific ban on any chemical other than PFAS,  
13 but we are requesting that if you will not disclose  
14 those chemicals or you cannot get the chemical  
15 identities from the manufacturer for instance, then  
16 you just simply can't use that in New Mexico. So in  
17 effect, it would mean that all chemicals used downhole  
18 are disclosed.

19 MR. BLOOM: Very good. Thank you.

20 'Cause I reread this morning the New  
21 Mexico law for Uniform Trade Secrets, chapter 57,  
22 article 3-A and it's seven short paragraphs and I  
23 didn't see anything in there suggesting that  
24 rulemaking by this body or others couldn't ban the use  
25 of undisclosed and/or trade secreted chemicals. My

1 understanding is that we can't force anyone to reveal  
2 trade secret chemicals, but it doesn't mean that the  
3 OCC can't prohibit the use of undisclosed chemicals.

4 Does OCD see this differently,  
5 Mr. Powell?

6 THE WITNESS: I think where OCD was  
7 coming from, when it's talking about undisclosed  
8 chemicals, is there's chemicals outside of PFAS that  
9 could be used downhole. Then operators have declared  
10 it as proprietary. I believe on the examples that  
11 we're provided, mineral oil was one of them. That's  
12 non-PFAS containing. We don't feel that that's a -- a  
13 chemical we're looking at today of banning, but it  
14 would effectively ban that unless that chemical  
15 provider would provide that information.

16 OCD's also seen things like special  
17 grit sands that a -- a -- an operator's using that  
18 they've requested proprietary knowledge on because the  
19 grit of the sand is -- is better. So there's things  
20 that have been declared as proprietary that we feel  
21 aren't harmful to the environment and therefore,  
22 shouldn't be banned. And it was OCD's stance that we  
23 felt that at this level, if we were banning trademark  
24 chemicals, it may not be explicit in the statute, but  
25 that would be an effect that could be large-reaching

1 and it would probably be better done through  
2 legislation is described potentially as they did in  
3 other states to ban those. So that effect could be  
4 more widely researched 'cause in this petition, we  
5 were looking specifically at PFAS as a chemical and  
6 essentially banning those other chemicals could be a  
7 lot more far-reaching than what's been presented here.

8 MR. BLOOM: Yeah. I mean, why do you  
9 think we would need legislation here?

10 THE WITNESS: I think because of the  
11 far-reaching effect of banning trade -- chemicals and  
12 proprietary chemicals across the board should be  
13 something that we feel may be something that's better  
14 tackled at the legislative level because you are  
15 negating the needs for the trade secret. I think the  
16 legislature, through the Trade Secret Act, has  
17 understood that some chemicals need that protection  
18 and we're essentially saying, "Well, we're stripping  
19 that protection away."

20 MR. BLOOM: I follow you now. Okay.  
21 You know, clearly as regulators, we struggle with  
22 trying to balance the oil and gas industry and our  
23 other charges which are protection of public health  
24 and the environment. I asked this question yesterday.  
25 We heard a claim, I think it was in the opening, from

1 NMOGA that PTFE hasn't been used since 2020,  
2 FPEG's [ph] not been used since 2015. But how do we  
3 know that with certainty when there are chemicals that  
4 haven't been disclosed? Do we know with certainty?

5 THE WITNESS: I don't think we know  
6 with certainty. That's why we built in the ability to  
7 get those trademarked chemicals to the OCD for that  
8 full evaluation. The -- the chemicals previously  
9 supplied, I didn't look up to see if there was a well  
10 integrity event in those site. No, they were detected  
11 at this locations. I've not detected. They were  
12 reported to be used at those locations. But I don't  
13 know if there was any exposure of those chemicals  
14 through any well integrity events or any exposure to  
15 the environment because of those. So I -- getting the  
16 full disclose to the OCD, to perform that evaluation  
17 at the time of a well bore integrity issue I think is  
18 pertinent and it's critical and that's why the OCD has  
19 asked for it.

20 MR. BLOOM: I think yesterday -- I  
21 think we heard a little bit today too. Does OCD  
22 believe that WildEarth Guardians is proposing moving  
23 away from FracFocus? I didn't see that explicitly,  
24 but is that a possible outcome of what we've been  
25 hearing?

1 THE WITNESS: I believe FracFocus, as  
2 it's there, does not handle the proprietary. If we  
3 were building something to handle proprietary, we  
4 would have to move away from FracFocus. They also  
5 proposed giving a chemical disclosure list to  
6 entities. FracFocus, I don't believe supplies those  
7 to any entities. So you would have to create a new  
8 way to put those chemicals down and then distribute  
9 those to those entities using their proposal.

10 MR. BLOOM: Okay. But again, if we  
11 banned or not permit this exemption for proprietary  
12 information, we wouldn't have that issue at all.  
13 Right? FracFocus could continue to handle --

14 THE WITNESS: It can continue in that  
15 format, but you would still have to find a way to  
16 distribute that if you took their distribution list of  
17 who -- who would need to be notified in each of those  
18 cases because they're looking for I believe a more  
19 positive distribution to those entities. It doesn't  
20 define how that would be distributed, other than they  
21 would have to provide it to those entities.

22 MR. BLOOM: Okay. Now, you're talking  
23 about -- I wasn't following you for a second. So  
24 you're talking about providing notification to third  
25 parties which I think included residents within a

1 mile, police departments, fire departments, et cetera,  
2 BLM, State Land Office?

3 THE WITNESS: Yes. I -- I was looking  
4 at it as a whole because I believed they had a full  
5 chemical disclosure list that they would be providing  
6 to those and that's not a service FracFocus provides  
7 that I'm aware of.

8 MR. BLOOM: Okay. All right. Again,  
9 back to this issue of as regulators trying -- I want  
10 to get into PFAS, the definition of PFAS now. And I  
11 just spoke about this yesterday, but as regulators,  
12 again, we struggle with regulating the oil and gas  
13 industry and also protecting public health and the  
14 environment.

15 The proponents, WildEarth Guardians,  
16 definition of PFAS is a fully fluorinated carbon atom  
17 would give us a pretty wide ban on a group of  
18 chemicals that have not been like widely tested. I  
19 think there's ample evidence of that in the record.  
20 Some of it toxic, the ones that have been tested. Why  
21 does OCD want a definition that narrows this to  
22 around, you know, 70 to 100 chemicals I guess is my  
23 question. Why narrow this?

24 THE WITNESS: I think what OCD was  
25 looking at is not necessarily an intent to narrow but

1 an intent to incorporate all that could be tested for  
2 through approved methods. It was incorporated with  
3 the method so as far-reaching as we could find those  
4 methods and water that can be tested for, it's there  
5 to ensure that, one, we're not arbitrarily eliminating  
6 something that may not be toxic. Two, limiting it in  
7 a way where we can't prove one way or another  
8 something has been used.

9 If somebody says, "Well, you used  
10 this," we have to be able to test to see if it was  
11 used or was not used and without a way to quantify  
12 that, it would -- it would be extremely hard as a  
13 regulator to do that. I understand the intent as a  
14 whole to protect ourselves from bad chemicals, but  
15 unless we can quantify those and say it is or isn't  
16 there, as we've heard, I believe only six or seven of  
17 them have been quantified at this point to being  
18 toxic. We're much larger than that in what we're  
19 requesting by going the -- the 40 to 70 different  
20 chemicals.

21 So we're trying to incorporate a large  
22 swathe of those chemicals but do so in a way that it  
23 can be tested for and verified. 'Cause as regulators,  
24 I think there's times where the intent is good to have  
25 all of them banned, but the reality at the end of the

1 day, to being able to prove one way or another, I  
2 think it's incumbent on us to be able to do that and  
3 to hold companies accountable if they are using  
4 something that you can't quantify and test for.

5 MR. BLOOM: So I feel like, just  
6 looking at an analogy, if I were trying to stop people  
7 from poisoning other people, I think I would say, "You  
8 can't poison people by any means," I don't think I  
9 would only list the poisons we have tests for. You  
10 see where I'm going?

11 THE WITNESS: I do. And I think that's  
12 part of what we're trying to do by the full disclosure  
13 of all the chemicals that are used to identify  
14 everything that's used in those when we get them. I  
15 -- I see what you're looking at. But at the same  
16 time, say a medical examiner, if you're poisoned with  
17 a chemical and they tried to identify the chemical,  
18 that examiner's going to have to test for what  
19 chemical was used as the poison.

20 MR. BLOOM: So back to disclosure, I  
21 mean, if we end up with a narrow definition of PFAS,  
22 there could be other PFAS chemicals that follow or  
23 other ones outside the narrower OCD or NMOGA  
24 definition of PFAS that could be disclosed and could  
25 be -- could be used. Correct?

