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STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:
Case No. OCC25875.

HEARING - DAY 3

DATE: Wednesday, July 29, 2026
TIME: 9:00 a.m.
BEFORE: Hearing Examiner Felicia Orth
LOCATION: Wendell Chino Building
1220 South St. Francis Drive
Pecos Hall
Santa Fe, NM 87505
REPORTED BY: Ryan Auten
JOB NO.: 8347077

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ALSO PRESENT:

Felicia Orth, Hearing Officer

Dr. William Ampomah, Commissioner

Paige Czoski, Commissioner

Sheila Apodaca, Commission Clerk

Dr. Gregory Schnarr, Principal Environmental
Scientist

Justin Wrinkle, Engineering Bureau Chief, OCD

Dr. Hassan Khaniani, Assistant Professor, New
Mexico Tech

Dr. Sai Wang, Assistant Professor, New Mexico
Tech

Matt Eales, CoolSky Energy Solutions

Jennifer Raney, Deputy Director of PRRC

Katherine Walton, WELC

Elvis Leunguen, EMNRD (by videoconference)

Caroline Wachtman, Attendee (by videoconference)

Allison Marks, Attendee (by videoconference)

Delilah Dougi, EMNRD (by videoconference)

John Garcia, EMNRD (by videoconference)

Peter Kondrat, EMNRD (by videoconference)

Robert Mathes, Attendee (by videoconference)

Tiffany Wallace, Attendee (by videoconference)

Phillip Goetze, EMNRD (by videoconference)

1 Heath Lovell, Attendee (by videoconference)
2 Gerasimos Razatos, EMNRD (by videoconference)
3 Erin Ramaker, Attendee (by videoconference)
4 Le Teaisha Carter, Attendee (by videoconference)
5 Claire Tate, Attendee (by videoconference)
6 Rosa Romero, EMNRD (by videoconference)
7 Serafina Seluja, Attendee (by videoconference)
8 Dr. Helm-Clark, Attendee (by videoconference)
9 Mike Eisenfeld, Energy and Climate Program
10 Director, San Juan Citizens Alliance (by
11 videoconference)
12 Carl Chavez, EMNRD (by videoconference)
13 Charlie Palladino, Policy Advocate, Earthworks
14 (by videoconference)
15 Liz Kuehn, Attendee (by videoconference)
16 Brandon Powell, EMNRD (by videoconference)
17 Charles Harvey, Attendee (by videoconference)
18 Mandy Sackett, New Mexico Lead Campaigner,
19 Earthworks (by videoconference)
20 Rochelle Chavez, Attendee (by videoconference)
21 Peter Morgan, Attendee (by videoconference)
22 Mark Ballard, Attendee (by videoconference)
23 Feleecia Guillen, Organizer, New Mexico No False
24 Solutions Coalition (by videoconference)
25 Erin Taylor, EMNRD (by videoconference)

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Stacy Sandoval, EMNRD (by videoconference)
Benjamin Shelton, EMNRD (by videoconference)

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I N D E X

E X H I B I T S

NO.	DESCRIPTION	ID/EVD
	(None marked.)	

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

2 THE HEARING EXAMINER: It's 9 a.m.

3 Let's begin this morning. We're on day three of the
4 hearing in OCC25875 related to primacy for Class VI
5 injection wells. We've reached our third public
6 comment session.

7 I don't see anyone in the room I don't
8 recognize, so let's go straight to the platform.

9 Sheila, who would like to go first?

10 MS. APODACA: First, Mike Eisenfeld.

11 THE HEARING EXAMINER: Oh, thank you.

12 Mr. Eisenfeld, would you please spell
13 your first and last name?

14 MR. EISENFELD: M-I-K-E E-I-S-E-N-F-E-
15 L-D.

16 WHEREUPON,

17 MIKE EISENFELD,
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 EXAMINER: Thank you very
22 much. Go ahead.

23 MR. EISENFELD: Madam Hearing Examiner
24 and Commissioners, thank you very much for the
25 opportunity to give public comment. My name is

1 Mike Eisenfeld. I work for San Juan Citizens Alliance
2 as the energy and climate program director. San Juan
3 Citizens Alliance has about a thousand members in the
4 Four Corners area.

5 The reason for my comment is that we've
6 been very much involved in that -- the concept of
7 carbon capture, carbon sequestration here in the Four
8 Corners for many years. I'm very much involved in
9 this idea of primacy for the state of New Mexico. And
10 I think that the primary concern that we have, it's
11 about public and safety. You heard in some of the
12 testimony about the idea of Farmington being an
13 epicenter for carbon sequestration. And we're
14 extremely concerned about that due to the -- the fact
15 that carbon sequestration could create a lot of
16 problems for -- for us up here.

17 We were part of the public comments and
18 public meetings in Farmington, and at that point, we
19 noted that there was no translation that -- into other
20 languages, that some of the community members that are
21 very diverse.

22 And we're also very much aware this is
23 a very complex scientific and legal issue. The
24 potential for these sequestration sites to interact
25 with the over 60,000 oil and gas wells known in the

1 Fort Corners area is a very, very significant concern.
2 We feel like there needs to be more information
3 provided about pore space, well spacing, mineral owner
4 notification, safety notices, the concepts of things
5 like split estates. It seems like we need more
6 assurance about the concern over New Mexico's ability
7 to oversee the -- the program.

8 Our -- a lot of our information was
9 from the Carbon Safe projects here, which are carbon
10 storage assurance facility enterprise projects. One,
11 for example, is a well site that was drilled near a
12 step that was going to be associated with the San Juan
13 Generating Station, which no longer exists. The idea
14 was to sequester carbon dioxide from that facility,
15 and there was very little information provided to the
16 community.

17 So we would encourage a lot of the
18 public safety measures, interference tests, concerns
19 over liabilities, concerns over just public safety at
20 every step of the way. I would suggest that we're in
21 a real characterization phase of the ability to
22 sequester CO2. And then finally, we question what --
23 what New Mexico is fit in in terms of sequestering
24 CO2, because capturing CO2 is a very complex issue.
25 And we would suggest that the end position be to not

1 create that CO2 emission in the first place.

2 Thank you very much for your time.

3 THE HEARING EXAMINER: Thank you,

4 Mr. Eisenfeld.

5 I'm not sure why it's echoing.

6 Do we have Mr. Palladino next?

7 MR. CHANG: Well, could we resolve --

8 I --

9 THE HEARING EXAMINER: Yeah.

10 MR. CHANG: I apologize, but could we
11 try to resolve the audio issue before you move on to
12 more?

13 MS. APODACA: Anybody with their
14 laptops joined on the Teams platform in the room, can
15 you check and make sure that your microphones are off
16 and that your speakers are off?

17 MR. CHANG: Thank you all. I
18 apologize.

19 THE HEARING EXAMINER: Are we resolved?

20 MR. CHANG: It sounds like it.

21 THE HEARING EXAMINER: I think we are.

22 MR. CHANG: Okay.

23 MS. APODACA: So next up is
24 Charlie Palladino.

25 THE HEARING EXAMINER: All right.

1 Mr. Palladino, can you unmute yourself? Hello.

2 MR. PALLADINO: Hello.

3 THE HEARING EXAMINER: Would you spell
4 your first and last name, please?

5 MR. PALLADINO: Yes. My name is
6 Charlie Palladino, C-H-A-R-L-I-E P-A-L-L-A-D-I-N-O.
7 WHEREUPON,

8 CHARLIE PALLADINO,
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 EXAMINER: Thank you. Go
13 ahead.

14 MR. PALLADINO: Okay. My name is
15 Charlie Palladino, and I'm a policy advocate with
16 Earthworks. Thank you for the opportunity to comment
17 today. And I would like to focus my comment on the
18 procedure for transitioning from Class II wells to
19 Class VI wells.

20 The Class VI rules outline certain
21 public safety measures intended to be commensurate
22 with the risk associated with long-term CO2 storage.
23 Class II wells, on the other hand, were not designed
24 for this purpose and do not require these same
25 measures.

1 When the EPA first announced that
2 class -- the Class VI rules, it explained the
3 difference between the two rules set on the ground
4 that Class II wells and use CO2 for advanced oil
5 recovery would be handling less CO2 and therefore
6 impose less risk. However, EPA also stated that if
7 the business model for enhanced oil recovery changes
8 to focus on maximizing CO2 injection volumes and
9 permanent storage, then the risk of endangerment to
10 underground sources of drinking water is likely to
11 increase if such wells may need to be repermitted as
12 Class VI wells.

13 Given that the federal tax credit means
14 to incentivize the use of CO2 or oil recovery was
15 recently increased, then likely this practice will
16 also increase. In anticipation of this, I think New
17 Mexico's rules should resolve the ambiguities that
18 remain in the process for deciding whether a well
19 needs to be reclassified.

20 Federal rules, which these rules
21 closely resemble, require a Class II well to
22 transition to a Class VI well when two conditions are
23 present. First, when the owners of the well inject
24 CO2 for the quote, "primary purpose of long-term
25 storage," and if there is an increased risk to

1 underground sources of drinking water compared to
2 Class II operations.

3 But there are questions around how this
4 transition is implemented. For instance, it's not
5 clear when the review process is triggered, how to
6 define primary purpose, or how to properly evaluate
7 the factors in determining whether an increased risk
8 to underground sources and drinking water exists, like
9 injection and pressure thresholds that would then
10 create a conversion.

11 Even in Texas takes more of a
12 precautionary approach where the state requires
13 operators to reclassify a well if either the primary
14 purpose of CO2 injection is long-term storage, or
15 there is an increased risk to underground sources and
16 drinking water instead of requiring both conditions to
17 be present. This approach better addresses the nature
18 of the risk, inherent in the geologic storage of CO2,
19 whether or not the primary purpose of the injection
20 changes, the risk associated with the change in
21 injection should by itself be enough to trigger the
22 stricter classic rules.

23 Thank you. That's it for me.

24 THE HEARING EXAMINER: Thank you,
25 Mr. Palladino.

1 Okay. Next will be Feleecia Guillen.

2 Ms. Guillen?

3 MS. GUILLEN: Hello.

4 THE HEARING EXAMINER: Hello. Would
5 you spell your first and last name, please?

6 MS. GUILLEN: Yep. Felicia Guillen, F-
7 E-L-E-E-C-I-A, G-U-I-L-L-E-N.

8 WHEREUPON,

9 FELEECIA GUILLEN,
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 EXAMINER: Thank you. Go
14 ahead.

15 MS. GUILLEN: Good morning, Hearing
16 Examiners. Thank you for the opportunity to give
17 public comment. My name is Feleecia Guillen, and I'm
18 an organizer with New Mexico No False Solutions
19 Coalition. Today, I'm here speaking in deep concern
20 to New Mexico's new primacy over Class VI CO2
21 injection wells.

22 I really urge the Oil Conservation
23 Division to strengthen these proposed rules because if
24 the state is ultimately granted primacy, New Mexicans
25 deserve protections that go beyond the federal

1 minimum. The burden, really, it should be on the
2 State to prove it can regulate this program better
3 than EPA, and I don't believe that this burden has
4 been met. OCD is already responsible for overseeing
5 one of the nation's largest oil and gas industries.
6 Yet New Mexico continues to struggle with orphaned and
7 abandoned wells, delayed key cleanups, inspection
8 backlogs, and enforcement challenges. And so if OCD
9 lacks the capacity to fully address existing
10 responsibilities, it should not take on an entirely
11 new and highly technical regulatory program.

12 I also want to center water in this
13 conversation because New Mexico and our communities
14 are already facing the realities of drought,
15 groundwater depletion, and climate change. For many
16 indigenous people, water is sacred. It's not simply a
17 resource to be managed, but rather a living relative
18 with deep cultural, spiritual, and ceremonial
19 significance. Acequia communities also have stewarded
20 water collectively for generations, recognizing that
21 our shared survival depends on protecting it. And I
22 want to make it very clear that any failure of classic
23 spells that threaten groundwater is not just an
24 environmental concern. It threatens our very cultural
25 traditions, our agriculture, our drinking water, and

1 our ways of life that have sustained New Mexico for
2 centuries. And so these rules should reflect that
3 reality by placing the highest priority on groundwater
4 protection.

5 Beyond some questions of capacity, I'm
6 also deeply concerned about what CCS represents. CCS
7 is being promoted as a climate solution, but in
8 practice, it serves as a lifeline for the fossil fuel
9 industry. Rather than reducing dependence on oil and
10 gas, it allows companies to continue extracting and
11 burning fossil fuels while claiming future emissions
12 will be managed underground. Communities that have
13 already suffered the harms of extraction should not be
14 asked to shoulder of another generation of industrial
15 risk.

16 If New Mexico nevertheless receives
17 primacy, these rules must be substantially stronger
18 than the EPA's baseline requirements. At a minimum,
19 they should require a 2,000-foot safety buffer between
20 classic swells and homes, schools, hospitals, and
21 other occupied buildings. They should also require
22 mandatory industry-funded training and emergency
23 preparedness for local first responders before any
24 permits are issued. And they should also strengthen
25 environmental justice requirements to ensure that

1 meaningful consultation with frontline communities and
2 really require robust financial assurance so taxpayers
3 never bear the cost of monitoring or cleanup.

4 New Mexico should not seek primacy
5 simply to make permitting faster. Regulation exists
6 to protect people, to protect our water, and to
7 protect our future generations. New Mexico currently
8 doesn't have any Class VI wells -- well permits at the
9 moment, and maybe we should keep it that way. So I
10 really urge the hearing examiners to adopt the
11 strongest possible protections that exceed federal
12 standards and truly put our communities first. Thank
13 you.

14 THE HEARING EXAMINER: Thank you,
15 Ms. Guillen.

16 Okay. Next is Mandy Sackett.

17 Ms. Sackett?

18 MS. SACKETT: Hello. My name is
19 Mandy Sackett, M-A-N-D-Y, S-A-C-K-E-T-T.

20 WHEREUPON,

21 MANDY SACKETT,
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 EXAMINER: Thank you. Go

1 ahead.

2 MS. SACKETT: Good morning, Chair Chang
3 and Commissioners. My name is Mandy. I'm the New
4 Mexico lead campaigner for Earthworks and a certified
5 thermographer.

6 I've stood in schoolyards and front
7 yards close enough to industrial oil and gas wells to
8 see the equipment from a playground. These are
9 different wells with different risks, but the question
10 of how close is too close is the same. We're here
11 because we want New Mexico to get these rules right.

12 Once primacy is granted, these are the
13 rules that will govern carbon dioxide injection in
14 this state for decades, and the wells themselves are
15 meant to hold that carbon dioxide for centuries. And
16 the people who live near them will be living with
17 these decisions long after all of us in this room have
18 moved on.

19 My comment today is about one specific
20 gap, and that is distance. The draft rules do a
21 careful job at looking at geology beneath the project
22 site, but they don't really have any minimum distance
23 between an injection well and what's above the ground,
24 like home schools and childcare centers. A project
25 could be permitted next door to an elementary school

1 and still satisfy its citing requirements in this
2 draft. Other states have already addressed this.
3 Colorado requires 2,000 feet with no exceptions.
4 Louisiana, Wyoming, and West Virginia, and New Mexico
5 can learn from these examples.

6 We suggest that this agency, at a
7 minimum, adopt a public safety setback and apply it
8 without exception. New Mexico doesn't have to choose
9 between a weak rule and no rule at all. Other states
10 have shown what a strong rule looks like. And I think
11 New Mexico should meet or beat them. We wouldn't cite
12 a school next to an active industrial well, so we
13 shouldn't allow it to happen the other way around.
14 Thank you.

15 THE HEARING EXAMINER: Thank you,
16 Ms. Sackett. Is there anyone else on the platform
17 who'd like to offer public comment this morning? The
18 next opportunity is 9 a.m. tomorrow morning.

19 All right. We'll return to the
20 technical case then. When we broke yesterday,
21 Commissioner Ampomah is questioning the Second
22 Division Panel.

23 Commissioner Ampomah, do you have
24 additional questions?

25 DR. AMPOMAH: Yes, I do. Thank you.

1 And I promise to be fast. Yeah.

2 DR. AMPOMAH: Mr. Eales, yesterday we
3 ended on the MIT and then also the operation that I'm
4 monitoring. So I'll continue on with that.

5 Now, you know, there are instances
6 where monitoring equipment is for [inaudible] field,
7 so similar to [inaudible] beach, something like that.
8 So my question to you is how much missing monitoring
9 data is acceptable before injection would be one that
10 stopped?

11 MR. EALES: No, that's a good question.
12 I have to say it depends upon which of the bits of
13 monitoring data. So if you are monitoring pressure
14 and temperature on the surface, you could lose
15 communication for a few minutes, and that wouldn't
16 justify it. But if you -- if you lost for a period, I
17 would -- my -- I think what I would say is more than
18 24 hours, especially on pressure, it's a good reason
19 to cease injection at that point or to at least
20 resolve that issue.

21 DR. AMPOMAH: And would this be in the
22 guidance, or it would be no, not necessarily the rule?

23 MR. EALES: I would recommend that in
24 guidance.

25 DR. AMPOMAH: Okay. Thank you. And

1 must practice or maintain backup instrumentation power
2 and communication, or not necessarily?

3 MR. EALES: It's not spelled out in the
4 rule, but it is common in most devices right now.

5 DR. AMPOMAH: So it would be part of
6 the guidance?

7 MR. EALES: Yes.

8 DR. AMPOMAH: Thank you.

9 Now, let's say it's the same Class II
10 wells. They do have a way to plug wells; right? So
11 there's a strategy for them to plug wells. Now my
12 question is, is compliance with the plugging standard
13 in effect right now?

14 MR. EALES: Yes.

15 DR. AMPOMAH: Yeah. When the legacy
16 wells was abandoned, sufficient, or it might -- it
17 must meet more than Class VI corrective action
18 standard?

19 MR. EALES: Yes, that's correct. It
20 must meet -- there's -- there's a regulation in place
21 now that requires that. So when permitting a Class II
22 injection well, part of the permit process, again,
23 includes the evaluation of the AoR and identifying
24 wells within the AoR. And then determining the
25 corrective action required to plug that well with

1 materials that are compatible with the potential
2 material, the injectate. So it's in place now, and
3 it's also spelled out within the Class VI rule.

4 DR. AMPOMAH: Now let me ask if, let's
5 say, a source of CO2 changes, assuming it is a gas
6 processing plant, that was what was used in the
7 permitting process, and now it changed to, let's say,
8 a coal power plant. My question to you is that will
9 the source, would the different source vicinity or
10 captive technologies require separate compatibility
11 evaluations of the CO2 screen?

12 MR. EALES: If it changes, it's
13 required within an AoR redetermination section. So if
14 you have a change in the inject date that was used to
15 determine all the -- all the inputs of the material
16 choices, then you are triggered within the AoR, and
17 you have to re-up that actual concentration or that
18 inject date and go through the same process on a
19 reiterate basis.

20 DR. AMPOMAH: Now let's talk a little
21 bit about emergency response and protection of nearby
22 communities. So the first question would be, what
23 specific events automatically require immediate
24 cessation of injection?

25 MR. EALES: Specific event to -- there

1 is any known impact to or -- or possible impact to the
2 USDW requires immediate cessation.

3 DR. AMPOMAH: And I do know from EPA
4 that the whole purpose of the Class VI is more or less
5 to protect USDW. Now, you just have said that if
6 there is a situation where there could be something
7 happening to the USDW, then there has to be cessation.
8 Now, what about if, let's say, the CO2 move into
9 unpermitted zones? What happens?

10 MR. EALES: Yep. So it's the same --
11 the same applies.

12 DR. AMPOMAH: Okay.

13 MR. EALES: The two primaries'
14 requirements, A and B, are at -- in general, at the
15 very top, what you just said, it's the USDW and
16 potential of communication between formations and
17 permitting.

18 DR. AMPOMAH: Now, another important
19 question that I do have is, does the operator do have
20 discretion to continue injection whilst
21 investigation -- while we are investigating an
22 anomaly?

23 MR. EALES: Yes, they do. They must
24 report the concern, and they have the discretion to
25 investigate in communication with the OCD to identify

1 the issue.

2 DR. AMPOMAH: But they do have the
3 discretion to continue injection, or?

4 MR. EALES: They do have the discretion
5 to -- to continue injection, Yes.

6 DR. AMPOMAH: And my last question to
7 you is, so there was a discussion about the local
8 respondents. So will that be the responsibility of
9 the operator to provide the equipment, training, and
10 funding to the local respondents?

11 MR. EALES: No, that is not required.

12 DR. AMPOMAH: Okay.

13 MR. EALES: Training and awareness, but
14 not [inaudible].

15 DR. AMPOMAH: Okay. So I do not have
16 any further questions for you.

17 And I'll move on to Ms. Raney. Thank
18 you for your service to the State. And then also
19 putting this huge experts all together to support the
20 Class VI primacy application here.

21 DR. AMPOMAH: Now, my first question to
22 you, I will focus mostly on the public communities,
23 landlord and tribes, and community engagement. So we
24 made mention a lot about affected community. So how
25 would you define the affected community?

1 MS. RANEY: Thank you for that comment.
2 Affected community is pretty broad. It's listed in
3 1915 41 Part E under 5; there are lists of any kind of
4 governmental agency that might be relevant in a permit
5 process. But in terms of members of the public, that
6 could mean surface owners; that could mean mineral or
7 estate owners that are in the vicinity of any proposed
8 project.