1 THE WITNESS: I think that's what we  
2 were going for by keeping that open-ended for updates  
3 to the -- the methods that are there. I think if  
4 other methods were to be developed, absolutely we'd  
5 probably have to look at additional rulemaking to  
6 incorporate those, but based on the experts that we  
7 had, the thought process is they wouldn't be creating  
8 new methods. They would be using these methods to add  
9 to those chemicals as those chemicals become known,  
10 become studied and the -- the reliable analytical  
11 methods were developed for them.

12 MR. BLOOM: Oh, I think my last  
13 question, just to clarify something, I believe maybe  
14 yesterday you said that OCD in the future could find  
15 spills that had PFAS in them that weren't banned today  
16 but we could force cleanup even in that situation in  
17 the future. Is that right?

18 THE WITNESS: So that was a very broad  
19 comment that was asked. So for this rule, we would be  
20 looking at -- at the time of the well integrity event.  
21 But if there was contaminants found later under part  
22 29 or part 30, we still hold operators accountable for  
23 contaminants that are found under those rules and  
24 cleanup underneath those rules.

25 MR. BLOOM: Wouldn't it be easier to

1 have this broader definition based on Guardians'  
2 proposal that would just ban a wide swathe of PFAS  
3 chemicals at this point and then in the future, if you  
4 found out that those things were used or spilled, then  
5 you have a stronger case for enforcement?

6 THE WITNESS: I don't know that you  
7 would because New Mexico's got a 100 years of oil and  
8 gas activity. If it's already out there, if it's  
9 already in those areas, having that broad ban today I  
10 don't think would bolster down the road if you found  
11 it and looked for that cleanup. I think you would  
12 still be detecting those PFAS through analytical  
13 methods. I don't see how you would detect a PFAS  
14 constituent say 20 years from now without running an  
15 analytical method that would discover the PFAS in that  
16 water. Because it -- you have to have a trigger point  
17 to be able to find that.

18 MR. BLOOM: Yeah. I mean, I lied. One  
19 last question. Something you've heard me struggling  
20 with is if we change notification to include people  
21 living within a mile, fire departments, police  
22 departments, the whole list that Guardians proposed,  
23 your thoughts on that, helpful, not helpful if we did  
24 it, how could those people best be notified.

25 THE WITNESS: The -- the initial

1 thoughts on it is you're sending it to a lot of people  
2 that may not understand it. Your -- your fire  
3 departments, your police departments, there's HazCom  
4 and I am not an expert in that where I believe  
5 different companies have to file MSDS's [ph] with  
6 those departments, that they're in those areas.  
7 That's outside of my realm. Just general knowledge on  
8 that.

9 But sending it to preschools, schools,  
10 people at houses, I can barely understand half of it  
11 and I work in this environment. If you start sending  
12 it to people that don't understand it, either, one,  
13 they're not going to understand it and throw it away  
14 or they're not going to understand it and feel like I  
15 think create some hysteria over it without that  
16 understanding.

17 And at the time of a frack, there's not  
18 an exposed person inside of that area at that time  
19 unless there's a well integrity event. We -- I  
20 believe in the state there's roughly two thousand --  
21 2,500 wells currently complete at a year. And this  
22 would affect everything that OCD's over so it's state  
23 lands, federal lands, private lands, all of those. So  
24 those 2,500 completions per year, plus any well that's  
25 being treated, if we include all downhole operations,

1 every well that has scavenger corrosion inhibitor, all  
2 of those are at treatment so now all of those wells,  
3 you're talking potentially 10,000 events a year or  
4 tens of thousands events per year. You're going to be  
5 sending out full disclosures to the entities that  
6 don't know what a disclosure or what these chemicals  
7 are.

8 MR. BLOOM: Yeah. This reminded me, I  
9 had one other question I forgot to ask. So FracFocus  
10 does not get the -- doesn't preserve the proprietary  
11 information, right. That's all -- if somebody claims  
12 it's proprietary, that company that applied is the  
13 only one that knows what it is?

14 THE WITNESS: Correct. They don't  
15 receive it. All they receive is the information  
16 provided where it's marked proprietary on that  
17 submission.

18 MR. BLOOM: Have there ever been issues  
19 with companies not being able to find that information  
20 after a series of -- of mergers and acquisitions and  
21 failures and things like that?

22 THE WITNESS: It's listed as a trade  
23 chemical. I haven't been aware of anything where they  
24 had issues because you're looking -- it gives the  
25 chemical name or the -- the mix name I should say. It

1 gives the mix name. We haven't been requiring that at  
2 this point for those events. We're looking for it  
3 when the integrity event happens so I don't know that  
4 because it's happening at that point that there would  
5 be an issue at being old enough where it wouldn't be  
6 accessible by the company.

7 MR. BLOOM: Yeah, I was thinking about  
8 -- I mean, I know you know the San Juan intimately and  
9 I started working at the Land Office the first time  
10 around in 2012 and I think of, you know, Logo sold out  
11 to maybe WPX and then WPX sold probably to Enduring or  
12 DJR.

13 THE WITNESS: Yep.

14 MR. BLOOM: And during DJR, WPX was  
15 bought by Devon. I mean, who knows what was in that  
16 frack job at this point.

17 THE WITNESS: So I think that's where  
18 the -- the key is is we would be looking at it at the  
19 time of an integrity event. So if when you're  
20 fracking and you have a loss of integrity over your  
21 casing, that's when we would be taking that action as  
22 at that point we would be asking for full disclosure  
23 of all the chemicals used in that fluid stream and  
24 testing for that. If there is some concern over what  
25 to be tested for, OCD did have in there -- OCD can

1 request additional chemicals to be analyzed for  
2 depending on the situation. And I think that's  
3 currently in OCD's power, under their investigatory  
4 powers. But that is the area, if -- if there really  
5 is a concern of what's being used downhole and if  
6 we're getting full disclose.

7 MR. BLOOM: All right. Thank you,  
8 Mr. Powell.

9 THE WITNESS: Thank you.

10 THE HEARING OFFICER: Okay. Thank you.

11 Commissioner Ampomah

12 DR. AMPOMAH: Thank you.

13 Please, do you have a copy of your  
14 direct testimony with you?

15 THE WITNESS: Do I have a copy of that?

16 DR. AMPOMAH: Uh-huh.

17 THE WITNESS: Yes.

18 DR. AMPOMAH: Okay. So I'm going to  
19 walk through that. So I'll start on page 1. OCD  
20 Exhibit 2 and I think page 13. But that is page 1 of  
21 your direct testimony. On line 17 --

22 THE WITNESS: Okay. Let me get to  
23 that, please.

24 DR. AMPOMAH: Okay.

25 THE WITNESS: So direct testimony, page

1 2 or page 1.

2 DR. AMPOMAH: Page 1, line 17.

3 THE WITNESS: Okay.

4 DR. AMPOMAH: "OCD supports action  
5 regarding the banning of PFAS as defined through the  
6 testimony of other Division witnesses as a completion  
7 chemical additive." What about enhanced recovery?  
8 What about drilling?

9 THE WITNESS: So that's what I  
10 mentioned earlier. A lot of the discussion up to this  
11 was around completion and recompletion activities so  
12 that's why that was stated that way. But after  
13 relooking at the -- how WildEarth Guardians proposed  
14 it, OCD supports the ban of PFAS in all downhole  
15 activities.

16 DR. AMPOMAH: So in the final rule that  
17 we'll get is going to be downhole activities, not  
18 necessarily completion.

19 THE WITNESS: Correct.

20 DR. AMPOMAH: Okay. Thank you. So my  
21 next question is, so looking at the entire rule, more  
22 or less suggested by NMOCD, how ready is OCD to  
23 implement these proposed rule?

24 THE WITNESS: So I think it would be  
25 using as proposed by OCD current staff. If there is a

1 well integrity event, we would be getting with the  
2 operator to see if that well was chemically treated or  
3 it was part of a completion activity and asking for  
4 which chemicals were being used for evaluation.

5 Depending on what chemicals were being used, OCD would  
6 be looking at that and potentially having the operator  
7 give more details or if -- if needed, reach out to a  
8 toxicologist, those kinds of things, to identify  
9 harmful chemicals. But it would be using the current  
10 OCD staff to do that because those cases would be  
11 limited just to those well bore integrity events.

12 DR. AMPOMAH: So then it means that OCD  
13 can easily implement this without additional burden.

14 THE WITNESS: Without what? I'm sorry.

15 DR. AMPOMAH: Additional burden.

16 THE WITNESS: Correct.

17 DR. AMPOMAH: Okay. But what about if  
18 the Commission decides to go with strictly what the  
19 petitioner or the applicant is suggesting?

20 THE WITNESS: I don't -- it would be  
21 extremely difficult for OCD to manage that and we  
22 would be pulling resources that we're using other  
23 places such as reviewing permits, those kind of  
24 things, spill reports, and we would have to pull those  
25 into processing those full disclosures on every well,

1 those kind of things.

2 DR. AMPOMAH: Will OCD be willing to  
3 provide that information to the Commission to guide us  
4 as we make decisions?

5 THE WITNESS: I don't think we have a  
6 full evaluation of what that would be. We -- we  
7 evaluate it based on OCD's proposal and where we -- we  
8 stated that it would be hard for OCD to implement what  
9 is in the slides.

10 DR. AMPOMAH: Okay. On page 2, I do  
11 have some few questions there.

12 THE WITNESS: Okay.

13 DR. AMPOMAH: So on line no. 12, the  
14 first is that "OCD does not support the proposed ban  
15 on trademarked chemicals as this type of ban would not  
16 align with the state statutes, providing for the  
17 protection of proprietary and trade secret  
18 information." Based on the discussion with  
19 Commissioner Bloom, do you believe this is the main  
20 reason why OCD is not supporting full disclosure at  
21 this time?

22 THE WITNESS: Yes. We feel that the  
23 trade secret ban was enacted in New Mexico and  
24 provides protections and eliminating that would  
25 effectively be going against that, those protection

1 provisions.

2 DR. AMPOMAH: Okay. And based on your  
3 earlier response, on line no. 18, so it's saying  
4 "These changes ensure that the rule can be effectively  
5 administered and not unintentionally conflict with  
6 other OCD rules." So definitely that is a -- that's  
7 to the trade secrets. And then also I think you  
8 responded that based on your evaluation, with regards  
9 to the changes that NMOCD is proposing, it's more or  
10 less going to also support with effective  
11 administration of the rule. Is that a fair statement?

12 THE WITNESS: That is correct.

13 DR. AMPOMAH: Thank you. Let's go no.  
14 3, page no. 3. So on the first two lines, I want to  
15 ask, what are the current limitations on the reports  
16 for to the FracFocus that you know of?

17 THE WITNESS: The current limitations  
18 are where they mark proprietary. We gave a couple  
19 examples in our exhibits of what come from FracFocus  
20 which give some marked proprietary information. One  
21 of them I remember offhand as being mineral oil. They  
22 use a proprietary blend of mineral oil in their use.  
23 So it's just ensuing we get all those chemical  
24 disclosures if there is an integrity event.

25 DR. AMPOMAH: So I do have a couple of

1 questions on the FracFocus. Is there a way to verify  
2 the information that is going in there?

3 THE WITNESS: That is operator  
4 reported. If there was a well integrity event, that  
5 would be something OCD would be working with the  
6 operators to ensure there -- there was full  
7 disclosure.

8 DR. AMPOMAH: Okay.

9 THE WITNESS: And if they didn't give  
10 full disclosure, they could be subject to an  
11 enforcement action.

12 DR. AMPOMAH: Okay. Thank you. So  
13 still on page no. 3. On line no. 5 to 7, the exhibits  
14 also show examples of what -- are marking as  
15 proprietary and the times of additives other than PFAS  
16 which would be banned from use on the Guardians'  
17 amended application. So that is for OCD. Do you  
18 believe OCC too do not have the authority to ban  
19 undisclosed chemicals?

20 THE WITNESS: I'm not a lawyer and I'm  
21 not OCC's counsel. I would say that it would be --  
22 what OCD is stating is OCD feels that it would go  
23 against the protections provided under the -- the  
24 state statutes for trademarked chemicals.

25 DR. AMPOMAH: Okay. We will seek

1 counsel. Thank you. Okay. So if we go down to 17 to  
2 23, it sounds to me that OCD do agree to full  
3 disclosure. It's more or less implementing full  
4 disclosure, but only when there is an incident. Is  
5 that a fair statement?

6 THE WITNESS: That is correct.

7 DR. AMPOMAH: Okay. And no. 4, so OCD  
8 supports -- I'm reading from line 15, "OCD supports a  
9 certification that no PFAS containing chemical  
10 additives were added to the completion fluids." Can  
11 you explain to us how this process will work?

12 THE WITNESS: So how that process would  
13 work, there's actually two certifications written in  
14 the proposal. One would be with the initial APD so  
15 they would certify in the APD that they will not be  
16 using any PFAS-containing chemicals. And then there  
17 would be an additional certification with the  
18 completion report that they did not use any PFAS in  
19 the completion or recompletion of that well. The APD  
20 certification I could see potentially covering all  
21 downhole operations if that's changed by the  
22 Commission. The 105 would still be just for the  
23 completion and recompletion.

24 DR. AMPOMAH: Okay. Let me ask. So  
25 how effective is the FracFocus as of now? How

1 effective is it in your -- duties?

2 THE WITNESS: As far as what I've used  
3 it for, I've found it very effective. You can pull it  
4 up. The public can pull it up. They can zoom to  
5 specific areas. They can search for specific API  
6 numbers and see what completion information's been  
7 entered for those wells or wells in a certain area  
8 that have been filed.

9 DR. AMPOMAH: And based on your  
10 experience with FracFocus, oil and gas industry has  
11 been more transparent?

12 THE WITNESS: I think since the  
13 enactment of the -- from the OCC to use FracFocus and  
14 previously using OCD's website, which have  
15 complications, I -- I actually think it was smoother  
16 under FracFocus because you had less down time, those  
17 kind of things. It was more reliable. It has been  
18 very transparent as far as the chemicals being used in  
19 those wells and which chemicals were listed as  
20 proprietary.

21 DR. AMPOMAH: Okay. So I want to ask  
22 you, as a deputy director, definitely you were heavily  
23 involved in the preparation for this rulemaking or the  
24 hearing. I want to -- I want to know the process that  
25 NMOCD went through, you know, announcing what the

1 petitioner provided and what more or less preempted  
2 all the changes that NMOCD has made to the current  
3 proposed rule.

4 THE WITNESS: Boy, that was quite a  
5 process. I would say from the first application OCD  
6 reviewed that. Reviewed it with OCD counsel. There  
7 was public -- or there was outreach with the other  
8 parties on that first proposed draft. There was  
9 definitely some issues OCD felt were in that first  
10 application jurisdictionally as OCD felt it was  
11 outside the scope of what OCD could regulate. So we  
12 got with the applicants, we drafted a potential  
13 outline frame of what rules that could be used that  
14 currently are in the rules to accomplish the main  
15 goals that we've seen from the petitioner. We  
16 provided to -- the -- that to the applicants.

17 Generally that outline is what was used  
18 by the petitioner in their current outline. They made  
19 modifications to it obviously to what they felt they  
20 needed in that proposed rule in what they were looking  
21 for, but they were using that structure as a guide.  
22 And then OCD took what the applicant provided in the  
23 current application and made modifications to it for  
24 what OCD determined they felt they needed for the  
25 implementation of that rule and what goals OCD needed

1 to meet on that.

2 DR. AMPOMAH: Thank you for that. So  
3 on page 5, line 17, 18, and 19. Okay. "OCD believes  
4 that changes to this rule should establish a process  
5 for the detection of potential impacts, not for the  
6 remediation." Now, with this statement, I'm thinking  
7 it sounds like OCD's more or less focusing on the  
8 detection and not necessarily the prevention. Can you  
9 comment on that?

10 THE WITNESS: I believe that detection  
11 is also prevention. In -- in the review, if we're  
12 evaluating for potential impacts, we're doing that  
13 detection. If it's found that they're using a  
14 chemical in that initial detection that wasn't  
15 allowed, that violates that rule, there is a potential  
16 for enforcement there.

17 I think what OCD was pointing out here  
18 is if there is an impact, that the remediation would  
19 then fall under part 29, part 30 which are separate  
20 rules than what's being opened here today. But that  
21 initial detection or evaluation would happen at the  
22 time of impact and that full disclosure happened at  
23 that point to see. And if it's determined that the  
24 chemicals are being used that were previously banned,  
25 that is a potential enforcement action.

1 DR. AMPOMAH: So assuming there is a  
2 problem or let's say there is a casing integrity issue  
3 and then the operator reports that to OCD. Help me  
4 understand, how does become small like a preventative  
5 measure, you know, than a detection measure with  
6 regards to underground is also drinking water?