9 DR. AMPOMAH: Thank you. Now, so why
10 does the rule not establish a clear minimum buffer
11 outside the modeled AoR for direct notice?

12 MS. RANEY: I understood, why does it
13 not include a buffer for the AoR?

14 DR. AMPOMAH: Yeah. Beyond the AoR for
15 the notices?

16 MS. RANEY: So that is -- would be up
17 to the discretion of the director. It's in no way
18 prohibited at this time, but making it prescriptive
19 within the rule might be a limiting factor down the
20 line. So leaving that for guidance and leaving it to
21 the site-specific conditions of any proposed project
22 is the procedure we used.

23 DR. AMPOMAH: Now let me ask, will
24 surface -- will every surface owner, mineral owner,
25 water well owner, equipment within the AoR, receive

1 individual notices?

2 MS. RANEY: The list of public
3 notice -- the list of individuals who'd be contacted
4 will be listed within every given site. But it would
5 be understandable and reasonable for all of the listed
6 landowners, well owners, any property owners within
7 the site to be contacted, yes.

8 DR. AMPOMAH: Now let me ask. So will
9 notices be repeated when there is material changes in
10 the AoR?

11 MS. RANEY: Correct.

12 DR. AMPOMAH: Now, how is the tribal
13 consultation going to be different? You know, how is
14 it going to be different from ordinary public notices?
15 Especially if we do have potential plumes that will be
16 going under the well, let's say the tribe, the tribal
17 policy?

18 MS. RANEY: So in the event that the
19 plume is modeled to go onto the land of a -- of a
20 sovereign nation, that would not just simply be
21 notice; that would require an agreement with that
22 tribal nation prior to the issuance of any kind of
23 permit.

24 DR. AMPOMAH: Now, in that instance,
25 would the tribal government be contacted before an

1 applicant selects a site or only after a project is
2 proposed?

3 MS. RANEY: If a plume site is in close
4 proximity to another tribal nation, they would need to
5 be contacted very well before the permit is even
6 drafted.

7 DR. AMPOMAH: Now, based on your
8 experience in public outreach, do you believe that
9 there has to be independent technical explanation, or
10 will it just be, let's say, the applicant controlling
11 the presentation during public meetings?

12 MS. RANEY: Could you please reframe
13 the question? I'm not quite sure I understand.

14 DR. AMPOMAH: Okay. So you do have a
15 lot of experience and expertise in public outreach.
16 Now, even during the primacy process, you've visited
17 several places. Now, my question to you is, will
18 public meetings, should it include independent
19 technical explanations, or will it be the applicant
20 controlling those presentations?

21 MS. RANEY: For meaningful and
22 effective participation and engagement with various
23 communities, you would need to consider all of the
24 above. You would have to take into account technical
25 experts that might be present in the -- at the

1 meeting, also a layperson who's unfamiliar with
2 material, so having the ability to speak to all
3 various audiences and all topics would be essential.

4 DR. AMPOMAH: Now, how will the public
5 comment comments actually influence the public
6 conditions?

7 MS. RANEY: As the public comments are
8 received, the director and the administrators of the
9 program would review each comment and take into
10 consideration the affected parties, how much they
11 would be affected by the given activities, and whether
12 or not the -- the background information provided was
13 relevant or meaningful in the permit application
14 process. And then, upon issuing decision, the
15 director would summarize the comments, and the
16 response, and decision-making.

17 DR. AMPOMAH: Now, my next question is
18 a preamble to follow that, which is confidentiality
19 issues. So will the administrative record include
20 modeling data, monitoring plans, emergency plans, and
21 financial assurance estimates in a form the public can
22 evaluate?

23 MS. RANEY: Without confidential
24 business information, the -- the public and affected
25 parties would have access to this information, yes.

1 DR. AMPOMAH: Then so let me ask. So
2 how will the confidential business information claims
3 be balanced against meaningful technical [inaudible]?

4 MS. RANEY: That I would leave to the
5 OCD to answer directly and how they would evaluate it.

6 DR. AMPOMAH: Mr. Wrinkle, can you
7 respond to that?

8 MR. WRINKLE: Yes. I was -- I was
9 trying to find the -- in the rule where it -- where it
10 explains confidentiality. It -- if -- if an applicant
11 requests it to be confidential and it meets state
12 statute law of being proprietary business information,
13 then -- then we will honor that. If they don't
14 request that, then it is immediately available to the
15 public. Not being an attorney and can speak to state
16 statutes, you know, I -- I don't know where those laws
17 lie and what could be claimed and what could not be
18 claimed.

19 MR. TREMAINE: Commissioner, if I may,
20 this is largely a legal question that we deal with in
21 response to the public records request. So there is a
22 state statute that I can point out for the Commission
23 at any point that requires in there to keep
24 legitimately marked confidential records closed. That
25 applies to all of the department, and there are

1 specific exceptions under the public records. So this
2 becomes a question of whether or not -- a legal
3 question of whether or not the records are marked as
4 confidential in good faith, and that's a -- that's a
5 case-by-case decision. But the basic rule is if they
6 are proprietary, then we would not be able to produce
7 those records.

8 DR. AMPOMAH: So, Dr. Schnarr, let me
9 ask you a quick question we had. So normally the EPA
10 will allow confidential business information. You
11 submit two, one redaction -- redacted, and one not
12 redacted. Now, during public -- before, let's say,
13 the project goes into public hearing, how does EPA
14 handles that? Is everything not open up to the
15 public?

16 DR. SCHNARR: Yes. I think when it
17 comes to the redactions, I think you do have to make
18 the distinction that EPA is subject to FOIA requests.
19 And because of that and the burden of that, they've
20 largely made the initial permit applications publicly
21 available very easily. So they are heavily redacted
22 even when they are publicly available, but that is
23 even before EPA had reviewed them. And so it -- it
24 varies by EPA region, but even drafts going back and
25 forth are typically publicly available, and those will

1 be pretty heavily redacted. But before the actual
2 formal public comment period, EPA typically really
3 stresses to remove those redactions as much as
4 possible.

5 And in my experience, they have really
6 prioritized and explained to the applicants how
7 important that is to the public to remove as much
8 redactions as possible. And to get to your questions
9 about the modeling in particular, there really is no -
10 - in my experience, most of that is all open by the
11 time of the public comment period.

12 DR. AMPOMAH: And would that be your
13 recommendation to OCD to consider?

14 DR. SCHNARR: Well, I -- I believe here
15 there are laws that govern confidential information
16 that I can't speak to, but I would recommend that
17 the -- in interest of public transparency, the -- the
18 modeling information should be as public as -- as can
19 be under the applicable laws.

20 DR. AMPOMAH: Ms. Raney, let me come
21 back to you.

22 Thank you so much for the -- chiming
23 in.

24 So what process allows residents to
25 report all those health concerns and well water

1 changes, site events, or other suspect impacts?

2 MS. RANEY: There would be a list of
3 reporting guidance for any interested member of the
4 public or any affected party to submit comments. And
5 this will be issued by the OCD and made available to
6 all affected parties.

7 DR. AMPOMAH: And my last question to
8 you is that, will it be required of the operator to
9 report back to the community regarding how the inputs
10 they received changed your project?

11 MS. RANEY: Updates and any changes on
12 a routine basis would be required, and the plan would
13 be approved for every site-specific contract, yes.

14 DR. AMPOMAH: Thank you for that. So
15 my last aspect is going to go through the rules. And
16 to make it much easier, I do have the print files of
17 what I'm going to read to you, so just for you to
18 follow.

19 I believe if -- Counsel, if it is
20 appropriate, I want to share that with the witnesses
21 and all the attorneys as well.

22 Okay. So I've shared with you what I'm
23 thinking -- you know, you did a great job putting all
24 the materials today, and I can assure you that I read
25 everything. So I'm also -- you know, based on our

1 discussions, I do have some suggestions. These are
2 not really stepstones, but I just want to walk through
3 and see what you think about it. And I'll definitely
4 go through with other witnesses as well.

5 But the strategy, I'll go through the
6 rule with you. And then after that, we just get
7 through what I just showed you so that we can make it
8 really fast.

9 THE HEARING EXAMINER: Can you ask
10 Sheila to put it on the screen?

11 DR. AMPOMAH: Yeah, Sheila, would you
12 pull up what I shared with you on the screen so the
13 audience can also look at it? But it would be good if
14 you do have the rules with you, so Exhibit 1, 2, and
15 3, if you have it really handy, that would be good.

16 So I'm going to start off with page 3.
17 Now, so on page 3, and I'm looking at Paragraph N or
18 Section N on page 3, that will be the "Definition" --
19 "Definitions beginning with the letter 'N'". You are
20 defining "New injection well." You are defining "New
21 injection well."

22 MR. CHANG: Hang on a second, just to
23 make sure. So it's page 3 of the exhibits, but the
24 first page of the handout that you just made; right?

25 DR. AMPOMAH: No. So I'm going to go

1 through the rule.

2 MR. CHANG: Okay.

3 DR. AMPOMAH: And then later on, I go
4 through this one. So --

5 MR. CHANG: Just want to do the rule?

6 DR. AMPOMAH: Yeah, I'm going to do the
7 rule first.

8 MR. CHANG: Okay. Because I just want
9 to let our Commissioner Clerk know because she was
10 scrolling.

11 DR. AMPOMAH: Yeah.

12 MR. CHANG: Make sure --

13 DR. AMPOMAH: I will let you know when
14 to scroll. But I'm looking at Exhibit 1 of OCE, that
15 is a rule, so it's page 1. Page 3 of Exhibit 1. And
16 I'm looking at N, titled "Definitions Beginning with
17 the Letter N." And you are defining "New injection
18 well." And this question will be to the whole panel
19 so anyone can read it. Anyone can step in and respond
20 to this.

21 Now, so you've defined a new well right
22 here. Now, my question is, will existing wells that
23 already more or less permitted by EPA under Class VI
24 be transferred to OCE jurisdiction after primacy?

25 MR. WRINKLE: So your question is, if

1 there is an already-permitted Class VI by the EPA,
2 when we get primacy, it will be transferred over to
3 us? Correct. Yes. That is my understanding when
4 speaking with the EPA.

5 DR. AMPOMAH: And if in all the
6 applications that are still pending with EPA will be
7 moved to OCD?

8 MR. WRINKLE: Correct. Yes.

9 DR. AMPOMAH: Now, how would those
10 wells be fathered or classified into this roof?

11 MR. WRINKLE: Yeah, I see your point.

12 DR. AMPOMAH: Okay.

13 MR. WRINKLE: Yeah.

14 DR. AMPOMAH: So something to look
15 into?

16 MR. WRINKLE: Yes.

17 DR. AMPOMAH: Okay. But that one, I do
18 not have any suggested language on that, so something
19 to look into.

20 MR. WRINKLE: Yeah, we -- we definitely
21 can provide some red line.

22 DR. AMPOMAH: I appreciate that. Thank
23 you.

24 Now, I see we are defining -- so I'm
25 going to go to -- still on page 3, and I'm looking at

1 S4. So we are defining "stratum," right there. And I
2 do also see that we are trying to define the storage
3 complex here. So I'm not saying, do we need to define
4 "storage complex" in this group or not?

5 DR. SCHNARR: I -- I believe in the
6 Class VI framework that the term area of review is
7 sufficient. The term "storage complex" is used in
8 some other non-Class VI regulatory settings I'm
9 familiar with. But maybe it would be helpful for --
10 if you want to explain what you're thinking and how
11 that might differ from a definition of the area of
12 review.

13 DR. AMPOMAH: So the area of review, in
14 my opinion, will be more of this area. So we are
15 using more of the suffix, you know, just a context.
16 But the storage complex defines the actual facility in
17 terms of right from the, you call it, the confining
18 zone, indexing zone, and then confining zone beneath
19 that. And that together forms the storage complex.

20 So let's say if -- let's say someone is
21 saying we are not protecting -- well, let's even
22 have -- there was a comment about we do have about
23 60,000 wells in the San Juan Basin, and we are not
24 going to be able to protect all these wells. But you
25 want to define the storage complex for the public to

1 know where the problem is and where we are focusing
2 our area review assessment on. So that is what I'm
3 thinking.

4 DR. SCHNARR: And so in your mind, the
5 storage complex, just so I understand, could it --
6 within what I call the injection zone, would it expand
7 outside of the area of review or just be constrained
8 within the area of review?

9 DR. AMPOMAH: It will be constrained
10 within the area of review.

11 DR. SCHNARR: I just would struggle
12 with how that terminology would get fit into the rule
13 personally. I'm -- I'm open to it, but I think that
14 it's adequately -- what your issue is, sort of,
15 defining the area of potential concern and where CO2
16 and elevated pressure will be in the subsurface. And
17 I believe the term area of review that's used
18 throughout the rules covers that. But yeah, I'm --
19 I'm open to red lines.

20 DR. AMPOMAH: Okay. Now, so the
21 definition of a "stratum," you're talking about means
22 a single sedimentary bed or layer, regardless of
23 thickness. That consists of generally the same kind
24 of rock materials, the same kind of rock materials,
25 and my question is, how does heterogeneity comes in,

1 especially when we are moving away laterally? Does
2 that not account for the same stratum or -- because if
3 you see the same rock material, how do you incorporate
4 heterogeneity in there?

5 DR. SCHNARR: In practice, this is
6 something that is, kind of, worked through as
7 geologists at the reviewing agency and the applicants,
8 kind of, define their "stratum." And I would say that
9 the heterogeneity definitely needs to be accounted for
10 in the modeling. And that is clearly outlined in, I
11 believe, the regulatory text and definitely the
12 guidance. And I don't think this definition precludes
13 that.

14 But I'm also open -- you know, I think
15 it may be helpful to provide additional clarity in
16 this definition. But I don't think it -- it precludes
17 accounting for heterogeneity within a -- a stratum.

18 DR. AMPOMAH: Okay. Something to
19 consider, though.

20 Now let's go to page 7. And I'm
21 looking at Paragraph G, Public Hearings, Public
22 Hearings. Now on this one, so my first question is --
23 I want to know if this prohibition follows strictly
24 according to EPA guidance or EPA rule? Yeah.

25 MS. RANEY: These are all structured on

1 EPA rules. However, we did add additional public
2 comment period -- or public comments in a couple of
3 places. I don't know if it's this one exactly, but it
4 is structured on EPA rules.

5 DR. AMPOMAH: Okay. So I'm looking at
6 Number 2, G2. So you're saying that the director may
7 also hold -- okay. Okay. Give me a second.

8 Yeah. So let me read it, Number 1.
9 "The director shall hold a public hearing whenever,"
10 that is the keyword, "whenever," "he or she finds, on
11 the basis of requests, a significant degree of public
12 interest in a draft permit." So does that mean that a
13 public hearing is not necessarily mandated?

14 MS. RANEY: It would not necessarily be
15 mandatory. However, a list of significant interests,
16 there are descriptions of that in Exhibit 18 in the
17 EPA guidance on community engagement and public
18 comment that describe a certain number of scenarios
19 that could occur that would warrant a public hearing.

20 DR. AMPOMAH: So, Dr. Schnarr, let me
21 ask you, has there been any of these permits permitted
22 by the construction permit to construct that there has
23 never been a public hearing?

24 MS. RANEY: Not to my knowledge, no.

25 DR. SCHNARR: I agree. Not to my

1 knowledge.

2 DR. AMPOMAH: So we are proposing very
3 strict rules. So why are we making it discretionary?
4 You know, because I do believe that the director has
5 to explain as to why he's agreeing -- let's say he's
6 permitting that -- I mean, he's agreeing with the
7 operator to permit that well. You know, he has to
8 more or less explain in a public hearing. So that
9 is -- I mean, that is something for you to consider,
10 that if you want to be strict, why not make public
11 hearing? I mean, Class II and DR wells, you can
12 require a public hearing. So why not for Class VI
13 wells?

14 MS. RANEY: That -- that is a -- a good
15 suggestion, and we'll take that into consideration.
16 In fact, I think in part of our review process, we
17 were open to that idea.

18 DR. AMPOMAH: Thank you. I appreciate
19 that.

20 Now, still on 7. I will go to -- I'll
21 move on to H2. And this prohibition discusses when
22 the director issues a permit; you have two years. And
23 the operator can petition to extend that. But if you
24 read through the last sentence of the 2, you're saying
25 that the OCD may approve the extension if it is

1 determined that the delay is justified and consistent
2 with the objectives of the Class VI program. But my
3 question is, there is no limit as to what is the time
4 frame that the director can say you can only get one-
5 time extension, or two-time extension, one year, two
6 year. Can you comment on that?

7 MR. WRINKLE: So my answer to that is
8 simple, as OCD is very open to redlining a limit of
9 extension time.

10 DR. AMPOMAH: Yeah, so that is
11 something that OCD has to think about. You know,
12 maybe similar to your other rules, what you've been
13 doing, so that it's very clear that operators will
14 know that I do have only, let's say, this period. And
15 the public will know that as well.

16 MR. WRINKLE: Yeah. And for clarity,
17 you're -- you're talking about the extension period,
18 yes?

19 UNIDENTIFIED SPEAKER: Exactly.

20 MR. WRINKLE: Okay.

21 UNIDENTIFIED SPEAKER: Thank you.

22 MR. WRINKLE: Yeah. Correct. We -- we
23 agree we need to look at that.

24 DR. AMPOMAH: Okay. Now, I will turn
25 to my sheet, I will turn to my sheet, and I will look

1 at -- so I've numbered the amendments that I'm
2 proposing here.

3 So I will look at the first one. And
4 I'm looking at page 7 of the Exhibit 1. We're still
5 on Exhibit 1. And I'm looking at 19.15.41.8.I1. So
6 in here, we're talking about the response to the
7 comments. Now, I'm more particular about the A. So
8 you're saying that at the time -- I'm reading from 1.
9 So: "At the time that a final permit is issued, the
10 director shall issue a response to comments." "This
11 response shall, A, specify which provisions." So
12 there, too, I'm proposing that I'm thinking about can
13 we add any conditions to that? Because the director
14 also has to show the changes in the conditions that
15 has been changed from the previous permit that was
16 issued. So that is a suggestion that I'm making here.
17 So something to think about.

18 MR. WRINKLE: The -- kind of like the
19 crosswalk format of -- of -- before and then after?

20 DR. AMPOMAH: Exactly. Exactly.
21 Exactly. And that should also include the conditions.

22 MR. WRINKLE: Okay.

23 DR. AMPOMAH: The new conditions that
24 the director is imposing on the permit.

25 MR. WRINKLE: Understood.

1 DR. AMPOMAH: Okay.

2 DR. SCHNARR: If -- if this is the
3 first time that a permit has been issued, there may
4 not have been conditions -- in the application, there
5 aren't conditions.

6 DR. AMPOMAH: I can tell you that OCD
7 will give conditions on every permit.

8 DR. SCHNARR: Yes. But I guess my only
9 point is, if this is the first time, if this is the
10 first time a permit is issued, there may not be a
11 change of conditions.

12 DR. AMPOMAH: Oh, not necessarily the
13 first time. Yeah, not --

14 DR. SCHNARR: Okay.

15 DR. AMPOMAH: Yeah, not the first time.
16 It is a time lapse.

17 DR. SCHNARR: And it does say if any,
18 so I think that --

19 DR. AMPOMAH: Yes, if any.

20 DR. SCHNARR: Exactly. Got you.

21 DR. AMPOMAH: Let me see if I have any
22 more on 1. Now -- yes. So let's look at -- on page
23 4, on page 4 of Exhibit 1. I'm looking at
24 19.15.41.8A. And in there, the director is required
25 to -- let me read to the B. He's saying that -- let

1 me read to 2. He's saying that "The director shall
2 not begin the processing of the permit until the
3 applicant has fully complied with the application
4 requirements for that permit." And you cite "See
5 Subsection of 19.15.42.11 NMAC.

6 Now, what I'm proposing is that -- what
7 I'm thinking here is that the director shall notify --
8 so this will be my Number 2, that the director shall
9 notify the applicant in writing of identified
10 deficiencies and may request additional information
11 necessary to determine completeness or technical
12 adequacy. Would that be something that you believe
13 can be an addition to Number 2?

14 DR. SCHNARR: I think it makes sense.
15 I -- I may want to read through everything, make sure
16 it's not covered -- my only, I guess, quibble would be
17 out of my Number -- Number 3, because Number 2 covers
18 what's called "the Completeness Evaluation," which is
19 for sort of the first step. And then the next step is
20 the technical review. And I think your suggestion
21 really covers the technical review, so.

22 DR. AMPOMAH: It will actually -- so it
23 will actually cover both because the technical
24 review -- no, the completeness review has to be
25 notified, documented, telling the operator. Because

1 there could be instances where my director will not do
2 that; right? But there could be in the future where a
3 director can draft the process. So there has to be
4 that written documentation to the applicant and then
5 also to, let's say, the UIC team.

6 MR. EALES: Can I ask a question on
7 that? So Number 2 says "The director shall not begin
8 processing," which is fairly robust language. And
9 I'm -- are you recommending to strike that and replace
10 it or add your language after that?

11 DR. AMPOMAH: No. So that one is
12 specifying that the director will have to do the
13 completeness review first before the technical review.
14 So Number 2 is just saying that the director will
15 still do -- will work on this completeness review
16 until the application is actually processed. So
17 during that completeness review, the director has to
18 notify the operator. These are the deficiencies in
19 your application. And I'm not moving an inch on it
20 until you fulfill those, documented.