7 THE WITNESS: Oh, I think the  
8 prevention measure is because the operator wouldn't  
9 want enforcement action against them because if there  
10 is a well integrity event, we would ask for a full  
11 chemical disclosure. We would get all of those  
12 chemicals and if it was found that they were using one  
13 of those PFAS chemicals, they would be subject to  
14 enforcement action from the OCD because they're using  
15 something that's banned. So the -- the prevention is  
16 because they wouldn't want the enforcement action  
17 taken against them. It is where the prevention would  
18 be.

19 DR. AMPOMAH: You know, based on  
20 current technology, we have any way to clean PFAS  
21 contamination?

22 THE WITNESS: To clean PFAS  
23 contamination?

24 DR. AMPOMAH: Uh-huh.

25 THE WITNESS: That wasn't something I

1 looked at.

2 DR. AMPOMAH: Yeah. Because the way I  
3 read this, it's more like if there is a problem, then  
4 the operator will quickly work on it to avoid any  
5 enforcement action against them.

6 THE WITNESS: It would -- it wouldn't  
7 be quickly work on it. It would be quickly identify  
8 and what potential contaminants are there. And if it  
9 is identified that there's PFAS there, they would then  
10 move to part 29 and part 30 for the evaluation or  
11 remediation. And those theoretically could be looking  
12 at long-term remediation, the water, what has to be  
13 done with that water. Those kind of things.

14 DR. AMPOMAH: Thank you. Okay. Page  
15 6.

16 THE HEARING OFFICER: Commissioner, may  
17 I make a brief --

18 DR. AMPOMAH: Sure.

19 THE HEARING OFFICER: -- announcement  
20 to those on the platform?

21 This is Felicia Orth, the hearing  
22 officer. We do have a public comment session coming  
23 up very shortly. I'm going to invite the commissioner  
24 to finish his questions of this witness and then I  
25 will turn to those on the platform who would like to

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1 offer public comment. Thank you.

2 Go ahead. Continue.

3 DR. AMPOMAH: Yeah. Let me wrap up  
4 quickly. Yeah, 'cause I have tons, but I'll wrap up  
5 quickly. Okay. Okay.

6 So on page 6, line no. 6, "OCD feels  
7 that the inclusion of most of the entities is  
8 unnecessary." And I know there was back and forth on  
9 this with my other commissioners. Let me ask, whose  
10 responsibility is it to get consent from these  
11 entities that the petitioner is more or less included  
12 in the room?

13 THE WITNESS: To receive concern if  
14 they have concern?

15 DR. AMPOMAH: No, so I think it was  
16 more on the list that is provided. And OCD strike  
17 most of them out, just focusing on the state and then  
18 also the federal. It's just State Land Office and  
19 then BLM. So I'm asking, who is responsible to  
20 notify?

21 THE WITNESS: So it would be the  
22 operator's responsibility to notify those agencies in  
23 those scenarios.

24 DR. AMPOMAH: Then why would that  
25 create a burden for, let's see, OCD? Why are you

1 striking them out?

2 THE WITNESS: OCD would be concerned  
3 with sending them to entities that wouldn't understand  
4 what they were receiving and then OCD would get the  
5 follow-up questions from that. You're -- you're  
6 receiving a list of chemicals that can be quite  
7 extensive and you're sending them to a place like  
8 childcare facilities, daycare facilities. They  
9 wouldn't have a -- even a basic chemist potentially on  
10 staff to evaluate it or even understand what they're  
11 getting.

12 So we kept those limited to other  
13 regulatory bodies that would understand at least what  
14 they're receiving. The FracFocus chemical information  
15 is publicly available to everyone so if people are  
16 interested, what's going on in their area, they can  
17 pull up a map in FracFocus to see what wells have been  
18 completed in the area. Pull up those FracFocus  
19 reports.

20 OCD's concern was the -- those  
21 disclosures going to entities that wouldn't understand  
22 that and causing concern and then those entities would  
23 be reaching out to the OCD and OCD would be providing  
24 that information whereas stated, FracFocus has a map  
25 where if an entity does have concern about what's

1 going on in their area, they can go to that map and  
2 find the completions generally in that area.

3 DR. AMPOMAH: Let me ask. So assuming  
4 OCD do have the budget and then the staff, will your  
5 proposed changes be different or it's just mostly just  
6 effective operations?

7 THE WITNESS: I think for that section,  
8 it -- it would be the same whether you had budget or  
9 staff because, again, I -- we believe that you're  
10 sending information to entities that wouldn't  
11 understand what they're receiving. And some of those  
12 are additional government agencies that don't regulate  
13 oil and gas and would they have some requirement to  
14 take some action with that, I think you would confuse  
15 those entities as well.

16 DR. AMPOMAH: Okay. So I was asking a  
17 different question.

18 THE WITNESS: Okay.

19 DR. AMPOMAH: I was asking that -- so  
20 you talked about it's going to create a lot of burden  
21 if let's say the Commission is to more or less go  
22 strictly with what the applicant is giving us with  
23 regards to the entire rule. So I'm asking you that  
24 assuming you do have the staff and then the budget,  
25 would your proposed changes be a little bit different

1 from what we have now?

2 THE WITNESS: I don't believe so. I  
3 believe where OCD comes at it, even with full staff,  
4 full budget in that scenario strikes a balance with  
5 effective regulation because at the time of a well  
6 bore integrity event, that's when you need to know all  
7 of those chemicals. The majority of operations in New  
8 Mexico aren't going to have those well integrity  
9 events. So the -- that information would be unneeded  
10 at that point. So the way it's proposed, if you're  
11 looking strictly at budget and staffing, OCD, I don't  
12 believe would change what we're recommending. The  
13 full disclosures, I don't think that is a budget or a  
14 manpower concern. That is more of a regulatory  
15 legislative body concern.

16 DR. AMPOMAH: With regards to the full  
17 disclosure, based on your testimony, the companies put  
18 that through FracFocus and if there's a problem, then  
19 you ask for more information. Is it that OCD is  
20 trying to move away from office of record, you know,  
21 that let's say there is a fallout, you're going to  
22 request to provide all this information or I just want  
23 to understand why OCD feels like they cannot enforce  
24 the full disclosure right -- to let's say in your  
25 operation.

1 THE WITNESS: I'll try to address that.  
2 I'm not sure I fully understand. But OCD feels the  
3 full disclosure that comes in, if it doesn't come in  
4 through FracFocus, OCD would have to be maintaining  
5 that if it's a full disclosure for every well. And  
6 then if OCD received an IPRA on each individual well  
7 that that came in on, they would have to be doing an  
8 evaluation for each individual scenario. So that  
9 could be extremely cumbersome for a scenario that  
10 there would not be an impacted party on unless there's  
11 a well bore integrity event. So OCD feels that's  
12 unneeded.

13 And FracFocus doesn't have the ability  
14 to get the proprietary information. So if it was a  
15 full disclosure, that would have to come to OCD to  
16 manage that information in OCD's records. As far as  
17 the public records and how FracFocus works, I believe  
18 that's not something I reviewed here. I'm sure that  
19 was reviewed by the Commission when FracFocus was the  
20 platform initially decided to be used by the  
21 Commission.

22 DR. AMPOMAH: Yeah, due to time, I'll  
23 ask you one last question.

24 THE HEARING OFFICER: You know what, I  
25 don't want to stop your questioning, but if you're at

1 a good stopping point, we can pick this up again  
2 tomorrow morning.

3 DR. AMPOMAH: Now, last one and then  
4 I'll be done.

5 THE HEARING OFFICER: Okay.

6 DR. AMPOMAH: So assuming there is a  
7 problem on the well and you ask for full testing, can  
8 you explain to the Commission the verification process  
9 of what you receive?

10 THE WITNESS: So if we're -- if there's  
11 a well integrity event, OCD would be asking for full  
12 disclosure first from the operator. The OCD would be  
13 working through that full disclosure with the operator  
14 to identify any potential contaminants of concern such  
15 as PFAS as well as other chemicals. Say formaldehyde,  
16 acids that are used in the well that could be  
17 detrimental to that water.

18 Once those chemicals are identified,  
19 the OCD would then be asking the operator to have  
20 testing performed on that fluid stream. And it's  
21 important to test the fluid stream first because as it  
22 moves out in the groundwater, it could dilute so  
23 chemicals that could be in the fluid steam may not  
24 have migrated out into the water at that point. So  
25 OCD's looking at testing the fluid stream as close to

1 that event as possible to look for those chemicals, to  
2 identify any potential chemicals that could have a  
3 negative effect to that water. Once that happens, OCD  
4 would review that and the operator would review that.  
5 And if there's chemicals of concern in that fluid  
6 stream, that would be marked and then moved to part 29  
7 and part 30.

8 DR. AMPOMAH: Thank you.

9 THE HEARING OFFICER: Thank you very  
10 much, Mr. Ampomah.

11 Is there any reason then not to excuse  
12 Mr. Powell? No.

13 All right. Thank you very much,  
14 Mr. Powell, for your testimony.

15 THE WITNESS: Thank you.

16 MR. DAVIS: Madam Hearing Officer,  
17 before we start public comment, I was wondering if it  
18 was possible to get some direction as to whether we  
19 need to prepare closing remarks for tomorrow  
20 potentially or if we're leaning more towards a brief.  
21 And I wanted to bring that up now so that if the  
22 Commission wants to give us any direction, that they  
23 have a little time to discuss.

24 THE HEARING OFFICER: Okay. Thank you.  
25 Commissioners, my impression from

1 comments I've heard behind the dais is that you would  
2 prefer to have written briefs following the party's  
3 receipt of the transcript such that you would be  
4 deliberating in a meeting in, for example, January.  
5 Is that a correct impression?

6 MR. BLOOM: That would be my  
7 preference, yes. Thank you.

8 DR. AMPOMAH: That would be mine too.

9 MR. RAZATOS: I could go either way so  
10 it's -- I would go with it, with the majority.

11 THE HEARING OFFICER: All right. Thank  
12 you very much, parties. We will talk about post  
13 hearing submittals and deadlines and all of that when  
14 we're actually at the end of the hearing.

15 MR. DAVIS: Thank you, Commissioners,  
16 Madam Hearing Officer, thank you.

17 THE HEARING OFFICER: Thank you.

18 Alrighty. I am turning to face the  
19 platform. We've come to the public comment period for  
20 today. There will be at least one more public comment  
21 opportunity tomorrow morning at 8:30. And by the way,  
22 for that public comment period, we will have an  
23 interpreter, a language interpreter between English  
24 and Spanish. So if you would prefer to make your  
25 statement in Spanish, please join us tomorrow morning

1 at 8:30. So I have three folks who signed up ahead of  
2 time and I'll call on those three folks first. The  
3 first one there, you see on your screen, Sarah Knopp.  
4 And then Aria Chioto [ph] and David Munoz. And then  
5 the administrator will follow those on the screen who  
6 raise their hand. And we'll go until everyone has  
7 gone.

8 Just a couple of things. I can accept  
9 oral comment from you just once so if you've already  
10 made an oral statement, I would ask you to put  
11 additional thoughts in writing. All written public  
12 comments can be submitted to Sheila Apodaca until five  
13 o'clock tomorrow. I will ask you to state and spell  
14 your name and I will ask you if you swear or affirm to  
15 tell the truth. And then I will set my stopwatch for  
16 three minutes. So let's get started.

17 Ms. Knopp. And if I mispronounce your  
18 name, please correct me.

19 MS. KNOPP: Yeah. Thank you, Hearing  
20 Officer. It's Sarah Knopp. So --

21 THE HEARING OFFICER: No problem.

22 MS. KNOPP: S-A-R-A-H and the last name  
23 is K-N-O-P-P.

24 THE HEARING OFFICER: All right. Thank  
25 you.

1 WHEREUPON,

2 SARAH KNOPP,

3 called as a witness and having been first duly sworn  
4 to tell the truth, the whole truth, and nothing but  
5 the truth, was examined and testified as follows:

6 THE HEARING OFFICER: All right. I'll  
7 start your three minutes.

8 THE WITNESS: Thank you.

9 And thank you, Commissioners, for the  
10 opportunity to speak to you today in the matter of  
11 Case No. 23580. My name's Sarah Knopp and I'm a  
12 policy specialist with Amigos Bravos. Amigos Bravos  
13 is a statewide water quality protection and  
14 restoration organization based in Taos and guided by  
15 social justice principles dedicated to preserving and  
16 restoring the ecological and cultural integrity of New  
17 Mexico's water and the communities that depend on it.

18 While rooted in science and the law,  
19 our work is inspired by the values and traditional  
20 knowledge of New Mexico's diverse Hispanic and Native  
21 American land-based populations with whom we  
22 collaborate. My colleague, who contributed to these  
23 comments, co-chairs, the New Mexico Toxic Pollutants  
24 Working Group, Amigos Bravos wholeheartedly supports  
25 the proposed rule change. PFAS chemicals are a major

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1 health concern in New Mexico and saying that -- saying  
2 this is not a scare tactic as we recently read in an  
3 op-ed piece in the New Mexican.

4 Here are some of the things that we  
5 know from working with affected communities. PFAS  
6 substances threaten the integrity of New Mexico's  
7 water quality and directly harm our land-based  
8 peoples, the sovereign native nations that reside  
9 within New Mexico's -- New Mexico as well as our  
10 agricultural, traditional, and cultural ways of life  
11 by the continuous introduction and exposure of these  
12 dangerous chemicals into our agriculture and then into  
13 our bodies, from the food we eat to the milk and water  
14 we drink.

15 We're particularly concerned about the  
16 oil and gas industry injecting these forever chemicals  
17 into dangerous and highly pressurized underground  
18 wells, putting all the groundwater resources in the  
19 area at work. Concentrations of non-regulated PFAS  
20 have been found in New Mexico's groundwater. In La  
21 Cieneguilla, New Mexico, private water wells have  
22 tested positive for industrial types of PFAS.  
23 Subsequently, the citizens there have found the same  
24 types of PFAS in their blood from drinking and being  
25 exposed to PFAS.

1           The groundwater plume in Clovis has  
2 migrated to the Ogallala Aquifer which is one of the  
3 world's large aquifers, underlying eight U.S. states.  
4 It also provides over 21 million acre feet of  
5 irrigation for agricultural, traditional, and cultural  
6 use. PFAS wash into water systems and are not always  
7 captured by wastewater treatment plants. Disclosure  
8 of chemicals used in fracking, both in PFAS and other  
9 chemicals, should be part of the cost of doing  
10 business for the oil and gas industries in this great  
11 state because we have so much at stake.

12           The industry claims that they already  
13 have to disclose chemicals through FracFocus, but as  
14 you've been hearing, according to FracFocus itself, in  
15 the section of their website that explains trade  
16 secrets, it says "Companies that create proprietary  
17 formulas, methods, techniques, or processes for  
18 hydraulic fracturing are protected by these trade  
19 secret laws and are therefore, not required to reveal  
20 the chemicals used."

21           In addition, that third-party database  
22 has no legal authority or capacities to verify what  
23 companies are self-reporting. So much more stringent  
24 reporting regulations are badly needed. We can learn  
25 from Colorado and California, just to give two

1 examples, which both require full reporting of  
2 fracking chemicals. So I sincerely hope that the  
3 Commission approves this rule as proposed. Thank you  
4 very much.

5 THE HEARING OFFICER: Thank you,  
6 Ms. Knopp.

7 Do we have Aria Chioto [ph] on the  
8 platform? Aria Chioto [ph]? No? Okay.

9 No. More screen. No. Okay.

10 So perhaps just go to no. 2 at this  
11 point, right, or yeah. This is Dr. Stephen Conrad.  
12 Dr. Conrad? You're muted. You're muted.

13 DR. CONRAD: Okay, unmuted.

14 THE HEARING OFFICER: Okay. Well, if  
15 you would spell your name for the record, please.

16 DR. CONRAD: Sure. Stephen Conrad,  
17 S-T-E-P-H-E-N C-O-N-R-A-D.

18 WHEREUPON,

19 STEPHEN CONRAD,  
20 called as a witness and having been first duly sworn  
21 to tell the truth, the whole truth, and nothing but  
22 the truth, was examined and testified as follows:

23 THE HEARING OFFICER: Thank you. I'll  
24 start your three minutes.

25 THE WITNESS: Okay. Thank you.

1                   So by way of introduction, I have a  
2                   Ph.D. in groundwater hydrology from New Mexico Tech  
3                   and I worked at the Sandia Labs for 26 years, working  
4                   on groundwater cleanup issues. I worked on safe  
5                   radioactive waste disposal, a variety of groundwater  
6                   cleanup projects and DOE and EPA-funded research.  
7                   Like many others, I agree that we need to know all the  
8                   added constituents that make up fracking water. But  
9                   beyond that, we also need to know the composition of  
10                  the water that is produced from these fracking  
11                  operations. Yes, we need to know what goes in, but  
12                  importantly, we also need to know what comes out.