21 DR. SCHNARR: I got you now. This is
22 still covering the completeness review?

23 DR. AMPOMAH: Exactly. It still covers
24 that.

25 DR. SCHNARR: I would take your edit,

1 and I would just be concerned, I would want to add it
2 to what's already there to make sure there's not any
3 stringency issues with EPA.

4 DR. AMPOMAH: So what are you
5 suggesting?

6 DR. SCHNARR: I believe so. If you
7 just take your language and add it to the -- what's in
8 Number 2.

9 DR. AMPOMAH: Exactly. That is what
10 I'm suggesting. That's what I'm suggesting. And
11 these are just suggestions, so you can go back,
12 attorneys will look at it, and then during their
13 closings, they can even address that. Because this is
14 what I'm thinking.

15 DR. SCHNARR: Yes. I -- it makes
16 sense. I just know that EPA is very detailed in their
17 stringency review, and we just wouldn't really want to
18 have any issues with that. So I think adding your
19 language is a good idea.

20 MR. EALES: And I would add to what
21 he's saying, from an OCD perspective, I'd like to keep
22 the language in, if I were OCD, to ensure that the
23 operator knows we're not moving forward until there's
24 completeness.

25 DR. AMPOMAH: Exactly.

1 MR. EALES: Full stop. And then your
2 words make sense to add to that.

3 DR. AMPOMAH: So Dr. Schnarr, you said
4 something, though, but -- so the Commission, we are
5 also allowed to add to the rule; right? And so that
6 is even why I'm trying to show you now, because we
7 also want to know the limits. Let's say if the EPA is
8 not going to agree to whatever we're talking about
9 here, we should more or less know the balance as well.

10 DR. SCHNARR: Yes. And that's the only
11 role I'm trying to serve.

12 DR. AMPOMAH: Okay.

13 DR. SCHNARR: Helping you define that.

14 DR. AMPOMAH: Exactly. Define that
15 balance. Thank you. Appreciate that.

16 So I do not have anything on Exhibit 1.
17 So if we can move to Exhibit 2 of OCD's application,
18 Exhibit 2. Now, so I'm going to start with page 1 of
19 the rule itself and ask a few questions. So I'll
20 start with A, Number 3, that is the "Area of review."
21 And before I ask my question, though, I thought,
22 Dr. Schnarr, you agreed to a modification of this?

23 DR. SCHNARR: What I -- yes. I agreed
24 that this needs to be modified. And my recommendation
25 is to actually take the definition in Exhibit 3 and

1 use it in each of the three exhibits. So I could
2 point you to it. The definition of "Area of review,"
3 although I'm not seeing it now, I know that somewhere
4 in -- in one of the other exhibits is the full
5 definition of -- of "Area of review." I think it's in
6 my demonstrative and in my testimony where that is.

7 DR. AMPOMAH: Yeah. I do know that
8 there's one in there.

9 DR. SCHNARR: It's in -- sorry to
10 interrupt. It's in Exhibit 3, page 4 of 24.

11 DR. AMPOMAH: Exactly. Exactly.

12 DR. SCHNARR: And that -- I would just
13 replace wholesale this definition with that
14 definition.

15 DR. AMPOMAH: Okay. Thank you. Now,
16 my question is, who has the ultimate decision with
17 regards to the methodology that is being used for the
18 AoR delineation?

19 DR. SCHNARR: I think to meet the
20 minimum federal stringency requirements, the -- the
21 definition really needs to remain in place. And
22 additional conditions could be added to that.

23 DR. AMPOMAH: Let me repeat my
24 question.

25 DR. SCHNARR: Yeah.

1 DR. AMPOMAH: So I'm not saying who has
2 the final authority to determine which method,
3 computational method --

4 DR. SCHNARR: Right.

5 DR. AMPOMAH: -- will be used for the
6 AoR delineation?

7 DR. SCHNARR: The reason I was being
8 careful, and you've rephrased your question, is when
9 you say which method, there could be a method of,
10 like, a quarter mile radius, and that would not be
11 acceptable. And EPA, I would say, would make that
12 decision in their primacy review.

13 But if you are -- are accepting the
14 definition here in Exhibit 3?

15 DR. AMPOMAH: No, the modified one.

16 DR. SCHNARR: Yes, Exhibit 3,
17 definition. And you're using the term "computational
18 modeling." At that stage, what is an acceptable
19 computational model would -- that decision would be
20 the director of OCD.

21 DR. AMPOMAH: Okay. So the director
22 will have the ultimate decision to say that you are
23 using EPA Method 1, Method 2, risk-based. Is that
24 your response?

25 DR. SCHNARR: Yes.

1 DR. AMPOMAH: Okay. Thank you.

2 DR. SCHNARR: Or -- or another method
3 that's not in guidance.

4 DR. AMPOMAH: Or another method that is
5 not -- please explain that a little bit?

6 DR. SCHNARR: Well, a guidance is
7 guidance. It is -- and, you -- you know, it's -- it's
8 not a requirement because it is guidance. And I would
9 say the OCD director has the flexibility to accept
10 other methodologies.

11 DR. AMPOMAH: Okay. Now, so let's move
12 to page 2 under G2. Page 2, G under 2. G2, yes. You
13 are defining "Geologic sequestration." Now, my
14 question here is the [inaudible]. You said "This term
15 does not apply to carbon dioxide capture or
16 transport." Why this distinction?

17 DR. SCHNARR: My understanding would be
18 that this -- it's because this rule and the Federal
19 Class VI rule do not have any bearing on capture or
20 transport. So it's trying to be specific in usage of
21 that term when it's used in the regulations that it is
22 for the storage component of -- of carbon capture, and
23 transport, and storage.

24 DR. AMPOMAH: So you believe that that
25 would still best be [inaudible]?

1 DR. SCHNARR: I -- I believe that's a
2 helpful distinction in the definition.

3 DR. AMPOMAH: Okay. Now I'll move to
4 page 4. We've not discussed a lot about the USDW
5 much. Now, let me ask, what you are proposing here,
6 even this and together with all the other provisions
7 under the USDW, is it following strictly under the EPA
8 guidance and then also the waiver well? I want you to
9 put all of that together.

10 DR. SCHNARR: I'm sorry. Do you mind
11 rephrasing the question?

12 DR. AMPOMAH: Yeah.

13 DR. SCHNARR: And maybe one part at a
14 time.

15 DR. AMPOMAH: Okay. Okay. So I'm
16 looking at page 4.

17 DR. SCHNARR: Yes.

18 DR. AMPOMAH: Section U, and then I'm
19 looking at the "Underground source of drinking water."
20 So you are defining what becomes USDW?

21 DR. SCHNARR: Yes.

22 DR. AMPOMAH: So I'm asking you. Did
23 you follow strictly the EPA guidance or you added to
24 it?

25 DR. SCHNARR: I believe this is a copy.

1 And I -- I'll make the distinction of not of EPA
2 guidance, but of the EPA regulations.

3 DR. AMPOMAH: EPA regulations. Now,
4 then let's take the one after you right there. So you
5 are defining "Underground source of drinking water,"
6 under 3, U3. So A, you are saying that "Which
7 supplies any public water system." Clearly
8 understood. Number 2 "Which contains a sufficient
9 quantity of groundwater to supply a public water
10 system; and," so that is a big -- and then N, in
11 addition to that, "Currently supplies drinking water
12 for human consumption; or contains fewer than 10,000
13 TDS," right there, "and which is not an exempted
14 aquifer."

15 And you go on to explain the
16 exemptions. Now, if I can get to the exemptions.

17 DR. SCHNARR: Yeah. The next page
18 describes aquifer exemption.

19 DR. AMPOMAH: Okay. Yes. So on page
20 5, D. Now, so now we're to the exemptions. Is it New
21 Mexico specific or is all still EPA rule?

22 DR. SCHNARR: This is all still EPA
23 rule. And even after receiving primacy, EPA still has
24 jurisdiction on offer exemptions.

25 DR. AMPOMAH: So do you believe that

1 the way EPA really -- the way the rule is structured,
2 even with the exemptions, it gives more clarity to
3 operators to really know what is the lowest most USDW
4 you're dealing with?

5 DR. SCHNARR: In my experience, that
6 has typically been pretty clear. I think there
7 have -- I have seen issues where the phrase "Contains
8 a sufficient quantity of groundwater" is subject to
9 interpretation. I'm not familiar -- there may be
10 state-level guidance that already covers that. I know
11 other states have guidance that -- that try to cover
12 that issue.

13 DR. AMPOMAH: So there's a way to
14 quantify?

15 DR. SCHNARR: I would think through
16 guidance.

17 DR. AMPOMAH: Okay. Now let's go back
18 to 4 and the General Provisions. So this will be
19 19.15 -- page 4, I meant. 19.15.42.8. So you made a
20 statement there saying that: "Such aquifers are those
21 which otherwise qualify as 'underground sources of
22 drinking water' to be protected, but which have no
23 real potential to be used as drinking water source."
24 "Therefore, they are not USDWs." Can you explain that
25 a little bit more?

1 DR. SCHNARR: Yeah. I think I would
2 want to take a minute to read --

3 DR. AMPOMAH: Sure.

4 DR. SCHNARR: the -- the references
5 above this.

6 Yeah. I think that there -- there --
7 this is maybe an area that needs some clarity because
8 I don't see really where it's defined that this is
9 referencing specifically exempted aquifers. But I
10 believe that's the -- the idea of Number 2 here.

11 Where it says "such aquifers," I don't
12 think it's clear what that means, and it could be
13 clarified to mean that. I -- I believe it's referring
14 to exempted aquifers.

15 DR. AMPOMAH: It is. Yes. It is. And
16 so you're saying that even though it could be a USDW,
17 but have no real potential to be used as a drinking
18 source of water. And I can give you an example. So
19 like, let's say oil and gas-bearing zone. It has TDS
20 less than 10,000.

21 DR. SCHNARR: Yes.

22 DR. AMPOMAH: EPA say is a USDW.

23 DR. SCHNARR: Yes.

24 DR. AMPOMAH: Do you believe this is
25 more or less clarifying those type of confusions?

1 DR. SCHNARR: This is a broader issue
2 than just Class VI. Aquifer exemptions are available
3 in other oil classes. And in fact, EPA does not allow
4 for an aquifer exemption only for Class VI. So if you
5 are to provide additional clarity on this, I think you
6 may be more prudent in guidance. And one reason I
7 point to that is because EPA has jurisdiction on
8 aquifer exemptions, even if you were to gain primacy.
9 So I think it's really more of an EPA issue.

10 DR. AMPOMAH: So then do you believe
11 that this statement is lay enough, I mean, for anybody
12 to read and understand as it is now?

13 DR. SCHNARR: Well, like I said, I was
14 confused when it just started with "Such aquifers," so
15 I do think it requires some clarity. And I just think
16 we would have to be careful in clarifying anything
17 else in here because it's really an EPA issue.

18 DR. AMPOMAH: Yeah. I do not have any
19 suggestions yet, but something to look into. But --

20 DR. SCHNARR: Your example, by the way,
21 that may be the grounds for perceiving an aquifer
22 exemption under the Class II program. And so if that
23 is envisioned in the way aquifer exemptions are
24 treated -- and the only way to use an aquifer
25 exemption in the Class VI program, it's the expansion

1 of an existing Class II aquifer exemption.

2 DR. AMPOMAH: Now let's go to page 8.
3 I'm looking at -- so I'll start from page 7, the
4 bottom of page 7. Looking at the "Transitioning from
5 Class II to Class VI." "Transitioning from Class II
6 to Class VI," I'm looking at Number 1. I will give a
7 minute to make sure we are on that.

8 So here, the way I understand it is
9 that you are giving the director the room to more or
10 less say, hey, you cannot continue on Class II; you
11 have to move to Class VI?

12 DR. SCHNARR: Yes.

13 DR. AMPOMAH: Okay. Now let's take
14 them one after the other. And see, even it's clear in
15 the rule, you know, that it's easy for the director to
16 really follow that. So I'm looking at -- so F is
17 transitioning from Class II to Class VI. And I'll
18 focus on 2, F2: "The director shall determine when
19 there is an increased risk to USDW compared to Class
20 II operations and a Class VI permit is required." "In
21 order to make this determination, the director must
22 consider the following." The first one is "Increase
23 in reservoir pressure within the injection zone."
24 "Increase in reservoir pressure within the injection
25 zone." What is the threshold here?

1 DR. SCHNARR: Yes. I -- I believe we
2 discussed this a little bit yesterday. And I agree
3 with you that this is an area where there could be
4 more clarity in guidance. And BK does not have very
5 quantitative guidance on this list. So it may be
6 something that would be state specific.

7 DR. AMPOMAH: So is OCD committing --
8 so this is what I'll give for Mr. Wrinkle.

9 Is OCD committing to provide clarity on
10 this because it's a big deal? Now, we talked about
11 the fact that probably there's probably no Class II
12 that can beat Class VI, you know? But with the Class
13 II -- with the Class VI provision, you see people
14 going around; right? Hopefully around. So when you
15 comment to provide guidance to more or less support a
16 director, I mean, making more meaningful and just for
17 decision?

18 MR. WRINKLE: Yeah. Yeah. One -- one
19 thing that we do try to do in any guidance that we
20 author is set those thresholds and -- and distribute
21 those out for easy -- easier decision-making. But
22 they have to be, you know, scientifically bound;
23 right?

24 DR. AMPOMAH: You made a good point
25 about scientific bound. And, as an engineer, I'm

1 thinking about what could be the bound here. I mean,
2 this is a tough one. And I don't know -- because as
3 you mean, let's say they are still injecting within
4 the fracture pressure limit. But you know clearly
5 that these guys are not really going for oil. They've
6 turned it into a sequestration well. So how do you
7 balance it? Because they are not really violating
8 their permit. Because you've given them, let's say
9 this is the injection pressure or let's say the
10 pressure that you have to operate. They are operating
11 within that. So what triggers that?

12 DR. SCHNARR: I do think that that --
13 this list, kind of, has to be looked at
14 comprehensively. And I would point to Number C -- or
15 Letter C here, which also lists a decrease in
16 reservoir production rates.

17 DR. AMPOMAH: Okay.

18 DR. SCHNARR: As you're saying that --
19 they may always be injecting at the same rate, but
20 they may -- and that's a regulatory, but it's their
21 discretion to decrease to almost zero or, you know,
22 you can see if there's a decrease and that would lead
23 to a larger reservoir pressure. So I would just take
24 these in -- in combination with each other and
25 evaluate.

1 DR. AMPOMAH: And evaluate all of that.
2 But you do know that companies seem in Class II for
3 enhanced recovery, they are getting tax credit. So if
4 they are just injected, injected, injected, and you in
5 the economics, balancing it off. So there has to be
6 more clarity as to how the director would say, no, you
7 are really using it for tax credit purposes and not
8 necessarily for hazard recovery. So even the C
9 decrease in reservoir production rates.

10 I mean, how does it become bad?
11 Because as you know, even in a secondary recovery
12 process, we intentionally continue to inject, to build
13 up our pressure, to build the MMP before we start the
14 CO2, and the production is still going to go down. So
15 how do we even justify what would be the minimum rate
16 to even trigger that?

17 DR. SCHNARR: I do agree with you that
18 additional clarity and guidance will be helpful for --
19 for operators on these.

20 DR. AMPOMAH: And I can assure you, I
21 don't have any suggestion here.

22 DR. SCHNARR: Yeah. I -- I do think
23 it's -- it's achievable to have more detailed guidance
24 on this.

25 DR. AMPOMAH: Now, under G, still 2G,

1 you made a point about "the owner's or operator's plan
2 for recovery of carbon dioxide and the cessation of
3 injection." So can you explain that a little bit?
4 Because probably an operator will not tell you right
5 from the offset that I'm going to dump this and take
6 that CO2 and take it somewhere; right? So how do
7 you -- and later on if they decide to do that, I mean,
8 how are you going to square that?

9 DR. SCHNARR: I may actually kick this
10 to Matt or Justin. I'm not familiar with what is
11 required to be disclosed to the agency in a Class II
12 program. But I think the intent of it was that
13 economically an EOR CO2 is a resource. So a -- a true
14 EOR project would try to recover CO2. Whereas if the
15 objective is long-term storage, the opposite would be
16 true.

17 DR. AMPOMAH: I don't know if anybody
18 wants to add to it?

19 MR. EALES: Yeah. Restate the
20 question, if you could.

21 DR. AMPOMAH: So you have a provision
22 here under 2G, you're saying that "the owner's or the
23 operator's plan for recovery of carbon dioxide at the
24 cessation of the injection." So I just want to
25 understand the thoughts behind that provision?

1 MR. EALES: And it's all based around
2 the potential increased risk to USDWs. And the
3 director's analysis, I think fairly straightforward to
4 mean that if there is a change in plan or plan to --
5 to change -- to stop injection, that the director must
6 include that.

7 So I don't know, Justin, do you want to
8 add to the point?

9 DR. AMPOMAH: I think I'm getting the
10 point here. So you're saying that the operator has to
11 let the director know whether at the end of the Class
12 II, because in the end of Class II, or let's say for
13 Class II, the CO2 is a commodity and not necessarily a
14 waste. So the operator has to let the director knows
15 what they are taking. Or let's even in their
16 application, they might probably have said, I'm going
17 to take the CO2 and send it somewhere. So that I --
18 this is -- the director has to consider all of that
19 before he says, okay, you have to go for Class VI.

20 MR. WRINKLE: Yeah. I'll agree.

21 DR. SCHNARR: That's correct. I
22 just -- I'm not aware of what they -- you asked also
23 in the same question of what they are required to
24 dispose to OCD under the Class II program, and that
25 I'm not aware of, so.

1 DR. AMPOMAH: Okay. Now let's look at
2 page 8, still page 8. So I'm looking at 19.15.42 of
3 10, "Authorization of Underground Injection by Rule."
4 Now, so I'm reading through the "Existing Class II
5 enhanced recovery and hydrocarbon storage wells." And
6 I'm looking at last but one sentence. Or is it the
7 last sentence? You're saying that "Class II enhanced
8 recovery or hydrocarbon storage well that is
9 authorized by rule, such authorizations shall
10 terminate upon the effective date of a Class VI permit
11 issued in accordance with Subsection F of 19.15.42.9
12 NMAC.

13 Now that provision, I'm thinking
14 through that. Is there some kind of a grace period
15 for a Class II operator to still be injecting, you
16 know, and saying I'm probably turning this one to a
17 Class VI? Or let's turn this one to be a long-term
18 sequestration project. Is there a grace period there?

19 DR. SCHNARR: Well, first, I -- I would
20 just verify that this only applies to Class II
21 operations that are authorized by rule, not by permit.
22 And I might ask, I don't know if that is a common
23 practice in New Mexico?

24 MR. EALES: That's what I was thinking.
25 This is not a common practice in New Mexico to

1 authorize an injection permit by rule.

2 DR. AMPOMAH: So --

3 MR. EALES: They're authorized by
4 permit.

5 DR. AMPOMAH: Okay. So then why do we
6 have that in the rule?

7 DR. SCHNARR: This would be something
8 we want -- want to go back and see if there is any.
9 But I think if we were going to edit this, we would
10 just add for clarity that there are none in New Mexico
11 authorized by rule. But I wouldn't remove it, again,
12 just because of EPA's stringency review.

13 DR. AMPOMAH: Okay.

14 DR. SCHNARR: So they just want to see
15 that that is in there.

16 DR. AMPOMAH: Okay. So for clarity,
17 you probably have to look at it and see?

18 DR. SCHNARR: If -- if that has never
19 happened in New Mexico, I think it -- it would be
20 worthwhile to state that in -- in this and just for
21 clarity.

22 DR. AMPOMAH: Okay.

23 MR. CHANG: Can you elaborate on why
24 that would be a stringency issue?

25 DR. SCHNARR: I think if we just remove

1 this wholesale because it's not an issue in New
2 Mexico, EPA would -- just may look at it as we're
3 removing a requirement.

4 MR. EALES: Yeah. My thoughts would
5 be, in our calls we've had with EPA, that they would
6 like to see -- they know that within the US, there are
7 means of authorizing by rule. So they want to make
8 sure we cover that.

9 MR. CHANG: Right. But if we simply
10 don't allow that, wouldn't that be more stringent than
11 what the EPA allows? How would that be less stringent
12 than what the EPA allows if we simply refuse to allow
13 it by rule?

14 DR. SCHNARR: I think it's -- we could
15 ask EPA, but I think -- first, I would want to know
16 the answer. Have there ever -- ever been any Class II
17 operations in New Mexico authorized by rule?

18 MR. CHANG: Understood.

19 DR. SCHNARR: And if there never have,
20 then I think it -- it would be good to coordinate with
21 EPA on that.

22 MR. CHANG: Fair enough. Thank you.

23 DR. SCHNARR: Thank you.

24 DR. AMPOMAH: Thank you, Director.

25 Let me let me go through my suggested

1 recommendations on the SB2 so we can move over quickly
2 here. And I do have probably -- so I'll go to Number
3 6 of my suggested amendments, and I'll look at page 4
4 of the Exhibit 1. Page 4 of Exhibit 1. Let's see.
5 Oh, Exhibit 2. Sorry. Exhibit 2. Page 4 of Exhibit
6 2. Sorry.

7 Now, this one -- let's see. So I'm
8 looking at 19.15.42.8. Now, this is a general
9 provision, general provision. And for Number 6, I am
10 looking at, do you think it would be necessary to put
11 in the rule that you are actually more or less
12 following the EPA guidance? So that is what this
13 suggestion is about.