13                  The oil and gas industry has a waste  
14                  problem, five to seven barrels of wastewater produced  
15                  for every barrel of oil. And it's running out of  
16                  disposal options. And there remains big, unanswered,  
17                  contentious questions about what to do with all this  
18                  produced water. This extracted water contains all the  
19                  constituents of the injected fracking -- fracking --  
20                  fracking fluid. Plus, it also contains a far greater  
21                  quantity of water concurrently it's extracted from the  
22                  geologic formation. So fracking fluid goes in and  
23                  then what comes out? Well, the injected fracking  
24                  fluid comes back out. Also, petroleum products, which  
25                  is great, that's the objective, but also, a large

1 quantity of connate water. That is the water that's  
2 trapped in the sedimentary rock at the time of its  
3 formation.

4 So in the aqueous phase, we have a  
5 mixture of fracking fluid, mixed with a far greater  
6 quantity of formation water. This produced water  
7 comes with a whole host of dissolved petroleum  
8 hydrocarbons. And because it's sitting in contact  
9 with petroleum for many millennia, this water can also  
10 carry dissolved radionuclides and other solutes from  
11 the rock in which this water reside in. And often, it  
12 can be far saltier than seawater. Most of these salts  
13 are relatively benign, but some are quite hazardous.

14 No matter how we decide to either  
15 dispose or treat this produced water, we need to know  
16 exactly what's in it to do it effectively and safely.  
17 Yes, we need to know all the constituents of the  
18 injected fracking fluid, but we also need to know all  
19 the constituents of the produced water coming out. I  
20 thank you for your time.

21 THE HEARING OFFICER: Thank you,  
22 Dr. Conrad.

23 Next we have Dave, oh, Munoz. Great.  
24 Thank you. If you would please spell your last name.

25 DR. MUNOZ: M as in Mary, U, N as in

1 Nancy, O-Z.

2 THE HEARING OFFICER: I can't hear what  
3 you're saying.

4 DR. MUNOZ: M-U-N-O-Z. Can you hear  
5 that?

6 THE HEARING OFFICER: Increase your  
7 volume.

8 DR. MUNOZ: M-U-N-O-Z.

9 THE HEARING OFFICER: Okay. That was  
10 almost impossible to hear. And we'd very much like to  
11 hear your statement. Do you have a way of increasing  
12 your volume?

13 DR. MUNOZ: Just the output. How's  
14 this? Is this better?

15 THE HEARING OFFICER: I'm sorry. I  
16 can't hear you.

17 DR. MUNOZ: Munoz, David Munoz.

18 THE HEARING OFFICER: No. I'm sorry.

19 DR. MUNOZ: Oh. I guess this isn't  
20 going to work.

21 THE HEARING OFFICER: So I have a  
22 couple of suggestions. One is that I could go to  
23 someone else and come back to you. Another is that  
24 you could put your comments in writing.

25 DR. MUNOZ: I have -- I have --

1 THE HEARING OFFICER: You want to try  
2 again?

3 DR. MUNOZ: I have my comments in  
4 writing I could send you.

5 THE HEARING OFFICER: Ooh. Oh, you  
6 know what, I can hear you right now. Just keep your  
7 voice way up. Go ahead, please.

8 DR. MUNOZ: Okay.

9 THE HEARING OFFICER: Go ahead.

10 DR. MUNOZ: My name is David Munoz. I  
11 have a Ph.D. in mechanical engineering and a career at  
12 -- as professor of engineering at Colorado School of  
13 Mines. I currently reside in Taos, New Mexico, and I  
14 serve as treasurer for the Acequia de Los Lovatos.  
15 I'm executive -- one of the oldest executives here in  
16 the Taos Valley. Also, on the board of Renewable  
17 Taos. PFAS, which resembles a hydrocarbon, except  
18 fluorine atoms instead of hydrogen atoms are attached  
19 to the carbon atoms. Do not occur in nature,  
20 therefore, no known biological organisms have yet been  
21 developed that have the ability to break down these  
22 individual -- these chemicals into individual  
23 elements.

24 As citizens of the United States, we  
25 are now in a tough situation. We've been using PFAS

1 for several decades, unaware of the potential dangers  
2 to the human body. Now, we learn that the U.S. EPA  
3 has classified it as a carcinogen. We have recently  
4 learned that the oil and gas industry has also been  
5 using these chemicals in addition to our precious  
6 water for the production of oil and gas. The same  
7 industry is now suggesting that we clean up the  
8 produced water and use it for growing food.

9 This is yet another cost to the public  
10 that's being asked to bear to maintain a lower price  
11 of fuel at the gas pump. We are already forced to  
12 breathe the air ladened with exhaust emissions from  
13 the production and burning of these fossil fuels. As  
14 I understand it, we're moving PFAS from wastewater  
15 stream, will likely involve filtering, effectively  
16 with carbon or some kind of soils.

17 However, these PFAS-ladened filters  
18 will then have to be deposed. Here, in the United  
19 States it's apparently legal to dispose of these  
20 filters and other O&G waste in public landfills. I  
21 hope this isn't the case. However, in doing so, we  
22 only managed to relocate the toxins and distribute  
23 them throughout the state, making the problem more  
24 widespread and able to inoculate other valuable  
25 aquifers.

1 Another proposed technique is to  
2 incinerate the PFAS material. However, the process of  
3 heating merely breaks down these long-chain molecules  
4 into shorter chains that maintain their dangerous  
5 nature. This is due to the fact that the carbon  
6 fluorine bond is the strongest known in organic  
7 chemistry. If we tried to depose of it in this way,  
8 it ends up in the air and the truth is, we do not  
9 currently have ways to destroy these chemicals. Thus,  
10 the adjective forever.

11 In 1998, I lost my 9-year-old daughter  
12 to a rare bone tumor of the cervical spine called  
13 atypical chordoma. We tried every potential remedy,  
14 resection, chemotherapy, radiation, but nine months  
15 after discovering the disease in her, we said goodbye  
16 for the last time. This cancer I had read in medical  
17 journals at the time was supposedly very rare, 1 in 80  
18 million odds by some estimates. But later, I became  
19 aware of several cases in Denver alone, a metro  
20 population of about one million at the time. We may  
21 never be certain about what the causes are of the  
22 cancers and respiratory illnesses that are killing us  
23 and our children, but that's the sinister nature of  
24 this business.

25 The oil and gas industry is responsible

1 for the disposition of this waste stream. The waste  
2 stream should not leave the areas of its production.  
3 It comes with an additional cost that should show up  
4 at the pump instead of being inequitably subsidized by  
5 the lives, by the state or the lives of our children.

6 THE HEARING OFFICER: Will you wrap up,  
7 please? Yes.

8 DR. MUNOZ: Oh. I'm done.

9 THE HEARING OFFICER: Thank you. Thank  
10 you very much, Dr. Munoz.

11 DR. MUNOZ: Thank you.

12 THE HEARING OFFICER: We have Wendy  
13 Volkmann.

14 MS. VOLKMANN: Hi, I'm hoping you can  
15 hear me.

16 THE HEARING OFFICER: Oh, very clearly.  
17 Would you spell your last name, please?

18 MS. VOLKMANN: Wendy Volkmann, V like  
19 Victory, O-L-K-M-A-N-N.

20 THE HEARING OFFICER: Thank you.

21 WHEREUPON,

22 WENDY VOLKMANN,  
23 called as a witness and having been first duly sworn  
24 to tell the truth, the whole truth, and nothing but  
25 the truth, was examined and testified as follows:

1 THE HEARING OFFICER: I'll start --

2 THE WITNESS: And I want to say --

3 THE HEARING OFFICER: I'll start your  
4 three minutes.

5 THE WITNESS: Thank you.

6 I want to say I have a very unstable  
7 internet connection so I can't have the video on and  
8 if I'm cut off, I'll just put upfront that I'm here to  
9 ask you to support the rule change and to make  
10 mandatory the disclosure of chemicals used in  
11 hydraulic fracturing.

12 So here are my comments. I'm not here  
13 to testify as an expert, just a regular --

14 THE HEARING OFFICER: Ms. Volkmann, we  
15 can't hear you. I think we may have lost you.

16 THE WITNESS: Michelle Lujan Grisham  
17 released a water plan during her gubernatorial  
18 campaign in 2018 and it promised that as governor  
19 she'd want to require mandatory disclosure of what  
20 chemicals are used in hydraulic fracturing to better  
21 protect groundwater. I think it's time for us to live  
22 up to that promise.

23 As you well know, the chemicals are  
24 known as forever chemicals 'cause our bodies can't  
25 break them down, can't expel them once they're

1 ingested because they persist in the environment,  
2 including in water, which the human body needs daily  
3 just to live. Water truly is life. It grows the food  
4 we eat, keeps us clean. Water's my personal trade  
5 secret for health. My trade secret is stay well  
6 hydrated at all times and you avoid all kinds of  
7 health problems. Meantime, corporate trade secrets  
8 are harming us. Sometimes even killing us.