14 DR. SCHNARR: I have a little
15 hesitation on that, and it's because of thinking of
16 the whole universe of possible future conditions. And
17 there may be a time in the future, although I largely
18 agree with the EPA guidance documents now, there may
19 be a condition in the future where EPA were to revoke
20 a guidance or edit a guidance in a way that OCD would
21 not necessarily agree with. Although this is written
22 to be flexible, my hesitation would be just that.

23 DR. AMPOMAH: Okay. Then look at my
24 Number 17 and combine both of them.

25 DR. SCHNARR: I would say I would defer

1 to OCD on whether or not these add additional clarity
2 taken together. Or if the additional framework
3 already provides these provisions, I would definitely
4 review and to proceed with that.

5 DR. AMPOMAH: Okay. Mr. Winkle, do you
6 have any feedback on this? Or you can take it back,
7 and then I'm just -- I want to know what OCD thinks
8 about it.

9 MR. WRINKLE: Yeah. And you're --
10 you're referring to Number 7?

11 DR. AMPOMAH: So I'm combining 6 and 7.

12 MR. WRINKLE: Six and seven. Okay. I
13 think Jesse's taking some notes there that we can go
14 discuss and -- and then come back. But no, I get -- I
15 get the Doctor's [inaudible]

16 DR. AMPOMAH: I appreciate that. Then
17 I'll switch to the last exhibit. So that would be OCD
18 Exhibit Number 3. And that will be my last one. And
19 I'll wrap up soon.

20 And I'm going to start with page 4 of
21 Exhibit Number 3, and I'm looking at Number 12. So
22 there you are defining "Transmissive fault or
23 fracture." And you're saying that "means a fault or
24 fracture that has sufficient permeability and vertical
25 extent to which allows to move" -- "fluids to move

1 between formations." So my question is, is the
2 permeability a technical word or -- transmissibility
3 is the technical word. Yeah. I do see the "fracture"
4 in there, but I still want to ask, though?

5 DR. SCHNARR: The question is whether
6 or not it's permeability or transmissibility?

7 DR. AMPOMAH: Yes.

8 DR. SCHNARR: I think permeability is
9 sufficient, but I'm looking to additions, or -- or
10 edits, or red lines to clarify this.

11 DR. AMPOMAH: So from your point of
12 view, I guess it gives clarity to the layman who
13 doesn't know what transmissibility is. So you believe
14 the permeability is still okay?

15 DR. SCHNARR: To your point, if this
16 was really framed more to laymen, I -- I would add
17 more language after this sentence to provide
18 additional clarity to -- to a layman.

19 DR. AMPOMAH: Because I do -- so you go
20 further to describe how the faults, fractures should
21 be implemented in the, let's say, in the models and
22 all of that, and when you are saying "permeability," I
23 mean, the permeability is part of the calculation of
24 the transmissibility. The transmissibility is the key
25 here. And I'm not sure if we are using

1 "permeability," which is not input, in calculating the
2 transmissibility. We are recovering it all. That is
3 just my point here.

4 DR. SCHNARR: I think it is reasonable
5 to provide additional definition. I -- I think this
6 is -- just to be clear, this definition is used --
7 it's an important definition because the confining
8 zone must be free of transmissive faults and
9 fractures. And that's a very key part of the site
10 characterization.

11 DR. AMPOMAH: That is where I'm coming
12 from. Because if you do say "permeability" and you do
13 not use transmissibility, transmissibility is what
14 goes into the model, not permeability for the fault.

15 DR. SCHNARR: Yes, I -- I think it
16 would be fair to add additional context and definition
17 here.

18 DR. AMPOMAH: Okay. That one, I do not
19 have a suggestion for you, but something to look into.

20 DR. SCHNARR: Okay.

21 DR. AMPOMAH: Thank you. Now let's go
22 to page 5. And I'm looking at I, page 5, I, that is
23 talking about a stimulation program. And I'm pretty
24 sure it probably says what I'm going to ask. So if a
25 operator doesn't provide a stimulation plan and the

1 director completes all the reviews, can they come
2 back?

3 DR. SCHNARR: In my experience with
4 EPA, it is not a strict requirement to have a
5 stimulation plan, but the director strongly encourages
6 it. Because in the future, if some minor stimulation
7 is needed, it would be a, in their mind, a major
8 permit modification to then, at that point, add a
9 stimulation plan. So they -- in -- in my experience,
10 the different EPA regions really stress, and actually,
11 there's been more recent guidance in the last few
12 months from EPA essentially telling operators that
13 it's a weakness of an application if it does not
14 include a stimulation plan.

15 DR. AMPOMAH: And New Mexico will also
16 follow that?

17 MR. WRINKLE: Yes. And also, there
18 might be -- we could look into any clarifications and
19 to put in a rule on that as well.

20 DR. AMPOMAH: Okay. Thank you.

21 Now, so let's go to Number 6 -- page 6.
22 And I'm looking at Number 2, page 6. And I'm looking
23 at Number 2. Give you a minute here.

24 So you're saying that "The director
25 shall notify in writing, any states, tribes,

1 territories within the area of review of the Class VI
2 project based on information provided in Subparagraphs
3 B and T of Paragraph 1 of this subsection of the
4 permit application and pursuant to requirement of
5 Section" -- and you state -- you referenced that.

6 Is there a timeline on this, or it is
7 left to the discretion of the director to determine at
8 what point does he feel like I need to notify these
9 agencies or groups?

10 MR. WRINKLE: So basically, you're --
11 you're saying that there -- there could be a threshold
12 deadline here, right, basically within X amount of
13 time? Yeah, I think OCD is open to the rule.

14 DR. AMPOMAH: And I do not have any
15 suggestion on that one, but I thought there has to be
16 some clarity on that.

17 MR. WRINKLE: Well, yeah, it would make
18 it easier. For us, especially. I think that we can
19 go back and -- and talk to the relevant individuals
20 and see, you know, what a -- what a practical time
21 frame would make sense there.

22 DR. AMPOMAH: Thank you. I appreciate
23 that. Let's go to number -- page 7, E. That is the
24 "Area of review and corrective action," page 7,
25 Paragraph E. And there you define the area of review.

1 Now, my question is, can aerial reviews overlap?

2 DR. SCHNARR: I have not seen that yet,
3 but I -- I don't believe there's anything that would
4 say that can't happen.

5 DR. AMPOMAH: So in the event that it
6 happens, how is the coordination going to be like?

7 DR. SCHNARR: Both operators would be
8 subject to the rules within their area of review.

9 DR. AMPOMAH: So you said it can
10 happen. Do you believe that an operator can challenge
11 a potential area of review overlap? And what would be
12 the suggestion to, let's say, OCD as to your -- or I
13 don't know if OCD has talked through that?

14 DR. SCHNARR: I -- I would defer to the
15 other panelists on sort of the -- the ability of other
16 operators to --

17 MR. EALES: And the question for you
18 is -- so you're -- the question is it around two new
19 permits in beginning stages or one existing permit in
20 one existing location and then secondary coming in?

21 DR. AMPOMAH: You've made it even much
22 clearer for me because you do have Project A and then
23 Project B. Now you brought in the time. You brought
24 in the time, which is key here. So I'm asking, the
25 operator is going to submit to you the entire AoR to

1 the end of the project. Project B is going to do the
2 same thing. And I'm asking if OCD is reviewing this
3 application, and there could be one, could there be or
4 let's say, can OCD accept overlap of AoRs? Two
5 different projects?

6 MR. EALES: I believe in the permitting
7 process, the -- either one of those parties would have
8 to consider the maximum interference from area wells
9 that would be injected in the same zone if -- if we're
10 talking the same formation. And if they don't have --
11 well, if there's one that's moving forward and going
12 to permitting, then Operator A won't know what's
13 happening with Operator B until the permit is issued.

14 So the only mechanism in place there
15 would be the opportunity to protest if you've been
16 notified as either operator notified plans and -- and
17 have the ability to protest the plans that are in
18 conflict with another operator's plans.

19 DR. SCHNARR: I'll just chime in real
20 quick. It is looked at, particularly in the UPA
21 implementation manual, but this is a key function of
22 the primacy entity, is to evaluate potential
23 overlapping projects and make sure that these projects
24 that are in the near vicinity of each other are
25 considering the pressure effects from the other

1 projects.

2 DR. AMPOMAH: Yeah, the pressure effect
3 is key. Now I'm Company B coming in. Company A is
4 there. I use Company A's area of review. I do my
5 modeling. I can -- he's putting in 50 million. I can
6 put in 50 million. Remember, there are some operators
7 that try to use this area of review to capture pore
8 space. I don't know if you've heard about BLM trying
9 to make sure they control how they give the allowance
10 to sequestration projects.

11 So Company A can come in and tell you,
12 I'm going to inject 50 million metric tons with a big
13 AoR. It could be that the objective is not actually
14 to really inject, but to capture that pore space for
15 future ransom; right? So operator will come in.
16 Operator A already have a permit, Operator B is coming
17 in, then all the models. I can inject even in the
18 presence of Operator A.

19 We do have overlap of the AoR. Do you
20 believe that just the overlap of the AoR can give OCD
21 the authoritatives the operator protects to deny the
22 permit?

23 MR. EALES: Yes, I think it can,
24 because the secondary operator would have to consider
25 the pressure fronts and all the information in that

1 existing permit for Operator A. One thing we did do
2 and we commented on earlier is maintain the expiration
3 to two years. So if there is someone trying to do
4 what you're talking about, it would expire, and they
5 would not have good reason to ask for an extension.

6 DR. AMPOMAH: You've got me right
7 there. But let me ask, definitely during your
8 outreach, the operators that are injecting soil from
9 disposals probably might have hinted you, hope you are
10 not having to take over our pore space. I don't know
11 if that discussion came through or not. But how is
12 OCD going to value CO2 sequestration and then water
13 injection all into the same zone? Has there been any
14 discussions on that?

15 MR. WRINKLE: There has been because we
16 have -- we have experience in these situations. And
17 the discussions internally within, you know, the
18 operational team, has been to supply very specific
19 guidance for certain scenarios to -- to new
20 overlapping that are both brand new, existing
21 overlapping, and how the applicant should navigate
22 those via OCD guidance. Now, again, those haven't
23 been developed yet, but -- but there has been
24 conversations because of past experiences in other
25 classes.

1 DR. AMPOMAH: Now, since you said
2 you've been discussing this, do you believe that soil
3 water injection and CO2 injection can coexist in the
4 same formation?

5 MR. WRINKLE: Being a -- a layman, I --
6 I don't have an opinion on that. I would have to
7 refer to a technical team.

8 MR. EALES: And I can speak to that.

9 DR. AMPOMAH: Yeah.

10 MR. EALES: Yes, they can coexist in
11 the same formation.

12 DR. AMPOMAH: So then existing soil
13 water injection company cannot necessarily use that as
14 an excuse to more or less protest against, let's say,
15 a sequestration project?

16 MR. EALES: Yeah. So if any company
17 that would be affected, again, has the opportunity to
18 notify and protest, and the applicant has to include
19 the total maximum permitted volumes and pressures
20 allowable for that SWD company in their calculations
21 to determine their total permitted volumes and
22 pressures themselves.

23 DR. AMPOMAH: Now let me ask you, who
24 bears the burden when there's that kind of -- let's
25 say if someone protests, who bears the burden? Is it

1 on both or is on the new company coming in?

2 MR. EALES: It is on both.

3 DR. AMPOMAH: Okay. Thank you.

4 And so if I go to Page 12, we've
5 already talked about that, and I do have some
6 suggestions there with regards to the casing, the
7 surface casing, and then the long strings. I do have
8 a suggestion that we'll go through.

9 But before that, let's go to page 13.
10 I'm looking at page 13. I'm looking at 2A. And
11 that's the list of the well, the logs. Now, Oxy also
12 brought this one up, so I'm not saying you. Do you
13 believe that there has to be all for the spontaneous
14 potential, or you still want to keep it right there as
15 a requirement?

16 DR. SCHNARR: My recommendation on this
17 issue would be to take this question to EPA.

18 DR. AMPOMAH: Okay. To take it to EPA?

19 DR. SCHNARR: Yeah.

20 DR. AMPOMAH: Okay. Thank you.

21 DR. SCHNARR: That's just my
22 recommendation.

23 MR. EALES: Yeah. And I would add to
24 that in -- following the question yesterday.
25 Spontaneous potential works in water zones. And it's

1 that more or less a pole heater. So it's -- it
2 wouldn't cause damage to the formation, but it would
3 essentially not work in an air environment. So --

4 DR. AMPOMAH: And then if you are using
5 oil-based mud?

6 MR. EALES: Correct. It's not very
7 useful in the oil-based mud. So we wouldn't take that
8 to EPA. But my interpretation of this is these --
9 these are tools that would be a minimum if valuable,
10 but and we'll just have to ask EPA how to term that.
11 But just taking it out, especially for surface casing,
12 which you're looking for water, it's -- it's good to
13 have that in as a minimum.

14 MR. CHANG: You want to take a break?

15 THE HEARING EXAMINER: All right.

16 MR. CHANG: I'm just suggesting if you
17 have one.

18 THE HEARING EXAMINER: No, I do have a
19 break.

20 MR. CHANG: You want to do a break and
21 then come back?

22 THE HEARING EXAMINER: Sure.

23 MR. CHANG: Let's take another morning
24 break for everybody's comfort.

25 THE HEARING EXAMINER: Thank you. I'd

1 like to come back at 10:45.

2 (Off the record.)

3 THE HEARING EXAMINER: All right. We
4 are still cross-examining the second division panel.
5 Commissioner Ampomah, you have more questions.

6 THE HEARING EXAMINER: Yes, I do.

7 So I'll go to page 13. Page 13 of
8 Exhibit Number 3. Exhibit 3 of OCD, and I'm looking
9 at Number 3. That would be is it page 3? Page 3.
10 Now in here, you're talking about the fact that the
11 operator -- the owner or the operator must take whole
12 cores or sidewall cores. Now I want to ask which one
13 takes precedence over the other? Because you're
14 saying must, it means they have to, but you're saying
15 whole core or side core. So which one takes precedent
16 over the other?

17 MR. EALES: I would say whole core
18 would take precedent over the side core just for
19 better quality.

20 DR. AMPOMAH: So then with that, is it
21 not -- would it not be possible to really clarify
22 that? Because there are instances where operators
23 will start with whole core, and you cannot recover
24 anything.

25 MR. EALES: Right.

1 DR. AMPOMAH: So then they do have a
2 sidewall core right there on site to really use. So
3 is it possible to clarify to see which one takes
4 precedent over the other?

5 MR. WRINKLE: So, Commissioner,
6 we'll -- we'll go look and see if this was part of the
7 and/or situation that, you know, the CFRs allowed and
8 we didn't, and -- and we'll take under advisement to
9 see, you know, which one has precedent.

10 DR. AMPOMAH: Yeah. And definitely --
11 okay.

12 MR. WRINKLE: If what --

13 DR. AMPOMAH: But definitely about the
14 end.

15 MR. WRINKLE: If what you're saying is
16 so it requires order, one or the other, and which
17 order of priority do you first use up? Normal
18 circumstance, he would try whole, but if he have
19 trouble with that, he would go to side core, sidewall.

20 MR. CHANG: Commissioner, just to make
21 sure I'm tracking with you, could you repeat which
22 section you're on, please, so I can track?

23 DR. AMPOMAH: Yeah. So, Chair, I'm
24 looking at OCD Exhibit 3, Page 13.

25 MR. CHANG: Page 13?

1 DR. AMPOMAH: Yeah. Section H. Three.
2 Page 13, H3.

3 MR. CHANG: Thank you.

4 DR. AMPOMAH: Thank you.

5 So some clarification on that would be
6 really helpful. But if we go down the same section,
7 you're talking about "The director may accept
8 information on cores from nearby wells if the owner or
9 operator can demonstrate that core retrieval is not
10 possible and that such cores are representative of
11 conditions at the well." My question is, what would
12 be -- is there more like a distance that the director
13 can consider? Is it 100 feet -- 100 miles, 200 miles?
14 You know, so if that would be clarified.

15 MR. EALES: We'll just start on mine.
16 I think it's a good question, but it's a difficult one
17 to answer because of how some areas have large
18 homogenous areas for miles and some are going to vary.
19 And so I think it needs to be up to the discretion of
20 the director of the OCD/UIC group on what they would
21 accept.

22 DR. AMPOMAH: But we need to give some
23 guidance to the director. So let's think about before
24 they can make that claim, have they compared the
25 rocks, you know, in those areas? Because you're

1 talking about homogenous nature of the formation;
2 right? So but there has to be some guidelines to the
3 director?

4 MR. EALES: I think the guidance is a
5 good recommendation. I do think that that is in
6 practice today as far as what's understood to be
7 homogenous through the permitting process and what
8 needs to have logs closer for permitting. That's a
9 good idea for a guidance document.

10 DR. AMPOMAH: You know, this provision
11 is also something that the director can use to require
12 strap well because operators can say, oh, there is a
13 core 15 miles away from here. I have everything that
14 I need. So the question really, really is, at what
15 point will the director has to request a strap well
16 before, let's say, the initial application can even be
17 deemed as complete?

18 DR. SCHNARR: I really feel that's a
19 project-specific determination. And in my experience,
20 a strap well is necessary when there is not a lot of
21 previous oil, gas, or injection activity. So there
22 really is no existing well data. But in areas with a
23 lot of existing well data, it -- it may not be
24 necessary.

25 DR. AMPOMAH: Okay. But you are using

1 the word "must" here. You're saying the owner or
2 operator must take a whole core. And as you said,
3 let's say -- I'm just going to use someone based as an
4 example. There are a lot of well data, meaning logs
5 everywhere, but not too many core that penetrates the
6 potential injection zones there. Now, operators can
7 use that and then avoid -- because the only thing that
8 the operator would need to drill a well for would be
9 the core. Aside the core, all logs, I mean, it's all
10 really obliterated. But you are using the "must." You
11 are using "must" here.

12 DR. SCHNARR: I'm looking at the
13 language just to make sure I understand. I think this
14 is specifying from the actual injection well. I
15 don't -- we -- we'd have to back up. Yeah. It says
16 "Logging, sampling, and testing prior to injection
17 well operation." My understanding is that these
18 requirements would be from the injection well.

19 DR. AMPOMAH: So this one would not be
20 applicable to the permit to construct by the permit to
21 inject?

22 DR. SCHNARR: The -- the operator would
23 have to have a plan in their initial permit to collect
24 these cores. That would be part of the permit to
25 construct. And the authorization to inject would be

1 dependent on their final submission of the well
2 logging and coring data and results to the director.

3 DR. AMPOMAH: So are you saying that it
4 could be at the discretion of the director, assuming
5 they couldn't recover the core? Even though you are
6 saying it's a must, right, but they couldn't recover
7 the core in the injection zone?

8 DR. SCHNARR: I think that this
9 terminology -- you know, this -- this text provides
10 enough flexibility to the director to allow for them
11 to not take core if it was not feasible.

12 DR. AMPOMAH: Okay. So let me wrap it
13 up and let's go through some of the suggestions that I
14 do have for your consideration.

15 So I'm going to start with page 7 of
16 Exhibit 3 of OCD, and I'm going to look at -- so
17 19.15.43.9, E3. E3. So in the -- you still are
18 concentrating on the area of review. Now, I do have
19 some suggestions that I really want you to read
20 through that, so that is on the screen, too. Because
21 we've discussed a lot about model assumptions. I do
22 know that you can clearly say, okay, yeah, probably go
23 into the guidance, but you listed some of it in here.
24 So I feel like this one, we have to consider this.
25 And the 4 and then the 3, model documentation and then

1 also the sensitivity and safety analysis, they are all
2 together. So if you can review my Number 3 and then
3 my Number 4 to see if any of them -- if you agree that
4 we should add this to your rule or probably belong
5 somewhere else?

6 DR. SCHNARR: I would just ask for a
7 minute to --

8 DR. AMPOMAH: Sure, sure.

9 MR. EALES: Question for you on just
10 the order. So 3A, there's a Sub I1, 2, and 3. And
11 then this one is jumping to five and --

12 DR. AMPOMAH: No, it started with 4.

13 MR. EALES: Okay.

14 DR. AMPOMAH: Yeah. So look at -- on
15 the screen, so you see Number 4, we assigned it 4, so
16 it would be an addition to that.

17 DR. SCHNARR: I think that these edits
18 are potentially helpful to provide additional clarity
19 on what is required for model documentation. And I
20 don't think it really would add much additional burden
21 because most operators should be doing these things.

22 DR. AMPOMAH: I appreciate that because
23 if you look at it, there's a vast range of things that
24 operators have options to do, and I do feel like with
25 these, we are narrowing it down. So if you can

1 consider -- but I do appreciate the feedback. So if
2 you can consider and then see if you will not agree
3 with me on this?

4 DR. SCHNARR: Yeah. I can see from
5 reading through this that it's definitely very thought
6 through how this would fit into the existing
7 structure. And I -- I think that it would -- these
8 are good suggestions.

9 DR. AMPOMAH: I appreciate that. Then
10 I'll go to the last one. The last one. And the last
11 one, let's think through it in terms of you want
12 your -- the rule that you are putting up, you want it
13 to be more straight than the EPA, so let's look at
14 this one. So I'm looking at Page 12. And we
15 discussed a little bit on this one, so I'm not going
16 to read anything here. So I'm looking at B and C.
17 And I want you to look at my proposed language here in
18 addition to that and see if you'll agree to it. That
19 would be Number 5 on my suggestion.