9 I ask you to think of the children who  
10 will grow up drinking this water. What will it mean  
11 for their health? Not to mention, health of livestock  
12 and crops and everything that depends on clean water  
13 and that we in turn depend on. We know these  
14 chemicals are dangerous to all living organisms. We  
15 know chemical disclosure requirements passed in  
16 California and Colorado. They haven't slowed  
17 drilling. We know New Mexicans deserve at least the  
18 same protections.

19 So I'm asking you to support the rule  
20 change and make mandatory the disclosure of chemicals  
21 used in hydraulic fracturing. And I really appreciate  
22 you taking my comments today. Thank you.

23 THE HEARING OFFICER: Thank you,  
24 Ms. Volkmann.

25 Next, we have Beth Enson. If you would

1 spell your last name, please, and you're muted right  
2 now.

3 MS. ENSON: Hi.

4 THE HEARING OFFICER: Hello.

5 MS. ENSON: My name is Enson,  
6 E-N-S-O-N.

7 WHEREUPON,

8 BETH ENSON,

9 called as a witness and having been first duly sworn  
10 to tell the truth, the whole truth, and nothing but  
11 the truth, was examined and testified as follows:

12 THE HEARING OFFICER: I'll start your  
13 three minutes.

14 THE WITNESS: Thank you.

15 Thank you, Madam Hearing Officer and  
16 Commissioners for hearing my testimony today.  
17 Citizens United accelerated the fracture of our  
18 democracy, especially here New Mexico, one of the  
19 foremost fossil fuel producing states. The voices of  
20 the fossil fuel corporations appear to carry a lot  
21 more weight than the voices of us, the citizen  
22 opposition and of simple common sense. I hope you  
23 will prove me wrong with your yes vote on the PFAS  
24 prohibition rule.

25 Despite the election of Trump, there

1 are still values more important than money and  
2 corporate profit. Long, healthy life supported by  
3 pristine water and land count as the basis of  
4 community well-being in New Mexico and on the planet.  
5 Why are fossil fuel and chemical corporations allowed  
6 to permanently contaminate our irreplaceable  
7 groundwaters with literally thousands of unidentified  
8 chemicals, many proven and/or suspected of being  
9 highly toxic and carcinogenic. Food corporations  
10 aren't allowed to include unlisted toxic chemicals in  
11 their products. PFAS are finding their way into our  
12 bodies as easily as food does.

13           The fossil fuel corporations doing  
14 business in our state should pay the state for the  
15 cost of monitoring each well for the chemicals used  
16 there. The CDC states that 97 percent of Americans  
17 have PFAS in our bodies. Rates of cancer and other  
18 diseases have skyrocketed since these chemicals came  
19 into use in the 1960s. Spills and waste from fracking  
20 have already poisoned some of our state's  
21 groundwaters. And members of communities there who  
22 use it are poisoned as well.

23           Are you, our lawmakers, so blinded by  
24 the promise of tax revenues that you would sell our  
25 health to fill your coffers? Are you so certain that

1 climate change is a myth that you are willing to risk  
2 the lives and futures of all of our children and  
3 grandchildren for the sake of short-term gain? Is our  
4 entire state a sacrifice zone?

5 Our governor promised in 2018 to  
6 require these corporations to disclose the chemicals  
7 they use in the extraction process. Clearly, the New  
8 Mexico OGA has bought her off. We are counting on  
9 you. Please use the precautionary principle and act  
10 to protect us. Remember who elects you, not who  
11 donates to your campaigns. Thank you very much.

12 THE HEARING OFFICER: Thank you,  
13 Ms. Enson.

14 Next we have Eileen O'Shaughnessy.  
15 Ms. O'Shaughnessy, would you spell your last name,  
16 please?

17 MS. O'SHAUGHNESSY: O, apostrophe,  
18 S-H-A-U-G-H-N-E-S-S-Y.

19 THE HEARING OFFICER: Thank you.  
20 WHEREUPON,

21 EILEEN O'SHAUGHNESSY,  
22 called as a witness and having been first duly sworn  
23 to tell the truth, the whole truth, and nothing but  
24 the truth, was examined and testified as follows:

25 THE HEARING OFFICER: I'll start your

1 three minutes.

2 THE WITNESS: Hello, Commissioners. My  
3 name is Eileen O'Shaughnessy and I'm a college  
4 instructor, a Ph.D. candidate and I'm also the  
5 co-founder of the Albuquerque-based grassroots  
6 collective Demand Nuclear Abolition.

7 And I'm speaking today in full support  
8 of the WildEarth Guardians' proposed rule to prohibit  
9 the use of PFAS as well as any additional undisclosed  
10 chemicals in oil and gas drilling in New Mexico. I  
11 noticed that, you know, we're all required to take an  
12 oath to tell the full truth, those of us that are  
13 giving public comment. So it seems only fair to  
14 require oil and gas companies to also tell the full  
15 and complete truth about what chemicals in their  
16 drilling fluid, proprietary or not, especially  
17 considering that many of those chemicals carry serious  
18 health consequences for New Mexico residents.

19 So I teach courses about social and  
20 environmental justice and one of the core concepts  
21 that I discuss with my students is the precautionary  
22 principle which essentially states that if a product  
23 and action or a policy has a suspected risk of causing  
24 harm to the public or to the environment, protective  
25 actions should be supported before there is complete

1 scientific proof of a risk. So essentially first do  
2 no harm.

3 The WildEarth Guardians' proposed rule  
4 is one way to enact this commonsense approach. The  
5 last thing I'll say is I just want to offer a  
6 historical perspective here in terms of thinking about  
7 ways that New Mexico has been overburdened by other  
8 forms of environmental harm and injustice. So we can  
9 see that if we look at the devastating history of  
10 uranium mining during the Cold War in New Mexico and  
11 it's really a -- basically a cautionary tale in terms  
12 of what happens when extractive industries are not  
13 held accountable to public health and environmental  
14 regulations.

15 Uranium companies knew full well the  
16 health risks to miners and to surrounding communities  
17 and yet they allowed Pueblo and Dine minors to be  
18 overexposed to radon and other radioactive decay  
19 products, which have a direct connection to lung  
20 cancer and many other life-threatening disease. And  
21 as a result, there are currently hundreds of abandoned  
22 uranium mines that continue to haunt the landscape of  
23 New Mexico and poison communities.

24 Those private uranium companies have  
25 largely avoided any accountability for the

1 long-lasting harm that they caused. So in conclusion,  
2 Commissioners, by supporting this proposed rule, you  
3 have an opportunity to avoid repeating history or to  
4 at least prevent more generational harm from happening  
5 here in New Mexico and we all know that that's what we  
6 need. Thank you.

7 THE HEARING OFFICER: Thank you,  
8 Ms. O'Shaughnessy.

9 Next we have Chris --

10 MR. PESKUSKI: Peskuski.

11 THE HEARING OFFICER: Peskuski. Would  
12 you spell the last name, please?

13 MR. PESKUSKI: P-E-S-K-U-S-K-I.

14 THE HEARING OFFICER: Thank you.

15 WHEREUPON,

16 CHRIS PESKUSKI,  
17 called as a witness and having been first duly sworn  
18 to tell the truth, the whole truth, and nothing but  
19 the truth, was examined and testified as follows:

20 THE HEARING OFFICER: I'll start your  
21 three minutes.

22 THE WITNESS: Good morning, esteemed  
23 members of the Commission. Thank you for your time.  
24 My name is Chris Peskuski. I'm a decorated combat  
25 veteran and I've previously spent over a decade as a

1 hydrologic technician with the New Mexico Water  
2 Science Center where my work included PFAS data  
3 collection projects at Cannon Air Force Base. But  
4 today, I'm here as a father committed to ensuring a  
5 safe, healthy environment for my son and future  
6 generations. PFAS contamination is a clear threat and  
7 I support the recommendations outlined by the  
8 WildEarth Guardians to protect New Mexicans.

9           First and foremost, New Mexico must  
10 follow the lead of other states like Colorado by  
11 enacting a ban on PFAS chemicals in oil and gas  
12 operations. These substances used in fracking persist  
13 in our environment indefinitely, contaminating our  
14 groundwater and accumulating in our bodies where  
15 they're linked to cancer, reproductive harm and immune  
16 dysfunction. Second, transparency is essential. We  
17 need to require full disclosure of all chemicals used  
18 by the oil and gas industry and closing loopholes that  
19 allow these hazardous substances to remain hidden  
20 under trade secrets. This ensures that communities  
21 know exactly what chemicals are being used near their  
22 homes and water sources.