20 DR. SCHNARR: And I can speak to that
21 one. Hear your point on, in my mind, potential of it
22 being more protected. On this one, after our
23 discussion yesterday, what it really brought home to
24 me in thinking it out -- thinking about it last night
25 is the value, again, of the State having primacy.

1 Because the OCD/UIC group is so
2 familiar, decades of experience with different
3 formations, the area that I work in, Silurian-Devonian
4 in the Delaware, all wells are completed open holes in
5 the Silurian-Devonian Delaware for a number of
6 reasons. One of them being the depth, 18, 19, 20,000
7 foot. And that the open hole zone stays open, so
8 there's -- and I -- I don't know the numbers. We can
9 research this. I believe there's dozens of wells
10 permitted Silurian-Devonian open hole. But I also
11 know from experience that the OCD/UIC Engineering
12 Group would require a cased-hole in some other zones,
13 like the -- the Bell or the Cherry, where they want to
14 see that structure.

15 And then, as was mentioned yesterday in
16 the San Juan, likely other formations require that to
17 be more robust. So it leads me to my thought would be
18 if the director was called upon every time a permit
19 came forward in the Delaware, an area I'm familiar
20 with, there would be a continual request to have the
21 director approve not doing cased-hole in order to
22 minimize the risk of running casing to the bottom of
23 the Silurian-Devonian to 20,000 foot, and the risk
24 that comes along with that and getting stuck or -- or
25 having mechanical problems versus the benefit, again,

1 in my opinion, the minimal benefit of casing to that
2 depth. And I think it would be a recurring question,
3 so my thought would be maybe to adjust the language to
4 "UIC engineering manager" or "UIC engineering" rather
5 than "director."

6 DR. AMPOMAH: I'm good with that.

7 MR. WRINKLE: Yeah. And I -- I think
8 when we're -- when we're saying "director" in these
9 roles, or his -- or his or her designee; right? So
10 I -- I think that would fall upon the UIC manager.

11 So I -- I agree totally with with what
12 Matt's saying. There -- there are instances where,
13 you know, open hole versus cased-hole is accepted. I
14 do think that either in guidance or either in the
15 actual rule, that there could be explanation on what
16 would be acceptable of, you know, the -- the different
17 parameters of -- of the -- of the formation that
18 you're injecting into where we would potentially allow
19 open hole. And then describe at a high level where we
20 would definitely not, you know, where there was issues
21 of clay slippage and whatnot.

22 MR. CHANG: May I quickly jump in here?
23 There's -- I heard you use the word "designee." I
24 looked in the definition of "director" in a few of
25 these places and, you know, out of purely altruistic

1 concern for future hypothetical directors.

2 MR. WRINKLE: Understand the opening.

3 MR. CHANG: I am -- I don't actually
4 see that in here, at least not in the definitions
5 portions. And in fact, there's a couple of places
6 where the director is referred to in the singular,
7 "his or her" capacity. So I'm wondering whether that
8 might be something we could add to the definition to
9 clarify that when "director" is used throughout the
10 provisions here, that we're referring to slightly
11 broader than the singular person.

12 MR. TREMAINE: Chair Chang, I -- if I
13 may? I think this is something that we can address in
14 closing. And we also want to look closely at and
15 explain how this would work in implementation in
16 comparison with other rules that reference -- the
17 statute and the rules reference "director." There's
18 a -- a normal facts to that. But understanding, I --
19 I want to make these future hypothetical directors'
20 lives easier, so I would like to address that in -- in
21 closing.

22 MR. CHANG: Sounds good.

23 MR. TREMAINE: Perhaps address the
24 definition, but we can take that under advisement.

25 MR. CHANG: Yeah. I just wanted to put

1 that on the -- flag that because in certain other --
2 NMAC, for example, it will specifically say the
3 director is defined as the director and/or his
4 designee. So anyway, just wanted to flag that that
5 might -- maybe a little massaging of the -- or
6 wordsmithing of that definition might be helpful.

7 MS. RANEY: If I can interject. Are
8 you referring to -- so looking at Exhibit 2 on page 1,
9 "D," "Director" is defining "means the director of the
10 New Mexico energy, minerals and natural resources
11 department, oil conservation division." So are you
12 suggesting that we add "or designee"?

13 MR. CHANG: I don't want to put
14 specific words in your mouth, but I know that -- I
15 think in the mining -- in NMAC for mining, that's how
16 "director" is defined as comma or designee.

17 MS. RANEY: Or designee.

18 MR. CHANG: I don't know if authorized
19 representatives, staff. There's a potential range of
20 terms that might best capture, so you don't end up
21 with a receptionist, for example, acting on behalf of
22 the director; right? But so, I'm not suggesting any
23 particular words, but yes -- but along those lines
24 somewhere clarifying that the director is not -- maybe
25 slightly broader than that's currently defined. Thank

1 you.

2 DR. AMPOMAH: Yeah. So would you
3 respond to my suggestion?

4 MR. WRINKLE: Yeah. Yeah. I'm sorry.
5 I'm sorry. I -- I though I thought I did.

6 I think that the -- you were talking
7 about cased-hole, non-cased-hold; correct?

8 DR. AMPOMAH: Yes.

9 MR. WRINKLE: Okay. Yeah. I think
10 either in guidance or outlined in the rule would --
11 would help both sides determine in their pre-
12 construction permit deciding, you know, if they're
13 going to run casing that long or, you know, if we
14 wouldn't even consider an open hole.

15 DR. AMPOMAH: Yeah. I do feel like it
16 has to be in the rule because, you know, I had a --
17 like, last night, this was going to -- I mean, Class
18 II was cased. Why is UFCs do have that preference?
19 So if you can look at it and see if we can add it to
20 the Exhibit 3, that would be good. But just look into
21 it.

22 MR. WRINKLE: Yeah.

23 MR. EALES: My only thought -- let's
24 kind of interject here. My only thought is that the
25 Class IIs I'm familiar with are not cased. And again,

1 it's the formational differences some are -- that are
2 in shallow zones.

3 And so the concern I would have in
4 getting very specific in rule would be you could sort
5 of do the same thing in all casing layers and all --
6 all strengths and tensiles and things in rule, which
7 constrains the -- the OCD by doing that. I do think
8 that maybe something along the lines of -- of
9 guidance. I -- I think putting it in there, and also
10 if I was the OCD/UIC engineer manager, and I was
11 starting at all times with -- I had to be -- I had to
12 have a cased-hole in the Silurian-Devonian again, the
13 one I'm thinking of, in -- in all applications.

14 And then I put my neck out there and I
15 say, in this -- this one, I say it's -- it's less
16 risky to do it non-cased and it's viable, it would --
17 it would put me in a strange spot versus just allowing
18 the language to -- which is in here right now stating
19 that "You must" -- "The operator must consider all
20 formations, integrity, and strength tensiles that are
21 necessary for that project specific application." So
22 I -- I would hesitate to just go to one particular
23 area requiring it by rule versus getting it in
24 guidance. I think it's a good place in guidance to
25 say it should be considered strongly. But -- but I

1 think in rule, it just sets a precedent that it'd be
2 hard to back down on. And it's going to happen
3 multiple times, to back it down from it.

4 DR. AMPOMAH: Yeah. So if you can look
5 at it or even suggest a different language, that's
6 fine, too. But I really want to know before we start
7 discussing.

8 Mr. Winkle, this will be the last
9 question I have for the entire panel. You know, I
10 must say that as a commissioner, I'm encouraged to see
11 there are many experts that are supporting the
12 community actually from New Mexico. You know, here
13 working in New Mexico. You know, also living in New
14 Mexico. I mean, was that intentional therefore by OCD
15 to build a New Mexico-based technical team for this
16 important primacy application? And what has that
17 benefit to -- that provide to the State over the long
18 term?

19 MR. WRINKLE: So I -- I think, you
20 know, we have to be -- pick fair of -- of who we -- we
21 contract with, but we -- we can impose different
22 values on experience; right? And I believe I touched
23 on this a little bit yesterday, but with New Mexico
24 being unique, very unique geology, that's going to
25 have more weight than, say, other things. There's

1 other aspects in -- in our daily -- daily life that we
2 would like to migrate more into New Mexico, like on
3 our seismic response areas, consulting, you know, keep
4 it within New Mexico.

5 But yeah, from the get -- from the get-
6 go, the start of this, it was, you know, who has the
7 best knowledge of the Permian and San Juan geology and
8 experience with -- with injection. And -- and it
9 landed right in New Mexico, which future MOAs that are
10 part of the Class VI are -- the -- the weight of that
11 experience, local New Mexico, will -- will be higher
12 than -- than other parts than in -- in the RFI.

13 DR. AMPOMAH: I appreciate the long
14 time that I have spent with you; that has been very
15 fruitful. So thank you to the panel. And I
16 appreciate all your work to support this application.
17 Thank you.

18 MR. WRINKLE: Thank you, Commissioner.

19 THE HEARING EXAMINER: Thank you,
20 Commissioner Ampomah.

21 Commissioner Czoski, do you have
22 questions for the panel?

23 MS. CZOSKI: Yes, I do. Thank you for
24 your time. Appreciate it.

25 I kind of just want to start off

1 with -- I'm just curious. Yesterday in the testimony,
2 someone mentioned that there's already a Class VI
3 permit through the EPA in New Mexico. Can you explain
4 that a little bit? Who is it? Where is it? Just a
5 little bit of background. What stage of the process
6 it's in?

7 DR. SCHNARR: I'll just clarify that
8 it's not actually a permit. It's a permit
9 application.

10 MS. CZOSKI: Okay. Thank you.

11 DR. SCHNARR: I have a little bit of
12 knowledge about it. I'm not sure if you all have
13 more? I -- I know the operator is -- is Tallgrass. I
14 don't have a lot of additional background.

15 MR. EALES: I don't either, other than
16 saying -- as far as I know, it's an application
17 process also.

18 MS. CZOSKI: Okay. Thanks.

19 Oh, did you have something to say?

20 MR. WRINKLE: No. I was just going to
21 add to that -- that that my potential UIC team have
22 been talking with EPA, but we haven't shared any
23 information yet on that application.

24 MS. CZOSKI: Okay.

25 MR. WRINKLE: Yeah.

1 MS. CZOSKI: So what will happen if New
2 Mexico gets Class VI primacy, will that go to the OCD
3 then, or will it stay with EPA?

4 DR. SCHNARR: In our conversations with
5 EPA, they explained how they have gone through this in
6 the past with Texas and Louisiana. And they --
7 essentially, if -- if the application is still in some
8 stage of review, they will provide, like, a briefing
9 package of that -- of their review of that application
10 to, in this case, OCD. And then OCD would take over
11 the review at that stage.

12 MS. CZOSKI: And would they get all of
13 the material that was submitted to the EPA, all the
14 models and everything?

15 DR. SCHNARR: Yes. Thank you, yeah,
16 for clarifying. Yes, they -- that in addition to this
17 kind of briefing package on their review.

18 MS. CZOSKI: Okay. Thank you. I was
19 just curious how that process worked.

20 So I think I'm going to go a little bit
21 opposite of Commissioner Ampomah. I'm going to go
22 through the rules, and some definition questions, and
23 then kind of go into my broader questions after, if
24 that works for everybody.

25 So let's start with Exhibit 1, so Part

1 41. And my first question is in G, "Definitions
2 beginning with the letter 'G'" on page 2, from the
3 definition for "Geologic sequestration." And I'm
4 wondering if the phrase "long-term containment" is a
5 little broad and could be defined better?

6 DR. SCHNARR: I'm sure there's always
7 room for improvement, but maybe -- I don't know if you
8 could provide a little more detail on how you would
9 like to have that additionally clarified?

10 MS. CZOSKI: Well, "long-term" doesn't
11 really say how long. Would that be permanently?
12 Would that be 50 years? Would that be 200 years? I'm
13 just wondering if there could be any clarity on that?

14 DR. SCHNARR: I would definitely take
15 that under consideration. Thank you.

16 MS. CZOSKI: Okay. Thank you.

17 Okay. My next question is on page 3,
18 and it is the definition for "Owner or operator." And
19 I'm wondering if there could be any clarification here
20 with the words "owner," "operator"? I think it might
21 be kind of confusing to the general public.

22 An "operator" is usually somebody who
23 operates on -- operates the well. Or the "owner"
24 could be -- it could be the landowner. It could be,
25 you know, the owner of the facility. I'm just

1 wondering if there could be any clarification, either
2 separate them out into two different definitions or --
3 and this repeats through the -- I think it's in every
4 definition, and throughout the -- the rules, it'll say
5 "Owner or operator," so I think it might be nice to
6 clarify that, if that's possible?

7 DR. SCHNARR: Yeah. Yeah. My
8 suggestion would be to keep the existing text and then
9 add to it some additional clarification to -- to meet
10 your request.

11 MS. CZOSKI: Is this definition come
12 from the EPA?

13 DR. SCHNARR: Yes.

14 MS. CZOSKI: Okay. So would it be
15 possible to clarify it, or?

16 DR. SCHNARR: I think so. I just
17 don't -- I think you could keep the existing text and
18 then potentially add one or two sentences after to
19 provide that clarity on the distinction between owner
20 and operator.

21 MS. CZOSKI: Okay. And then throughout
22 the document, would -- or throughout the rule, would
23 be -- would you change it to be -- "owner or operator"
24 to be just "operator owner" to help clarify that?

25 DR. SCHNARR: I think that I would keep

1 that the same just to reduce any back-and-forth with
2 EPA on this topic and that both entities are
3 regulated. It's just how they viewed this in the
4 past. It may be a legal question that I can't speak
5 to, but I just know that's how they've always framed
6 everything that I've ever done.

7 MR. EALES: Now, I know I'm reading
8 here that it says the -- there's the one subject to
9 regulation under the UIC program, which would only be
10 one entity that would be subject to regulation, I
11 don't think, but -- I don't know if you need more
12 clarity on top of that?

13 MR. WRINKLE: I -- I recall us
14 looking -- looking at this particular definition, and
15 I think Matt is -- is right, is -- the -- the last
16 sentence of that, I think we were okay with that
17 because it identifies whoever is responsible. But
18 point taken, and I think we can take a look at that
19 and give a little bit more clarity because for the
20 public and laymen, it can probably look a little
21 confusing.

22 MS. CZOSKI: Yeah. Thank you.

23 And kind of along those lines, I've
24 noticed in some parts of the rule, it'll say
25 "Permitee" and -- instead of "Operator or owner," and

1 I'm wondering if that should be further clarified or
2 one or the other should be used in all cases?

3 MR. WRINKLE: Yeah, we can -- we can
4 also take a look at that as well.

5 MS. CZOSKI: Okay. Thank you.

6 And just further down on page 3, under
7 the "Definitions beginning with the letter 'S'", I
8 think this might just be a typo, but I see "Subsurface
9 fluid distribution system." Should that be a separate
10 definition?

11 DR. SCHNARR: I -- I noticed that as
12 well. I think you're right. That should be formatted
13 differently.

14 MS. CZOSKI: Okay. Thank you.

15 And then just jumping back up to the
16 definition of "Person," that includes, you know,
17 multiple entities, but including the federal agencies.
18 And I'm just wondering if that conflicts with on page
19 4, A1? It'll say "Any person who requires a permit
20 under the UIC programs." And if a project would
21 happen completely on federal estate, would they need
22 to apply for a permit through this?

23 MR. WRINKLE: So I don't -- just by
24 looking at it briefly, I don't think that that
25 definition contradicts this because I think any of

1 those -- the listed out individuals, can apply for a
2 permit. And I -- yeah, it -- for -- for primacy, it
3 would be the entire state, even the federal area, just
4 like our normal UIC program. But I can double,
5 triple-check that for you to make sure that is the
6 case.

7 MS. CZOSKI: Okay. So if it was
8 completely on federal land, they would have to go
9 through the OCD and not through the EPA?

10 MR. WRINKLE: Other -- yes, other than
11 tribal plans.

12 MS. CZOSKI: Okay. Also with the
13 definition of "Person," I was wondering if that could
14 include limited partnerships, limited liability --
15 limited liability, limited partnerships, and limited
16 liability companies for completeness?

17 MR. WRINKLE: Yeah. We -- we can
18 definitely look into that as well.

19 MS. CZOSKI: Okay. Thank you.

20 MR. WRINKLE: Uh-huh.

21 MR. TREMAINE: Commissioner, may I ask,
22 is that -- we've gotten proposed edits in -- in
23 [inaudible] or comments from the State Land Office, so
24 is that intended to mirror language that's referenced
25 before? I'm just looking for the source language to

1 incorporate for our team to review. If there's a
2 specific example, I would -- I would go back to that.
3 But it's -- if it's new language, I --

4 MS. CZOSKI: I don't believe it's new
5 language, but let me double-check where that comes
6 from.

7 MR. TREMAINE: Okay. I just want to
8 make sure we did -- we used the -- the precise
9 language. I know there are particular types of
10 partnerships that have -- bring concern to the State
11 Land Office.

12 MS. CZOSKI: Okay. Yeah. Thank you.
13 I appreciate that.

14 MR. CHANG: Just for my clarification,
15 you're asking to specify -- we were asking whether it
16 would be a good idea to specify specific types of
17 partnerships. Is that what's --

18 MS. CZOSKI: Yeah. Just to include
19 that into the definition because those -- should be
20 able to apply for.

21 MR. CHANG: Well, of course, that they
22 would -- like, a limited liability corporation is a
23 corporation; right?

24 MS. CZOSKI: I believe that language
25 comes from another -- I'll have to double-check.

1 MR. CHANG: Okay.

2 MR. EALES: I think that was the
3 question I have, is it -- is this partnership and
4 corporations? So you're asking to parentheses of all
5 types of partnerships and all types of corporations,
6 or is the -- are the general terms in the -- in the
7 guidance acceptable?

8 MS. CZOSKI: I think it needs a little
9 bit more clarification, a little bit more detail.

10 MS. RANEY: If I may? It may -- since
11 this is a more broad term referring to partnership in
12 a general sense, making a specific partnership might
13 limit the stringency here, and that might be a
14 stringency concern with EPA.

15 MS. CZOSKI: Okay. But I mean, it
16 seems like there is some areas where we're adding
17 extra, so would this -- if we added this extra in,
18 would that really --

19 MR. TREMAINE: If I may? We'll --
20 we'll take a look. I -- I believe I may know where
21 that other language is from, and so I -- I would agree
22 with the -- the kind of question underlying the -- the
23 Chair's question and the concerns with, you know,
24 lists when you list things out can become considered
25 exhaustive, so we just have to wordsmith that. And I

1 want to make sure the language mirrors. I don't know
2 where we'll land. I -- I need to be able to talk to
3 the team about that, but we can go back to the other
4 rule and -- and see.

5 But to Dr. Schnarr's point earlier, I
6 think adding clarifications in and making sure it's
7 not exhaustive is the -- probably the appropriate
8 drafting approach there. I don't know if it's
9 necessary, and we'll have to speak at length about
10 potential stringency.

11 MS. CZOSKI: Okay. Thank you.

12 Let's see. So also in this, in --
13 let's see. So in H of this, Exhibit 1, on page 7.
14 And I have a question about the term "drilling
15 operations." So it says "If drilling operations have
16 not commenced within the two-year period, the permit
17 shall automatically terminate." And we've -- you
18 know, there have been cases where a company might
19 drill, you know, 15 feet and say, we're having ongoing
20 drilling operations. I was wondering if this
21 "drilling operations" could be further defined to help
22 prevent that from happening.

23 DR. SCHNARR: I think we're just having
24 trouble following where you are in the regulations.

25 MS. CZOSKI: Page 7 and H, "Issuance

1 and effective date of permit," and Number 2.

2 DR. SCHNARR: Excellent. Thank you.

3 MS. CZOSKI: Yeah.

4 MR. WRINKLE: So just reading 2 real
5 quick. Yeah. I don't -- I don't see an issue with
6 further defining that with -- with -- I believe in
7 other areas in our NMAC, we -- or -- or in the
8 internal policy, we have said "Breaking ground with
9 intent to reach the bottom." But, you know, I think
10 we can wordsmith that to where, yeah, you don't go and
11 drill your first string, and then you can then wait
12 five years, so --

13 MS. CZOSKI: Yeah.

14 MR. WRINKLE: That's a good
15 observation. I think -- I think we need to
16 distinguish that.

17 MS. CZOSKI: Okay. Sounds good.

18 Sorry. I have so many papers up here.

19 So let's look at Exhibit 2, which is
20 Part 42.

21 MR. WRINKLE: Okay.

22 MS. CZOSKI: And first, I would like to
23 start with 12, A5. I'll show you where it is, on page
24 12.

25 MR. WRINKLE: Okay.

1 MS. CZOSKI: And in this section, it
2 says, "Proper operation and maintenance" includes
3 effective performance, adequate funding, adequate
4 operator staffing and training, and adequate
5 laboratory and process controls, including appropriate
6 quality assurance procedures." Again, I'm wondering
7 if that could be better defined and who determines if
8 something is adequate?

9 MR. WRINKLE: Do you have -- do you --
10 can --

11 DR. SCHNARR: I can only probably speak
12 to the very last one, which is the quality assurance
13 procedures. Is -- but your question is broader than
14 that.

15 MS. CZOSKI: I mean, you could answer
16 that for now.

17 DR. SCHNARR: There is a quality
18 assurance plan that is required to be a part of the
19 permit application. That is a condition of the
20 permit. It does define in very detail what the
21 quality assurance procedures are for all of the
22 monitoring for the project.

23 MS. CZOSKI: But do you think that
24 should be more guidance in the rule instead of in the
25 permit itself?

1 DR. SCHNARR: I think I'm just
2 talking -- I would probably defer to my other
3 panelists or the OCC.

4 MR. WRINKLE: So operate and maintain,
5 are you -- are you suggesting maybe just a little bit
6 more elaboration on, you know, their equipment
7 operations, the maintenance records, laboratory
8 calibrations, that it would actually be spelled out in
9 the rule rather than -- than what we've reviewed
10 internally?

11 MS. CZOSKI: Yeah. I'm just wondering.
12 "Adequate" seems very broad.

13 MR. WRINKLE: Okay.

14 MS. CZOSKI: Just I'm wondering if it'd
15 be better to do a little bit more clarification?

16 DR. SCHNARR: I think one thing is
17 there could be reference added to the requirement for
18 the quality assurance plan. So that's something we
19 would have to go back and look at. But that that --
20 that is one way of addressing these -- part of this.

21 MS. CZOSKI: Okay. Thank you.

22 MR. CHANG: Can I follow up with a
23 clarification, if you don't mind, Commissioner?

24 MS. CZOSKI: Yes.

25 MR. CHANG: These, and correct me if

1 I'm wrong, Panelists, but these are general conditions
2 that are applicable to all permits. They're not an
3 exhaustive list of conditions; right? So the idea is,
4 and to the extent that we need to look at case -- or
5 that the division would eventually be looking at case-
6 specific applications of these broad principles, there
7 would be specific permit conditions specific to
8 individual permits that would elaborate on what that
9 means, on what these more general terms mean in each
10 particular permit on a case-by-case basis. Was that
11 the -- is that the general gist of what this -- these
12 general conditions are meant to accomplish?

13 MR. WRINKLE: That -- that is normally
14 the case, Commissioner, yes.

15 MR. CHANG: Thank you.

16 MS. CZOSKI: Okay. So let's see on
17 page 14, Number 15. So the sentence "For purposes of
18 this paragraph, temporary or intermittent cessation of
19 injection operations is not abandonment." And this is
20 an area that I also think could be defined better.
21 What do you think that this area could be? Have a
22 time limit rather than having it be open-ended?

23 MR. WRINKLE: Yeah. Just one second.
24 I'll -- I'll go look at the citation that it
25 references to see what the context is.

1 MS. CZOSKI: Thanks.

2 MR. WRINKLE: And are you just --
3 Commissioner, are you just referring to the last
4 sentence in -- in 15 there "For purposes of this
5 paragraph, temporary or intermittent cessation of
6 injection operations is not abandonment"?

7 MS. CZOSKI: Yeah. I think having
8 more -- I'm just wondering if that could leave it to
9 be open-ended to avoid having wells not injecting or
10 not being plugged for a long time?

11 MR. WRINKLE: Okay. So -- so maybe a
12 holistic view of how long cessation takes place?

13 MS. CZOSKI: Yes.

14 MR. WRINKLE: Or can take place.

15 Excuse me.

16 MS. CZOSKI: Yeah. Would that be able
17 to be considered?

18 MR. WRINKLE: I think we can look at
19 that broadly. I don't know if it's -- if -- if that
20 would fit specifically in this, but I but there might
21 be an area where that could be fit into. I -- I would
22 be looking more for, you know -- just thinking ahead,
23 would be, you know, limits on basically what we're
24 calling downtime; right? And justification to go
25 beyond that limit, right, to the -- the OCD. So we

1 can definitely take a look at that.

2 MR. EALES: And I could speak to the
3 Class II program. And in that program, an operator is
4 required to initiate injection within 12 months, or
5 they lose the permits. So we could look at how that
6 might be something applicable with this.

7 MS. CZOSKI: And would it be possible
8 to add in language to limit the amount of time a well
9 would be not actively injecting?

10 MR. WRINKLE: I -- it may. Well, we'll
11 have to -- to do some internal discussion, but it may
12 fall -- fall under the enacted rule already. So that
13 may be covered. But if not, then we can look at
14 some -- maybe some rule additions or --or
15 clarification to -- to make that distinction.

16 MS. CZOSKI: Okay.

17 MR. EALES: And what I would add would
18 be that, in my opinion, the rule was set at 12 months
19 primarily to allow workovers, some things that may
20 take some time to get the well back into operating
21 shape with integrity. So that allows that amount of
22 time and considering the material availability.

23 But, Justin, that's the best way to
24 answer.

25 MS. CZOSKI: One other thing I'd like

1 to ask about is, it seems there are a few places in
2 the rule that have the text "Administrator." And I'm
3 wondering if that needs to be clarified to be director
4 or maybe EPA administrator. I don't know if you could
5 add any clarification on that within the rule?

6 DR. SCHNARR: Yeah. I think that is a
7 good idea to do a word search, but there may be
8 instances where it actually still needs to remain the
9 "EPA administrator," like, in reference to aquifer
10 exemptions or something like that. But I think it
11 certainly could probably use a sweep and just make
12 sure.

13 MS. CZOSKI: Thank you.

14 So on Part 43, which is Exhibit 3, and
15 on the first page for the definition of "Abandoned
16 well," I'm wondering if the term "permanently
17 discontinued" could be better defined? Would this
18 allow an operator to not plug a well for, you know, a
19 long time?

20 DR. SCHNARR: I'll just clarify. I
21 think one way this term is used is in the search
22 during corrective action that you need to search for
23 abandoned wells. So it -- it may not be something
24 that is under the direct control of the operator.

25 MS. CZOSKI: And Number 5 for the

1 definition of "Confining zone." The way it currently
2 reads is that "limiting fluid movement above an
3 injection zone." Would that be possible to change
4 that to "out of injection zone"?

5 DR. SCHNARR: Yeah. I'm giving that
6 some thought. I'm sending through it. I don't think
7 that would be a problem.

8 MR. EALES: I think that would --

9 DR. SCHNARR: Take that under
10 consideration.

11 MR. EALES: I would agree that it's
12 worth considering.

13 MS. CZOSKI: Okay.

14 MR. EALES: So that's considering both
15 the top and the bottom, one and two?

16 MS. CZOSKI: Yes.

17 DR. SCHNARR: Well, that is the
18 clarification that I was kind of mulling over in my
19 head. The Class VI rules actually don't have a
20 requirement in all cases for a lower confining zone.
21 The way you phrased it, I thought was fine. But just
22 to be clear, the base requirements are for there to be
23 a confining zone above the injection zone. And then
24 in cases where you are injecting between or above the
25 lower most USDW, to have a lower confining zone.

1 MS. CZOSKI: Thank you.

2 MR. EALES: And I think just add from
3 Class II experience that OCD does expect a confining
4 zone on the top and the bottom in the application.

5 MS. CZOSKI: Thank you for that
6 clarification.

7 And for again, with the confining zone,
8 so in this -- on this page number 5, and then there's
9 another definition in 9, B4, which is on page 4.
10 Yeah, number 4. And I'm just wondering why those are
11 different?

12 DR. SCHNARR: Which -- which definition
13 again?

14 MS. CZOSKI: For "Confining zone."
15 There's one definition on page 4 and then the other
16 one on page 1.

17 DR. SCHNARR: I believe that the reason
18 why this is structured this way is because it mirrors
19 the federal rules, and the federal rules are
20 written -- sort of organized a little bit differently.
21 And that's where this different definitions-of-area-
22 of-review issue came in. And 43.7 is probably
23 broader. And 43.9, which I think is at page --
24 starting on page 4 -- or page 3 is really what's
25 specific to Class VI. But my understanding, these

1 rules really are only for Class VI.

2 And so I -- my suggestion would be to
3 consider taking the definition, which I like better on
4 page 4, and just using that for -- and -- and removing
5 that -- that issue. So either having the definition
6 once or replacing the definition in the first part to
7 be identical to where it is in the second part. And
8 the -- and the definition on page 4 kind of covers
9 this issue of injection depth waivers that I was
10 speaking to earlier.

11 MS. CZOSKI: Okay. Thank you for
12 taking that under consideration.

13 MR. CHANG: May I follow up? Because
14 that's a really good question. It seems to me you're
15 looking at the applicability here. You've got a
16 definition for the same term, right, "Confining zone."
17 You've got a definition under 19.15.43.7 that's
18 applicable to the entire part. But then you have a
19 different definition that's written here that is only
20 applicable to 19.15.43.9B; right? Because at the top
21 of page 4 there, it says "The following definitions
22 apply to this subpart."

23 So that's a very unusual structure in
24 our NMACs to have the same term, but used differently
25 with it -- I mean, it's not unusual for different --

1 for the same term, but you define differently in
2 various -- in different acts or even different
3 sections of the NMAC. But that is pretty unusual to
4 have two different sets of -- and not just one, but
5 two different sets of definitions, one that only
6 applies to a subpart of NMAC, so.

7 And then I don't know that -- whether
8 or not there's a good reason to do it that way, but
9 you guys might want to help us understand why it's
10 structured that way at some point prior to closing.

11 MR. TREMAINE: If I may? We'll take
12 that under advisement, Mr. Chair, but I -- I just
13 wanted to note that the -- reconciling the CFR into
14 the state legislative drafting, there are certain
15 sections at the beginning of each part that are
16 required, including definitions. So where in the CFR,
17 you may have two different types of applicability of a
18 term, we have to incorporate that in a definition
19 section and the applicability section.

20 So I'm not giving you a final answer,
21 but there is a good reason for it. We're reconciling
22 a very dense CFR with very anachronistic legislative
23 drafting. And that -- that's the reason. And the
24 only reason I'm interjecting is because that direction
25 came from -- out of consultation with the State

1 Records and -- and from legal and -- and not from the
2 technical team.

3 MR. CHANG: Oh, no. I understand.
4 Yeah. And I -- I know the technical team probably
5 can't answer the exact, but help me -- but that's what
6 I'm saying. At some point before closing, I think
7 it'll be fair, and it would be helpful to both -- for
8 all -- all of us here up here to understand, because
9 that is relatively unusual structure for NMAC.

10 Thank you for allowing me to interrupt
11 me like that.

12 MS. CZOSKI: Thank you. I appreciate
13 your input.

14 Okay. Page 3 and Number 3 and the
15 definition of "Well monitoring" up at the top of the
16 page. My question is, why is this only looking at
17 water quality instead of other things that could be
18 monitored in a well, like pressure, temperature,
19 seismic?

20 DR. SCHNARR: As I sit here, I -- I
21 would -- wouldn't know the answer. And I would take
22 it under advisement to broaden that definition if
23 possible.

24 MR. EALES: Yeah, and what I would say
25 on mine, and it could -- could stand some further

1 clarification, but when I read that, that's the
2 monitoring aspect of the Class VI program for water
3 wells. So it's related to water well sampling in the
4 AoR versus the well, but it does say "well." And so I
5 tend to think to say addition to the word "water well"
6 would clarify it. But we can check on that.

7 MS. CZOSKI: Do you think adding
8 another definition for other types of monitoring wells
9 might be useful?

10 DR. SCHNARR: Yes. I would take that
11 under advisement. I'm just -- like we talked about,
12 there's multiple areas where there are definitions, so
13 I just want to make sure it's not already covered
14 somewhere.

15 MS. CZOSKI: Oh. Yes. Thank you.

16 Well, Madam Hearing Officer, I'm kind
17 of at a good stopping point. If we want to break for
18 lunch and I could continue after, if that sounds good?

19 THE HEARING EXAMINER: Certainly, we
20 can do that. Let's come back at 12:45.

21 (Off the record.)

22 THE HEARING EXAMINER: We are back
23 after our lunch break. Commissioner Czoski, do you
24 have additional questions?

25 MS. CZOSKI: Yes, I do. So I'd like to

1 ask a little bit more about staffing at the OCD to
2 review Class VI rules.

3 Mr. Wrinkle, assuming these would go to
4 you?

5 MR. WRINKLE: Hmm.

6 MS. CZOSKI: How big are other state
7 divisions that have Class VI primacy for the EPA, how
8 big are their teams that work on this?

9 MR. WRINKLE: So the ones that I do
10 know about and that I can answer here with -- with
11 some confidence, the -- the team in Texas, I believe,
12 is made up of about 10 to 13 folks. They have, I
13 believe, if they're current, about 15 applications
14 that are in. And if you don't mind, I'll point to
15 Greg for the size of -- for EPA reviewers.

16 MS. CZOSKI: Okay. Thank you.

17 DR. SCHNARR: It's a little hard as the
18 applicants have precise knowledge. But in my
19 impression, I've worked with one other primacy state
20 that my guess would be three to five dedicated
21 individuals. And then in the EPA regions, again, you
22 know, just from providing multiple applications and
23 always working with the same individuals, my
24 impression is that those regional offices may -- may
25 also only have, like, three to five dedicated permit

1 reviewers and writers.

2 MS. CZOSKI: Okay. Thank you.

3 So I noticed that all of OCD's
4 witnesses are outside parties, except for Mr. Wrinkle.
5 And I was just wondering, it'd be interesting to hear
6 from someone on the Class VI team who can talk about
7 the actual day-to-day process and their expertise and
8 what they will actually do to review these permits,
9 especially since it seems like a lot of the modeling,
10 very technical review work might be contracted out.
11 Is there a reason why they couldn't testify?

12 MR. WRINKLE: I -- I think it was more
13 of a logistical timing issue. So we -- we just filled
14 the supervisory position, and we didn't feel that they
15 had enough time to come in and look at all the work
16 that we had already done to come in and give any kind
17 of meaningful answers to -- to any questions. Now,
18 they have caught up tremendously. All the way yet?
19 You know, I'm -- I'm not real, real sure about that.

20 MS. CZOSKI: And I know you gave some
21 of their background yesterday, and I believe you don't
22 need a specialized degree to be a petroleum specialist
23 or a petroleum specialist supervisor. I just was
24 wondering if you could explain some of their
25 educational background?

1 MR. WRINKLE: Sure. Let me find my
2 direct and go over that.

3 MS. CZOSKI: Thank you.

4 MR. WRINKLE: And that is --

5 MR. TREMAINE: Four.

6 MR. WRINKLE: Four. Okay. If you guys
7 find it before me, let me know. Okay. Right here.

8 Okay. So the -- the current supervisor
9 is led by the geologist -- senior geoscientist, excuse
10 me. He also holds a Project Management Professional
11 certificate. I understand that's a globally
12 recognized program with accreditation. Twenty-five
13 years of experience in leadership roles in oil and gas
14 activities, mainly in the San Juan Basin.

15 The petroleum specialist that reports
16 to him is a petroleum engineer and comes from a
17 diverse background of regulatory for the Railroad
18 Commission, and also he was a regulatory specialist
19 for a big operator. And he played a lot of different
20 roles, especially in the industry side, but tracking
21 compliance-related issues, auditing on the -- on the
22 regulatory side as well.

23 The person that is not listed in my
24 direct testimony that will be starting on September
25 12th has a PhD in petroleum sciences, published author

1 on -- on multiple papers. And I -- I believe
2 that's -- that's the most of confident I am without
3 having that in front of me to -- to answer that, but I
4 do know that those to be true.

5 MS. CZOSKI: Okay. Thank you. So do
6 you know what the staff will be looking at as part of
7 these reviews, especially since a lot of the more
8 technical and modeling will be contracted out?

9 MR. WRINKLE: Yeah. So, you know,
10 the -- the good thing about having, you know, rules to
11 go off of, and especially, you know, half of the hard
12 work has been done for us with the implementation
13 manual and the AoR -- AoR review manuals, site
14 characterization things, it -- it's basically you put
15 into place thresholds, parameters, things that you
16 need to to look for. And then of course, it's on the
17 regulatory itself to kind of come up with those
18 internal state-specific numbers, if you will,
19 thresholds, a lower and higher threshold.

20 But, you know, on the -- on the flow
21 chart that I submitted in my direct, that's basically
22 the pre-construction permit. So to go into depth
23 would be a very a -- very long conversation, and I
24 don't have that information in front of me. But, you
25 know, the site characterization is going to be very

1 important and -- and the other steps after that.

2 But basically what I'm saying is
3 they're going to be looking at predetermined guidance
4 factors. Anything that falls outside of their scope
5 will first be looked at for internal experience. And
6 then anything outside of that will be contracted out
7 to specialized contractors.

8 MS. CZOSKI: Thank you. So you said
9 there's still work on some internal guidance that
10 needs to occur to help permit these. Do you think
11 that would be useful to have that guidance more in
12 rule so that it's more clearly stated?

13 MR. WRINKLE: In -- in general terms,
14 when -- when promulgating a rule, you don't want to
15 get too specific because it might limit people in the
16 future, new technologies, findings in the future, that
17 to where you -- you leave it kind of open-ended, but
18 still protectory of -- of what you're trying to
19 protect, i.e., USDWs, et cetera.

20 So you know, there are some places that
21 I think, you know, the conversation has taken us over
22 the last few days where I think we can be a little bit
23 more subscription. But in general, my -- in my
24 experience in -- in what I've been taught since
25 entering regulatory environment about five years ago,

1 is that you want not to be specifically vague, but you
2 want to leave some room for -- for future state
3 scenarios.

4 MS. CZOSKI: Thank you.

5 MR. WRINKLE: Uh-huh.

6 MS. CZOSKI: So I have a question about
7 the contractors. Would those be on a price agreement
8 to review process?

9 MR. WRINKLE: There -- there is a
10 process. Yeah. Oh, I'm sorry. Didn't mean to cut
11 you out there.

12 So there is a process for that. I
13 don't know if that would -- if that would involve a --
14 a price agreement, but, you know, I -- I would
15 probably be involved in -- in reviewing whatever that
16 process entails.

17 MS. CZOSKI: And how often would
18 contractors be reviewed -- how often would they be
19 renewed?

20 MR. WRINKLE: In -- in my experience, I
21 believe that there is a re-upping at a -- at a
22 predetermined rate, like every year, every three
23 years, et cetera. So, you know, I -- I don't know
24 what our procurement people would decide there, but
25 they probably would land somewhere in between the

1 every year to every three-year model.

2 MS. CZOSKI: Okay. Thank you. And I
3 believe previously you said that the funding for these
4 permit positions and any contractors will be coming
5 out of the general fund or grants; correct?

6 MR. WRINKLE: Correct. Yes.

7 MS. CZOSKI: Has the OCD contemplated
8 having a permit fee to help cover some of these
9 expenses and help cover the review of the process?

10 MR. WRINKLE: We -- we've had
11 discussions about it. I don't know if there was time
12 logistically, you know, to -- because you would have
13 to bring that to the legislature body in order to
14 change permitting fees. The only permitting fee that
15 we would be collecting is under statute. And -- and
16 forgive me, I -- I can't quote the actual statute, but
17 it is for fluid injection wells, and it would be a
18 \$500 fee for the APD. And that's after the success of
19 a -- a permit.

20 MS. CZOSKI: Okay.

21 MR. WRINKLE: Excuse me. Let me -- let
22 me clarify that. It's a \$500 fee for the C108
23 application and then another \$500 for the APD if it
24 was on State property.

25 MS. CZOSKI: Okay. Thank you for that

1 clarification.

2 So I have some other questions about
3 records and confidentiality, which I think probably
4 apply best to you. Within the rule, it -- it seems
5 like there are time limits of when data will be held
6 for, and then it can be released after that. And it
7 seems like retaining all of the data and, like, the
8 injection pressures and the composition of the CO2
9 stream, all of that would be very important to keep in
10 perpetuity because, you know, what happens if there's
11 an issue in a hundred years. Is there plans for the
12 OCD to retain that information or make the operator
13 retain that information?

14 MR. WRINKLE: Yeah. So -- so we are in
15 in discussions right now internally about where to
16 house that at first -- in the first place. For very
17 long term, as -- as you bring up, which is -- is very
18 important, you know, to -- to have access to that.
19 We -- we are still deciding if that's going to be a
20 third-party data warehouse or if that's something that
21 we can handle internally.

22 Again, that's -- that's kind of got to
23 go through the procurement process as well. But
24 either/or, I believe the intention is to at least keep
25 the data at a buffer period past the 50-year PISC.

1 MR. EALES: And I could add
2 specifically it spells out ten years after the
3 injection.

4 MS. CZOSKI: Do you think it should be
5 held longer than just ten years, though?

6 MR. WRINKLE: I mean, holding any
7 record longer than what is recommended is -- is always
8 good, in my opinion.

9 MS. CZOSKI: Does the rule say up to
10 ten years, or could it be extended?

11 MR. WRINKLE: I'm not sure. I'd have
12 to find the exact text.

13 MR. EALES: Yeah. The text is on page
14 8 of Section 3. And it says -- this one's all
15 modeling inputs and data used to support has to be
16 retained ten years after site closure.

17 MR. WRINKLE: Does it say "up to"? I'm
18 sorry.

19 MR. EALES: "Up to," yes.

20 MR. WRINKLE: "Up to," yeah.

21 MR. EALES: So that's the minimum is
22 ten years.

23 MS. CZOSKI: Minimum is ten years. Do
24 you think it would be better to increase that time in
25 the rule?

1 MR. WRINKLE: That's something that
2 we -- that we can look at. It would be -- it would be
3 more stringent, so it would be doable. So yeah, we
4 can take note of that and see if -- if New Mexico
5 would rather have a longer retention period.