23           Finally, we must enhance our monitoring  
24 and regulation of PFAS in New Mexico to prevent  
25 further contamination, protecting our state's water,

1 environment. Cannot take a backseat to short-term  
2 gains. The most valuable gift I can give my son is a  
3 future where he too can raise his children in a health  
4 New Mexico. I urge the committee to take decisive  
5 action, prioritizing long-term safety and health over  
6 temporary benefits. Thank you.

7 THE HEARING OFFICER: Thank you,  
8 Mr. Peskuski.

9 Is there anyone else on the platform  
10 who would like to offer public comment at this time?  
11 We will have at least one more opportunity to comment  
12 8:30 tomorrow morning and there will be a Spanish  
13 language interpreter available at that time. You can  
14 also submit written comment of any length to Sheila  
15 Apodaca. I see a gentleman who has turned on his  
16 camera.

17 Sir. Oh, Lauro Silva? Would you like  
18 to offer comment?

19 MR. SILVA: Yes. Si.

20 THE HEARING OFFICER: It's very hard to  
21 hear you. Can you increase your volume?

22 MR. SILVA: (Speaking in Spanish.)  
23 Lauro Silva.

24 THE HEARING OFFICER: Can you make it  
25 even a little louder so we can hear you?

1 MR. SILVA: (Speaking in Spanish.)

2 Lauro Silva.

3 THE HEARING OFFICER: Yes. If you'd  
4 like -- can you join us tomorrow morning if you'd like  
5 to offer your comment in Spanish?

6 MR. SILVA: Well, I think it's going to  
7 be very difficult for me to do it in Spanish tomorrow  
8 morning and I was going to take this opportunity, but  
9 I can do it in English if you want. It would be good  
10 if we had Spanish interpretation all the way through.  
11 Nonetheless, my name is Lauro Silva. I live in the  
12 South Valley of Albuquerque and I wish you a wonderful  
13 evening and I -- the Commission, thank you for  
14 listening to us.

15 I think that we're facing a very  
16 difficult dilemma with PFSA's that are contaminating a  
17 lot of our drinking water, a lot of our irrigation  
18 water, particularly the acequias that are not  
19 monitored for contamination. PFSA -- A-S with over  
20 9,000 different constituents. I have been -- a degree  
21 in biology, in chemistry. I've been to medical  
22 school, although I'm not a medical doctor. I -- I am  
23 an attorney and I've been an attorney for 32 years.  
24 I'm now retired. But I also have been the principal  
25 investigator for the South Valley Partners for

1 Environmental Justice.

2 The -- the dangers that we face with  
3 the PFSAs is not only in oil, drilling, and fracking,  
4 a lot of farmers in Southeastern New Mexico have been  
5 selling their water rights, Artesian wells to the oil  
6 companies and it's endangering a highly agricultural  
7 base, valley, in the Pecos Valley.

8 But I'm very concerned about my  
9 children, my grandchildren and my great-grandchildren  
10 that are drinking contaminated water and irrigating  
11 their gardens with contaminants. All of these  
12 contaminants that we face today are -- are very great  
13 dilemma for our future, for our future generations and  
14 we need to have some really tight regulations to make  
15 sure that we're protecting the health and environment  
16 -- and health, especially the health disparities that  
17 are already ongoing for different kinds of pollutants  
18 in the air, not only the water, but this is very, very  
19 important.

20 The acequias especially, over 800  
21 acequias in New Mexico that depend on acequias clean  
22 water that is not being monitored -- or they're  
23 growing their crops, their -- their crops for their  
24 communities, for their families and all other larger  
25 agricultural products.

1                   And I respectfully request that you  
2                   consider passing some really good legislation and  
3                   advocating for legislation that is going to bring --  
4                   bring a lot of this investigation of all of these  
5                   constituents in our water to make it public and to  
6                   protect the environmental health and the public health  
7                   in this state. Thank you very much.

8                   THE HEARING OFFICER: Thank you,  
9                   Mr. Silva.

10                   Is there anyone else on the platform  
11                   who would like to offer non-technical public comment  
12                   in this session? Our next session is at 8:30 tomorrow  
13                   morning.

14                   Oh, thank you very much for raising  
15                   your hand, ma'am. I'm turning now from the platform  
16                   to the room. If you would come up to the microphone  
17                   at that stand, please. And if you would state and  
18                   spell your name first.

19                   MS. CAMFIELD: Stephanie Camfield.  
20                   S-T-E-P-H-A-N-I-E C-A-M-F-I-E-L-D.

21                   THE HEARING OFFICER: Thank you very  
22                   much.

23                   //

24                   //

25                   //

1 WHEREUPON,

2 STEPHANIE CAMFIELD,

3 called as a witness and having been first duly sworn  
4 to tell the truth, the whole truth, and nothing but  
5 the truth, was examined and testified as follows:

6 THE HEARING OFFICER: Thank you. I'll  
7 start your three minutes.

8 THE WITNESS: (Speaking foreign  
9 language.) I'm Stephanie Camfield. I'm a Muskogee  
10 woman. I'm native to this continent. I live in New  
11 Mexico. I work as a clinical social worker in tribal  
12 and rural communities. I want to express gratitude to  
13 the Tewa people who came here before us and who loved  
14 this land and cared for this land and still love this  
15 land and care for this land. Anybody wants to join me  
16 in one conscious breath so that we can clear our  
17 minds, open our hearts, speak and hear truth today.  
18 Thank you.

19 I'm not an expert in PFAS and I hope  
20 that everybody here that is holding our future in our  
21 hands that you have listened with your heart to what  
22 the experts have said and that you listened with your  
23 heart to what people are saying about how these  
24 chemicals are affecting them. Yeah, I'm just a being  
25 who's grateful for clean, healthy water. Water is

1 sacred. Every one of us is mostly water. And if --  
2 if these chemicals are in our water, they're going to  
3 be in us. And I don't know any other way than to ban  
4 them.

5 We can't live with them. Humans,  
6 sometimes we have a tendency to create problems for  
7 ourselves and we don't realize it at the time. And it  
8 looks like this is a big problem. And so the only way  
9 is to just ban it. And yeah, there needs to be full  
10 disclosure, but there better not be any PFAS chemicals  
11 being used. That's -- it's ridiculous. We can't be  
12 healthy, why bother with any of this? Y'all are in a  
13 position to make decisions that will affect all of us,  
14 all beings and I speak for the ones who crawl and the  
15 ones that fly and the stones and the trees. We all  
16 deserve clean water. It's basic. Basic. I ask you  
17 to listen deeply to the most wise and loving part of  
18 you, okay, when you make this decision. Now, water is  
19 sacred. (Speaking foreign language.)

20 THE HEARING OFFICER: Thank you,  
21 Ms. Camfield.

22 Is there anyone else in the room who  
23 would like to offer public comment at this time? No.  
24 Okay. We have come then to the end of the public  
25 comment period for today. We will reconvene tomorrow

1 morning at 8:30. Begin with public comments and then  
2 move back to the technical case. And at this point,  
3 we have every expectation, I think, of finishing the  
4 evidentiary record tomorrow. Thank you all very much.

5 (Whereupon, at 5:14 p.m., the  
6 proceeding was concluded.)

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CERTIFICATE

I, JAMES COGSWELL, the officer before whom the foregoing proceedings were taken, do hereby certify that any witness(es) in the foregoing proceedings, prior to testifying, were duly sworn; that the proceedings were recorded by me and thereafter reduced to typewriting by a qualified transcriptionist; that said digital audio recording of said proceedings are a true and accurate record to the best of my knowledge, skills, and ability; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this was taken; and, further, that I am not a relative or employee of any counsel or attorney employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.



JAMES COGSWELL

December 2, 2024

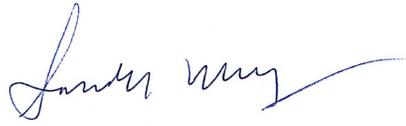
Notary Public in and for the  
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CERTIFICATE OF TRANSCRIBER

I, SANDRA HUANG, do hereby certify that this transcript was prepared from the digital audio recording of the foregoing proceeding, that said transcript is a true and accurate record of the proceedings to the best of my knowledge, skills, and ability; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this was taken; and, further, that I am not a relative or employee of any counsel or attorney employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

December 2, 2024



SANDRA HUANG

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[disposal - downhole]

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[industries - instructor]

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[iskat - know]

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[language - limitation]

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[today - traditional]

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