6 MS. CZOSKI: Okay. Thank you.

7 MR. WRINKLE: Uh-huh.

8 MS. CZOSKI: So there's been some
9 significant discussion about confidentiality. And I'm
10 just wondering how potentially affected people,
11 stakeholders, or, you know, landowners or property
12 owners would be able to make an informed decision
13 about potential damages if they can't see the data.
14 Do you have any thoughts on that?

15 MR. WRINKLE: Yeah. So -- so you know,
16 we -- we have talked about this internally. And I
17 believe our -- our plan is to take some legal
18 resources, look at the statute, look at what -- what
19 is required to be submitted during the different
20 phases of the application, and have operator guidance
21 or just general guidance spelling out for internal
22 review purposes, you know, to make sure that -- that
23 the reviewers in the OCD have a guideline of what they
24 can release and what possibly they couldn't upon
25 request of the applicant. So our -- our goal is to do

1 that sooner than later so we know how to build out
2 those flows in the permitting process.

3 So I -- I know it doesn't answer your
4 question, but it's still -- it's still going to take
5 some statute review by our legal department to
6 determine what those are and are not.

7 MS. CZOSKI: So if someone was to file
8 a protest, would they be able to see that information,
9 the confidential information?

10 MR. WRINKLE: It -- it depends. So
11 right now, and, you know, I'll paraphrase, it -- it
12 basically says that the applicant can claim
13 confidential business information. If it falls under
14 one of the protected categories in our statute that it
15 is confidential business information, then we have the
16 obligation to redact that. So if somebody files a
17 protest, then I would assume that -- that would --
18 that would be redacted. I'm not sure. I think it's
19 more of a legal -- what happens during discovery in a
20 hearing or anything like that, so I -- I couldn't
21 speak to that.

22 MS. CZOSKI: Would an operator be able
23 to say something is confidential if maybe it would
24 have, like, an environmental impact and not share
25 that?

1 MR. WRINKLE: I -- I'm not -- I'm not
2 sure. I would have to look and see if -- if that was
3 under the protected category. I mean, not me, myself,
4 but the legal department.

5 MS. CZOSKI: Okay. Thank you.

6 MR. WRINKLE: Uh-huh.

7 MS. CZOSKI: And as far as reporting,
8 right now, the OCD with other injection wells, they
9 have monthly reporting of their injection amounts. Is
10 that something that the OCD plans to do with Class VI?
11 It seemed like the reporting requirements were more
12 spread out for Class VI?

13 MR. WRINKLE: Correct. Yeah. So we --
14 we are currently visiting with our in-house developers
15 right now about how to be more granular because I -- I
16 believe the rule calls out for more granular reporting
17 time periods. So we are laying that out for a plan
18 forward. And that kind of falls into, okay, are we
19 housing this? Are we going to house it first? Will
20 it be a portal that they report to? Is it going to be
21 a band-aid of a -- of document until we get that built
22 out?

23 But yeah, we -- we are thinking through
24 that of where that's going to be housed, but we are
25 aware that it's -- it's going to be different than

1 other injection wells.

2 MS. CZOSKI: Do you think -- oh, strike
3 that.

4 So there's annual reporting
5 requirements and compliance reporting requirements.
6 Will those be available to the public to see on the
7 OCD website or posted somewhere?

8 MR. WRINKLE: They -- they -- yes.
9 Just like any other thing that is submitted to us
10 that -- that, of course, is not claimed as
11 confidential, will be available to the public. It
12 will most likely, and it could be different, you know,
13 as we work through this process, be in the imaging
14 system on -- on the particular wells' link on -- on
15 our website.

16 MS. CZOSKI: And will reports of non-
17 compliance be shared with people who might be
18 affected?

19 MR. WRINKLE: Those are currently, at
20 least the pre-enforcement notifications, are currently
21 imaged to the well file. As far as, like, a notice of
22 violation or anything that moves through our legal
23 department, I couldn't speak to. I know that there is
24 a process there, but I don't know if that is, you
25 know, public information until it hits a certain point

1 in there in that process.

2 MS. CZOSKI: Okay. Thank you. So the
3 plan is to have a website similar to what the OCD does
4 now for wells with all the well files and injection
5 information?

6 MR. WRINKLE: Yeah. So holistically,
7 what we're going to try to do is use our -- our
8 existing infrastructure as much as that -- as we can.
9 But where the rule dictates that -- that it needs to
10 be different where -- where we have in-house
11 developers that will build to our -- to our needs.

12 MS. CZOSKI: Okay. Thank you.

13 MR. WRINKLE: Uh-huh.

14 MS. CZOSKI: And as far as
15 confidentiality, would the OCD be willing to share
16 data and permit application materials to the State
17 Land Office with BLM if they're affected?

18 MR. WRINKLE: Sure. I mean, as long as
19 it doesn't fall under that -- that category right
20 after -- after the legal review. But anything that
21 comes to us that isn't in that category is -- is
22 public information.

23 MS. CZOSKI: Do you think having some
24 clarification in the rule that some of this data could
25 be shared with affected state agencies or federal

1 agencies might be useful to help clarify that?

2 MR. WRINKLE: If -- if it's needed,
3 I -- I would say. But anything -- and what we're
4 going to try to do is do a more digital footprint
5 rather than, you know, PDFs and -- and such nature.
6 But, you know, it -- I -- I do believe that there are
7 some verbiage and agreements and things like that,
8 that, you know, anything that you do submit to us
9 is -- is public, right, in -- in a database.

10 But if it is needed and -- and your
11 suggestion is, you know, to add that somewhere in
12 there for more clarity, you know, we'll definitely be
13 open to that.

14 MS. CZOSKI: Okay. Thank you. So I
15 think I have a few more questions about compliance
16 issues. Let's see. In 42, which is Exhibit 2. Let
17 me get there. So 42.12. Page 12. So then 12C2 --oh,
18 sorry. That's on the last page, on page 16.

19 MR. WRINKLE: Okay.

20 MS. CZOSKI: So here it says "Any
21 schedules of compliance shall require compliance as
22 soon as possible and in no case later than three years
23 after the effective date of the permit." Do you think
24 three years is too long?

25 MR. WRINKLE: Can you -- can you tell

1 me what subsection?

2 MS. CZOSKI: Oh, sorry. C2, and it's
3 on Page 16.

4 MR. WRINKLE: So when we send out our
5 pre-enforcement notifications, there's a internal
6 deadline or a written deadline on that for 60 days.
7 The -- I think what this text is getting at here, and
8 chime in with anybody else that -- that reviewed this
9 section in more detail, is, I believe, that three
10 years is kind of, like, the last -- like, that's your
11 limit on -- to -- to become in compliance. We are
12 open to tightening that up.

13 MS. CZOSKI: Do you have a
14 recommendation for a stringent that should be?

15 MR. WRINKLE: Well, without, like,
16 it -- so this is a general schedule of compliance, so
17 it would depend on the type of out of compliance. You
18 know, and -- and I just keep using, you know, your
19 sign isn't right, you know, as an example. You know,
20 you -- you can get that done in a month; right?

21 Other things, you know, would require
22 a -- a timeline to be submitted to the OCD for us to
23 approve. So I think even if we did tighten that up
24 to, let's say, one to two years or a number of months,
25 that it would allow the applicant or the operator of

1 that, well, to submit those compliance plans to us,
2 even if it did stretch out. But I don't believe that
3 you could go past the three years because that might
4 create a -- a stringency issue.

5 MS. CZOSKI: Okay. Thank you.

6 MR. WRINKLE: Uh-huh.

7 MS. CZOSKI: And in Part 13, which is
8 also on page 16, is there anything in this rule that
9 will prevent any other person from bringing suit or
10 seeking compliance against any person in violation of
11 the program requirements?

12 MR. WRINKLE: So can -- can you
13 elaborate a little bit on that?

14 MS. CZOSKI: So can somebody who might
15 be affected by the plastics permitting bring suit
16 against the --

17 MR. WRINKLE: Like in the -- like in
18 District Court, or -- or to OCD, or?

19 MS. CZOSKI: Like District Court?

20 MR. WRINKLE: I don't know. Let's see.
21 I'm looking right here.

22 MR. TREMAINE: I don't believe
23 Mr. Wrinkle can answer that question.

24 MS. CZOSKI: Okay.

25 MR. TREMAINE: The -- the text of the

1 rule is not going to trump any statutory rights of --
2 of appeal or -- or complaints. But that's something
3 the best we can address in closing briefings. But Mr.
4 Wrinkle is not able to opine.

5 MS. CZOSKI: Okay. Yeah, I appreciate
6 that being addressed. Thank you.

7 Okay. So I think I would like to jump
8 to USDWs now. And I'm not sure who might be the best
9 to answer these, but feel free to jump in.

10 So is the ultimate goal of carbon
11 sequestration to keep the CO2 within the permitted
12 injection zone?

13 DR. SCHNARR: The objective of the
14 Class VI regulations?

15 MS. CZOSKI: Yes.

16 DR. SCHNARR: Are to be protective of
17 USDWs and that it is a requirement that the fluid
18 remain within the designated injection zone.

19 MS. CZOSKI: So I believe this was
20 discussed yesterday, but isn't the OCD statutory duty
21 to protect oil and rights in New Mexico?

22 MR. WRINKLE: Correct. Yes.

23 MS. CZOSKI: And do you suspect that
24 carbon sequestration will occur in areas of multiple
25 stacked resources, such as helium, geothermal,

1 hydrocarbons, and SDWs?

2 MR. WRINKLE: I mean, they -- they may
3 be permit applications in those areas, but if there is
4 a -- a commercial, provable commercial commodity, in
5 the horizon, then, you know, they're going to have a
6 lot of difficulty getting a permit.

7 MS. CZOSKI: What about not in the
8 horizon? What if higher up, but would still be in the
9 same area as the carbon sequestration?

10 MR. WRINKLE: You mean, like, above the
11 combining zone?

12 MS. CZOSKI: Yeah. Let's say there's
13 an oil reservoir above where the carbon sequestration
14 is happening?

15 MR. WRINKLE: Yeah. Yes. That could
16 potentially be the case.

17 MS. CZOSKI: So do you think if CO₂
18 leaked out of the permitted injection zone, there
19 could be damages to another's oil and gas or helium or
20 geothermal operations, either their actual mineral
21 resource or, like, the wells accessing those mineral
22 resources?

23 MR. WRINKLE: If -- if there was a
24 breach and it did -- it -- it -- well, it depends on
25 the amount, of course. But it -- it does, in

1 potential, have the ability to -- what's the word I'm
2 looking for? Decrease the value.

3 MS. CZOSKI: So do you think if there
4 is that possibility that it needs to be stated more
5 clearly in the rule that the areas should not -- the
6 protected areas should not only be USDWs, but also
7 correlative rights, such as other mineral rights?

8 MR. EALES: I could speak to that. One
9 of the other key points is that number one is to be
10 protective of the USDW. And the second one at the top
11 level is no communication between formations, and
12 that's open to all layers of that depth of that
13 casing.

14 MS. CZOSKI: Do you think that should
15 be repeated more often in the rule because a lot of
16 areas in the rule only contemplate protecting USDWs?

17 MR. EALES: From my viewpoint, at the
18 top level, it just defines the overall goal. And the
19 rest of it does discuss that through the more
20 specified means of how to ensure that, such as the
21 cementing and verifying cement in place. So my take
22 would be, I think it follows fairly logically, but I
23 can see your point that it could add additional, if
24 you wanted, through the -- in the language.

25 MS. CZOSKI: Okay. Thank you. So that

1 kind of brings me to emergency notification. And
2 let's see how -- where this is. One second. Sorry
3 about that. I should write down what this was.

4 MR. EALES: It's on that page, 21.

5 MS. CZOSKI: Oh.

6 MR. EALES: At least the emergency
7 response section.

8 MS. CZOSKI: Thank you very much.

9 MR. EALES: Letter O.

10 MS. CZOSKI: Sorry. Thank you. So in
11 here, it states in Part 1 "As part of the permit
12 application, the owner or operator must provide the
13 director with an emergency and remedial response plan
14 that describes actions the owner or operator must take
15 to address movement of the injection or formation
16 fluids that may cause endangerment to a USDW during
17 construction, operation, post-injection site care
18 periods." So it doesn't make it clear that there's an
19 emergency response for if CO2 leaks to the surface.
20 So does it -- does this rule read that they only need
21 emergency response notification if it's endangering
22 USDW?

23 MR. EALES: Yeah. So my interpretation
24 of that section is -- is part of the permit
25 application, the owner or operator has to spell out

1 how each one of those stages will keep that from
2 happening. So each one will be specific into, again,
3 during construction, we'll -- we're going to drill a
4 certain way, we're going to cement a certain way. And
5 then through the operational stage, here are all the
6 State steps we're doing on a proactive basis. So
7 it's -- it's less of the reactive response versus the
8 planning part in this section. So that's my
9 understanding there.

10 And if you don't mind reiterating your
11 question for what to do, how -- how to respond to CO2
12 in a reactive situation; is that right?

13 MS. CZOSKI: Yes. So if -- if CO2 is
14 leaking onto the surface, will that be an emergency
15 response and make sure people are notified?

16 MR. EALES: Yeah. At that stage, if
17 it's leaking on surface, the earlier sections already
18 has a requirement for immediate cessation of injection
19 to stop the source and to react if there is a leak on
20 surface also. So the response section is what to do
21 if you have it on surface, more from an environmental
22 health safety response standpoint and less from a well
23 construction standpoint. And -- and again, the
24 immediate response that's dictated is to stop
25 injection immediately.

1 MS. RUSHING: Doctor, I'm so sorry to
2 interrupt you. So I'm going to object to that
3 characterization of the rule. We don't believe that
4 there's a part of the rule that requires immediate
5 cessation of injection if there is a surface leak.

6 MR. EALES: Yeah. If there's -- so if
7 there's a surface leak, you have a USDW in between the
8 injection zone and the USDW. So if an operator is
9 aware of -- number one, if an operator has concerns
10 that there may be impact to the USDW, which is below
11 the surface, they must notify and be an investigation.
12 But if there's knowledge that there has been a leak to
13 the surface or -- or through the USDW, at that point,
14 you have to -- even before the surface, you have to
15 cease injection.

16 MS. RUSHING: Can you -- I'm so sorry.
17 I know, I'll stop. Is that in the rule itself?

18 MR. EALES: Yes, it is.

19 MS. RUSHING: What section?

20 MR. EALES: Let me find that.

21 MS. RUSHING: Sorry.

22 MR. EALES: It's under the operations
23 section, I believe. Yeah, it'll take a little time to
24 find it, but I know it's there.

25 MR. TREMAINE: Page 14.

1 MR. EALES: Yeah. And that's on a
2 shutdown. "If there's a lack of mechanical integrity,
3 you may need to cease injection."

4 THE HEARING EXAMINER: Are we good?

5 MS. O'GRADY: Just to clarify, that
6 would be an implied -- an implied reading under that
7 provision in 19.15.43.9I6?

8 MR. CHANG: Are you testifying,
9 Counsel, or?

10 MS. O'GRADY: That's a question.
11 That's a question.

12 Right. So it says "immediately cease
13 injections," but --

14 MR. EALES: Yes.

15 MS. O'GRADY: For lack of mechanical
16 integrity but -- okay. But not if there is surface
17 leak, just -- they're the same. Never mind.

18 MR. EALES: Yeah. So any impact -- so
19 to clarify a little bit more, I think that's a good
20 question. So mechanical integrity is defined as the
21 assurance that you have a barrier from the tubing to
22 the outside of the casing. So if you know or if you
23 have concern that you have lost -- so that the tubing
24 going through the center of the casing, if you no
25 longer have mechanical integrity, that's well before

1 something on the surface. You -- you know that
2 there's a loss in a barrier in the tubing as well as
3 the casing, and it could be coming to surface or
4 possibly could come to surface. So at that point,
5 you're required to cease operations. So that's even
6 before known loss to the surface.

7 MS. O'GRADY: Okay. Thank you so much.

8 MR. EALES: Yeah. Thank you.

9 THE HEARING EXAMINER: All right.
10 Commissioner Czoski, would you like to resume your
11 questions?

12 MS. CZOSKI: Yes. Thank you.

13 So this is kind of along the same
14 lines. In 19.15.43.9, so the same area, but Part 0,
15 which is on 21. Oh, I'm sorry. This is a different
16 area. This is about the 24-hour -- when there needs
17 to be 24-hour reporting. So "The permittee shall
18 report any non-compliance which may endanger health or
19 the environment, including" and again, in here, it
20 just says "any monitoring or other information which
21 indicates the contaminant may cause an endangerment to
22 USDWs or any non-compliance with a permit condition or
23 malfunction of the injection system, which may cause
24 fluid migration into or between USDWs." That doesn't
25 specify leaks to the surface. And I'm wondering if

1 that should specify leaks to the surface?

2 MR. EALES: Can you -- which -- which
3 section is that again?

4 MS. CZOSKI: Yeah. I'll look.

5 MR. EALES: Are you on Number 303,
6 ABCD?

7 MS. CZOSKI: It's in the reporting
8 section. I'm sorry. It might be in a different spot.

9 MR. EALES: Oh. Well, first, what --
10 what I'll respond to while I'm on that one is O, 3A,
11 B, C, D is "If the owner or operator obtains evidence
12 that the injected carbon dioxide stream and associated
13 pressure front may cause endangerment to a USDW, the
14 owner or operator must, A, immediately cease
15 injection." And again, that's, to my earlier point,
16 that the USW is even before the surface. So -- and if
17 an operator were concerned at -- surface, there would
18 be a concern immediately at the USDW. And then they'd
19 have to take all the steps, notifying 24 hours,
20 identify and characterize the release.

21 So which page are you on now?

22 MS. CZOSKI: I have a question.

23 MR. TREMAINE: If -- if I may? Just
24 for the record, Mr. Eales responded about a different
25 section. If you could just identify for the record --

1 because you said the section and subsections, but if
2 you can give the exhibit and page number so we can
3 know where your answer came from.

4 MR. EALES: Yeah. Thank you. So
5 19.15.43.03A.

6 MS. CZOSKI: Thank you.

7 MR. EALES: Uh-huh.

8 MS. CZOSKI: Couldn't there be a case
9 where CO2 might leak to the surface and not endanger a
10 USDW?

11 MR. EALES: I think that would be a
12 very rare event. The only way I could see that
13 happening would be, you know, possibly up to the
14 casing, the internal casing, or a cementing issue in
15 USDW, which would be very rare if that were to
16 transport, but not endanger the USDW. So I I think if
17 you were to add that loss, you would associate it to
18 endangering the USDW. But I could see -- I mean, I
19 don't actually see a downside with adding the -- the
20 verbiage surface to this; right?

21 DR. SCHNARR: Yeah. I'll just add to
22 that, that I can understand the scenario that you're
23 speaking to. And it may make sense to add that. It
24 just it may be a legal determination of what the
25 statutory authority is. It's the only thing I would

1 add to that. So that would be something we would need
2 to check.

3 MS. CZOSKI: Okay. Thank you. I'd
4 appreciate you checking on that.

5 And how is the area where there needs
6 to be an emergency response ready to go? How is that
7 area defined?

8 MR. EALES: I can respond. It's within
9 the area of review and the activity itself.

10 MS. CZOSKI: Okay.

11 MR. EALES: So again, yeah, where
12 the -- it might endanger the USDW, which would then
13 fall back to within the area of review.

14 MS. CZOSKI: Okay. And --

15 MR. EALES: And -- and again, I'll
16 reference it's 19.15.43.01.

17 MS. CZOSKI: Thank you. So CO2 is
18 heavier than air; correct?

19 MR. EALES: Yes.

20 MS. CZOSKI: So what if there is a leak
21 of CO2 at the surface, and what if it migrates into an
22 area of lower elevation that might not be within the
23 area of review?

24 MR. EALES: I think that's a good
25 point, that it could possibly, if there was a leak

1 that would extend past that and then settle into a low
2 area, then -- and no wind conditions moved on, it
3 could create a risk.

4 DR. SCHNARR: I'll just add that the
5 answer to your question about the area that is covered
6 is somewhat project specific and would be defined in
7 the project's emergency and remedial response plan, so
8 I would look at the area review as a minimum. But the
9 director would have the discretion working with the
10 applicant to define a -- a separate area.

11 MS. CZOSKI: Would there need to be
12 modeling done to help understand where CO2 might
13 migrate on the surface?

14 MR. EALES: So you're talking about the
15 question related to, like, air dispersion modeling?

16 MS. CZOSKI: Yes.

17 MR. EALES: You know, I know that
18 that's not a common thing for other types of releases
19 as far as methane or other types of sources. So it
20 could be done, but typically it's not done to define
21 an emergency response plan for areas.

22 MS. CZOSKI: Do you think that should
23 be something that's included?

24 MR. EALES: I'm not sure in this
25 situation -- do like to point that you -- you need to,

1 in your creating that plan, understand low-lying areas
2 or low-wind areas to anticipate that. But in my mind,
3 air dispersion modeling for air permitting purposes
4 gets into a lot of complicated analyses that wouldn't
5 necessarily be as helpful as just an -- basic
6 understanding of physics and where there may be a low
7 area where there may be pockets to consider, would be
8 my thoughts. I don't I think it's it would be -- it'd
9 be the -- the incorrect tool for the goal that we
10 would be willing to achieve.

11 MS. CZOSKI: Do you think there should
12 be some text in the rule saying that the emergency
13 response area should be project-specific and not just
14 be the area of review?

15 MR. EALES: I need to read through;
16 make sure I'm not missing something.

17 MS. CZOSKI: Okay. Thank you.

18 MR. EALES: And I tend to lean towards
19 that being prescriptive below what's there now in
20 reading you need to do -- again, identify the chain of
21 command, well-related issue we talked about earlier.
22 But I can't see how that would be a negative to have
23 that rule. But I can see it either in guidance or in
24 the rule to ensure just one more layer of specificity
25 to do that such specifically. I think my -- when I

1 read it, that's my understanding of what the intent
2 is. But if it's not clear that something should be
3 considered to make it more clear.

4 MS. CZOSKI: Okay. Thank you.

5 And I know this was brought up by a
6 couple other witnesses in the testimonies, but do you
7 think that there should be buffers around schools, or
8 towns, or anywhere where there are a lot of people to
9 help minimize potential environmental and human health
10 safety hazards?

11 MR. WRINKLE: I think that any buffer
12 around sensitive areas is a -- is a good idea.
13 Currently, I -- this -- it's a legal determination, I
14 believe, that our authority for sites or siting is --
15 is limited. So currently in oil and gas permitting
16 and any other permitting, we -- we rely on local
17 municipalities, whatever their regulatory guidance is
18 there.

19 MS. CZOSKI: Do you think it would be
20 helpful for the OCD to provide maybe maps showing
21 where Class VI permitting is maybe more likely to
22 occur?

23 MR. WRINKLE: I don't know if our
24 interpretation would be -- I mean, we can make
25 informed decisions with -- with the experts; right?

1 But I -- I don't know if that's our place really to --
2 to put out there.

3 MS. CZOSKI: Okay. Thank you.

4 I guess kind of on the same vein as
5 talking about leaking to the surface, can you remind
6 me, is air measurements for CO2 leakage mandatory at
7 the wellhead?

8 DR. SCHNARR: I would actually probably
9 prefer to find the exact testing and monitoring
10 section where -- where this is covered, so -- and do
11 so fairly quickly. It's on Exhibit 3, page 16. It
12 says "The director may require surface air monitoring
13 to detect movement of carbon dioxide that could
14 endanger a USDW, including in oil and gas fields for
15 other areas with a high density of legacy wellbores."
16 So it's up to the discretion of the director. It's
17 not required in all cases, to answer your question.

18 MS. CZOSKI: And again, it sounded like
19 it was only to monitor for dangers to USDWs. Is that
20 how the rule reads?

21 DR. SCHNARR: That is what the text of
22 the rule says.

23 MS. CZOSKI: So do you think that
24 should include not just endangerment to USDWs, but
25 also at least to the surface?

1 DR. SCHNARR: I would have the same
2 answer. I -- I say potentially, yes, subject to a
3 legal review of the statutory authorities.

4 MS. CZOSKI: Okay. Thank you.

5 And -- okay. Let's see. So in
6 19.15.43.9K, so this goes into some of the testing and
7 monitoring requirements. For Part 1, it says that the
8 "Analysis of the carbon dioxide stream with sufficient
9 frequency to yield data representative of its chemical
10 and physical characteristics." And I'm wondering what
11 sufficient frequency means and if that should be
12 better defined?

13 DR. SCHNARR: In this case, that is not
14 defined in the rule, and it would be a project-
15 specific determination that would be part of the
16 applicant's testing and monitoring plan and would be a
17 condition of the permit. It would be ultimately up to
18 the director or his or her designee to define that in
19 the final permit conditions.

20 MS. CZOSKI: In some of your experience
21 looking at other permits, how often is that actually
22 happening?

23 DR. SCHNARR: I would say quarterly
24 would be the first thing that comes to my head for a
25 detailed compositional analysis. There are some

1 projects that actually have continuous injected
2 monitoring for more limited suite of -- of -- in
3 addition to a quarterly laboratory analysis.

4 MS. CZOSKI: Do you think there'd be a
5 time where not test -- testing it yearly, so quarterly
6 would be the best option, or do you think quarterly is
7 the best option?

8 DR. SCHNARR: I just didn't quite hear
9 the first phrase of your question. Can you just --
10 I'm sorry. Repeat the question.

11 MS. CZOSKI: Is there a time where
12 maybe you'd want to monitor annually instead of
13 quarterly?

14 DR. SCHNARR: Less frequently?

15 MS. CZOSKI: Yes.

16 DR. SCHNARR: I -- I really think
17 this -- the reason why I would see this as project
18 specific is there are some operations that are taking
19 CO2 from multiple facilities into a common pipeline.
20 There's a higher chance that -- that variability of --
21 of the -- injected would change frequently.

22 If it's the same plant producing the
23 same gas over time, I can see over after a few years
24 of monitoring, it being the same every quarter.
25 There -- there may be the need for some flexibility to

1 move to an annual sample.

2 MS. CZOSKI: So doing quarterly, just
3 in the rule, just saying quarterly testing, you don't
4 think -- you don't agree with that?

5 DR. SCHNARR: No. I -- I would agree
6 with it as written that that is something that should
7 remain flexible in the rule. But ultimately, we -- a
8 permanent condition for each individual project.

9 MS. CZOSKI: Okay.

10 MR. EALES: And I would -- I would add
11 to that from experience as well, that you'll have some
12 situations in which it's one stream, it's one process,
13 and it doesn't change for years. And you'll have
14 others that will have different sources of CO2 that
15 would change more frequently, and it needs to be
16 adjusted accordingly.

17 MS. CZOSKI: Okay. Thank you.

18 And I know this was brought up
19 yesterday, I think, about soil CO2 monitoring. And
20 why is that not required?

21 DR. SCHNARR: Just to clarify, it
22 actually is required. So it's not required in the
23 federal rule. That's an area of increased stringency.
24 And I'm pointing, again, to Exhibit 3, page 16, Number
25 8 "Soil gas monitoring is required to detect movement

1 of carbon dioxide that could endanger a USDW."

2 MS. CZOSKI: So again, I -- just
3 pointing it out again, that it's only for USDW, that
4 it can endanger USDW and not that -- not at the
5 surface.

6 DR. SCHNARR: That is the text of the
7 regulation as written. The proposed regulation.

8 MR. EALES: And the intent of the way
9 it's written is that it is required to detect women.
10 So it is something we did is more robust to require
11 soil gas monitoring.

12 MS. CZOSKI: And how often would that
13 need to occur?

14 DR. SCHNARR: Again, that's not defined
15 in the regulation as proposed. So that would be a
16 project-specific determination in the testing and
17 monitoring part.

18 MS. CZOSKI: And how would -- would
19 there be -- I think I remember you mentioning this,
20 that there are some baseline measurements that need to
21 occur before?

22 DR. SCHNARR: That is not a -- a
23 regulation requirement as written, that there would be
24 a baseline monitoring. In practice, I think you --
25 but the operator would also really want that baseline

1 data so they have something to compare against in the
2 future. So it's not baseline -- sorry. It's not a
3 rule requirement, but I do think it could be a
4 permanent condition, and in practice, I do believe
5 there would be baseline data that would be collected.

6 MS. CZOSKI: Okay. Thanks. And I
7 guess how long do you think that baseline data should
8 be collected for?

9 DR. SCHNARR: I would really leave that
10 to be project specific, and I would be hesitant to
11 mandate a -- a lengthy baseline monitoring period. So
12 I would leave that to be project-specific.

13 MS. CZOSKI: Does CO2, the amount,
14 just, like, naturally in the background, does it
15 change with the season depending on the vegetation?

16 DR. SCHNARR: It does, yes.

17 MS. CZOSKI: So it'd probably be
18 prudent to ask for a longer baseline of CO2
19 measurements; correct?

20 DR. SCHNARR: Well, there is some
21 seasonality to CO2 measurements, as both Mr. Eales and
22 I have actually been in the field doing this, I would
23 say, though, that the operator would have another
24 option of collecting soil gas data outside the area
25 review as another measure of an area and seasonal

1 fluctuation that's not potentially impacted by the
2 project. That also may be more relevant because those
3 things can also have long-term trends. So 13 years
4 into a project, I -- I may prefer that than looking at
5 something from a long time ago. So that's one reason
6 why I would leave that flexibility, though, to that.

7 MR. EALES: And what I would add is you
8 referred to it earlier in earlier testimony, it would
9 likely -- baseline would likely begin after a permit
10 is issued. An operator wouldn't want to start that
11 not knowing if they were to have a permit. So then at
12 that point, you have a two-year time period to get the
13 well. And so I would say somewhere within two years.
14 I totally agree with what Greg's saying. It's going
15 to be very dependent upon the situation, access, and
16 the area itself.

17 But, like you said, we both have this
18 experience, and it's very interesting to see the
19 seasonality of how much CO2 is in the soil in winter
20 versus summer, all those seasons. So you want to get
21 that trend line going as early as possible. To his
22 point earlier, everybody involved benefits to begin
23 that. So then you can identify if there's any
24 variation or anomalies.

25 MS. CZOSKI: Okay. Thank you for that.

1 So in Part 10 on page 16 is talking
2 about seismic monitoring. And I guess, kind of again,
3 you know, New Mexico -- or the seismic network in New
4 Mexico has areas where there are not seismometers to
5 understand the baseline of seismic data, especially in
6 areas not in the Southeastern part of the state. Is
7 part of characterizing the seismic, understanding the
8 baseline seismicity, and would that be required to be
9 monitored before the injection starts?

10 MR. EALES: Yeah. So that, again,
11 would follow a similar path. In my experience with
12 the permitting process now, and would see it going the
13 same way with this requirement, Number 10, the -- the
14 permit conditions require a seismometer specific to
15 that project. But you would, again, would not install
16 that until after the permit was received, typically.
17 And then you would have those -- that two years of
18 baseline from that seismometer. But also you -- it's
19 very important to understand what's happening with the
20 other area seismometers to be able to triangulate and
21 understand that, the baseline.

22 I do know in the permitting phases,
23 it's one of the things that's due earlier, the seismic
24 has to be considered as part of your permitting
25 process, which also gives you some of that baseline

1 from a general standpoint. But once permitted and in
2 your conditions, then it's specific to your own
3 operation in -- in gathering that data.

4 MS. CZOSKI: So if they waited to start
5 monitoring for seismic for when the permit started,
6 what if they are able to drill and get the project
7 going within a few months? That wouldn't be very much
8 of a baseline?

9 MR. EALES: I think that's a good
10 point. I think it's just the nature of the conditions
11 of ensuring that you have that permit first. But then
12 you also have a fairly broad array of seismometers in
13 New Mexico, especially in these areas that we're
14 talking about. They're putting more and more in, but
15 it's not -- my knowledge of the areas that we're
16 talking about, there's there's good data that's coming
17 in that can provide a good baseline.

18 DR. SCHNARR: I'll just add that on
19 this end, the soil gas, there is the opportunity for
20 clarifying some of this through guidance.

21 MS. CZOSKI: Do you think it should be
22 more clarified in the rule, though, rather than
23 guidance?

24 DR. SCHNARR: I think the reason
25 guidance has the -- some advantage is that there's

1 some additional flexibility there. And in my
2 experience, there is discussion of -- of baseline
3 fluid sampling in the EPA guidance that I think is
4 helpful. And these are just two areas that are kind
5 of more stringent in the New Mexico rule. And so I
6 may defer to OCD, but I -- I would -- I'd just like to
7 point out that there is an opportunity to provide some
8 clarity on the baseline monitoring guide.

9 MS. CZOSKI: Thank you for that.

10 So what actually is required? Is it
11 just seismometers per injection well?

12 MR. EALES: It doesn't specify, but it
13 does say that it does have to occur. So likely that
14 would be -- the outcome would be one and a half well.

15 MS. CZOSKI: How can you properly
16 locate earthquake location or understand the focal
17 mechanism of what type of earthquake it is with just
18 one seismometer?

19 MR. EALES: Yeah. And I think that's a
20 good point and a good question. And -- and it's the
21 difference between detecting seismic activity or
22 triangulating an epicenter. And that seismometer is
23 detecting activity, but its purpose in itself and by
24 itself is not to triangulate the epicenter of an
25 event. In my experience, when there has been a

1 seismic event, all of the seismometers, including this
2 one, would be part of the public database that then
3 informs the triangulation of that epicenter. So to be
4 very clear, the purpose of this section is to get a
5 sense of seismicity, but not triangulation.

6 MS. CZOSKI: In Part 10 of the rule, it
7 does say that the "seismic monitoring program must be
8 capable of detecting and characterizing induced
9 seismicity." Do you think one seismometer is enough
10 to characterize induced seismicity? In

11 MR. EALES: My experience, one is not.
12 But then the system that it's with, yes. But --

13 MS. CZOSKI: What if --

14 MR. EALES: I'll pass that to any
15 member of my team.

16 MS. CZOSKI: What if it's in an area
17 where there's not existing seismometers? Do you think
18 there should be stricter monitoring -- seismic
19 monitoring array guidelines in the rule?

20 MR. EALES: I actually think -- to the
21 point that something that Greg said earlier, I like
22 that -- within a guidance document, I think that's
23 where you could spell out that as an operator or as
24 OCD, ensure that there is the ability to have the
25 ability to meet this. And -- and that could be

1 yourself placing more or using the -- the State
2 system.

3 MS. CZOSKI: But if there's not clear
4 guidance about how many seismometers need to be
5 included, you can't properly characterize a rule --
6 characterize events, so how can that be in guidance?
7 Would that need to be in the rule?

8 MR. EALES: Yeah. I think I go back to
9 my earlier testimony that OCD is approaching primacy
10 with -- with its knowledge and skillset and getting
11 into the level of detail of seismicity and
12 triangulation, and these -- that's a -- that's why the
13 OCD historically and currently refers and -- and leans
14 to the Bureau of Economic Geology for how they would
15 approach it and use new technologies to be able to
16 achieve the goal, but not with OCD. And in my view,
17 again, stepping out and portraying themselves as a
18 seismicity triangulation expert and getting it in that
19 level of detail.

20 MS. CZOSKI: I'm sorry. Did you say
21 the Bureau of Economic Geology?

22 MR. EALES: Yeah. Bureau of Economic
23 Geology, New Mexico Tech, the State seismologists.

24 MS. CZOSKI: Oh, the New Mexico Bureau
25 of Geology?

1 MR. EALES: Yes.

2 MS. CZOSKI: Okay. Thank you.

3 And if there's a seismic event, does
4 that cause automatic shutdown of the injection?

5 MR. WRINKLE: So under our current
6 protocols, we have different SRA areas, and it depends
7 on the distance from the epicenter. And we are using
8 the State geologists' epicenters now, and it shows a
9 50 percent reduction depending on distance; right? So
10 you -- you've got 25 percent, 50 percent, and then a
11 shut-in, and depending on magnitude as well.

12 But specifically laid out in the rule,
13 no. It -- it -- I think it points to the current New
14 Mexico SRA guidelines.

15 DR. SCHNARR: The project's emergency
16 remedial response plan would list out a very detailed
17 response to earthquakes of different magnitudes.
18 Typically, there's a very detailed table that provides
19 response actions for earthquakes of different
20 magnitudes.

21 MS. CZOSKI: And how -- let's say that
22 there is a Class VI injection well in an area that
23 doesn't have an existing seismic array. And would you
24 expect the Class VI operator to be able to locate an
25 earthquake within a certain time period and understand

1 it to -- understand if it's tied to the Class VI? Is
2 there, like, a reporting requirement for that?

3 MR. EALES: I would say that -- that if
4 there was an initial seismic event in which it was
5 detected with that seismometer, and it was known, and
6 to these points, there's obligations in New Mexico
7 through the seismic response to notify OCD and loop
8 them in, I would say at that point, the normal
9 response I would expect is the -- an array being
10 placed or -- or basically further actions being placed
11 to determine what that -- what it was and -- and
12 investigate where that did come from.

13 And I know from experience in talking
14 to what Justin was referring to earlier, that's --
15 that's been something New Mexico has been extremely
16 good at. It's why New Mexico has so many fewer
17 seismic events, in my mind, in my opinion, than Texas.
18 When you cross the border, is there's immediate
19 response, immediate notification requirements, the
20 operators know they need to engage. And the OCD at
21 that point looks at the different wells in the area
22 and will ask individuals to bring down and -- and try
23 to triangulate and resolve that problem.

24 So I think it's a skill set that OCD
25 has shown themselves as being very adept at in

1 conjunction with the New Mexico BEG. So I guess long
2 answer, but I would expect that were that particular
3 situation would happen, which would be rare, there
4 would be a response to investigate.

5 MS. CZOSKI: And what would happen if
6 there was a Class VI well injecting into the same zone
7 as an SWD well, and there was a seismic event?

8 MR. EALES: Yeah, very similar to what
9 I was explaining. If you had multiple wells, which is
10 what OCD is familiar with, is you have a seismic event
11 at some epicenter, you look at all injection wells in
12 the area. There are permitted volumes of permitted
13 pressures and the records of their most recent
14 injection, and begin to -- and provide the zones, deep
15 or shallow, to try to triangulate where that epicenter
16 occurred, and -- and then take action from a wisdom
17 standpoint to kind of laser it in on where the problem
18 is.

19 MS. CZOSKI: Okay. So one more
20 question for this part. In Part 12, also on page 16,
21 it says "The owner or operator shall periodically
22 review the testing and monitoring plan." How often is
23 periodically?

24 DR. SCHNARR: I'm just going to read
25 the whole paragraph.

1 MS. CZOSKI: Okay.

2 DR. SCHNARR: It -- it states here on
3 page 16 of Exhibit 3 "An initial review of the testing
4 and monitoring plan shall occur two years after
5 injection begins, and at no time may exceed four
6 years."

7 MS. CZOSKI: Do you think --

8 DR. SCHNARR: It -- it also says,
9 "Amended plans or demonstrations shall be submitted
10 within one year of an area of review reevaluation." So
11 it's also tied to that review cycle. And then it goes
12 on to list other conditions in Parts 12 A, B, and C.

13 MS. CZOSKI: Remind me, was this an
14 area that is New Mexico specific for?

15 DR. SCHNARR: Yes, this is an area of
16 increased stringency compared to the federal rule.

17 MS. CZOSKI: Okay. Thank you.

18 Madam Hearing Officer?

19 THE HEARING EXAMINER: Yeah.

20 MS. CZOSKI: Would it be possible to
21 take a break at this point?

22 THE HEARING EXAMINER: It would. It
23 would. Let's see. It is 1:55. Come back at 2:10.

24 (Off the record.)

25 THE HEARING EXAMINER: Let us come back

1 from the break, please.

2 Commissioner Czoski, do you have
3 additional questions?

4 MS. CZOSKI: Yes, I do.

5 So I want to get into something that
6 hasn't been discussed too much, which is exempted
7 aquifers. And that is in 19.15.43.8.

8 MR. CHANG: Can you repeat that for me
9 just real fast?

10 MS. CZOSKI: Yeah. 19.15.43 and number
11 eight.

12 MR. CHANG: page 3; is that correct?

13 MS. CZOSKI: Yes. Thank you. Sorry
14 about that.

15 So who makes the determination if a
16 reservoir should be exempted or an aquifer?

17 DR. SCHNARR: My understanding is
18 ultimately that decision remains with the US EPA
19 regional office, in this case, Region 6, but they do
20 incorporate feedback from local entities, in my
21 experience.

22 MS. CZOSKI: So the OCD won't be
23 deciding where there might be a possible mineral
24 resource, such as oil and gas or geothermal?

25 DR. SCHNARR: I don't have a ton of

1 experience with the aquifer exemption process once you
2 start working with EPA, but it is my understanding
3 that the ultimate decision of -- of whether or not to
4 grant an aquifer exemption is with EPA. But I would
5 note that new aquifer exemptions are not allowed under
6 the Class VI program. And the only way that an
7 aquifer exemption would become relevant is if there's
8 a previous aquifer exemption for a different oil class
9 and, more specifically, Class II. And EPA, in their
10 framework, does allow for expansion of an existing
11 aquifer exemption if it was for a project that was
12 previously injecting CO2 for Class II and now wants to
13 expand into a Class VI project.

14 MS. CZOSKI: So how would if -- let's
15 say if there is an aquifer that the OC thinks should
16 be exempt, how would they bring that up to the EPA?
17 If there's, like, a New Mexico-specific thing, like a
18 geothermal aquifer?

19 DR. SCHNARR: I can speak to this
20 unless there's someone else on the panel with more
21 experience. In my experience, it's the operators that
22 typically come in for aquifer exemption application.
23 Though I have seen where the EPA has at least
24 solicited comment from the State during the decision
25 making on that.

1 MS. CZOSKI: So if there was, let's
2 say, like a geothermal operator, they would have to go
3 to the EPA to try to protect their aquifer.

4 DR. SCHNARR: Oh, okay. I'll just back
5 up a little bit. An aquifer exemption would allow for
6 injection into what would otherwise be an underground
7 source of drinking water. So when I said an operator
8 would come in for an application for an aquifer
9 exemption, they would be the party that is attempting
10 to inject into a potential USDW.

11 Just to be clear, if -- if it's an
12 entity looking to protect groundwater, that would not
13 be through the aquifer exemption process, is my
14 understanding.

15 MS. CZOSKI: Sorry. I'm just looking
16 through that.

17 DR. SCHNARR: Sure. Yeah.

18 MS. CZOSKI: So right now, an exempted
19 aquifer could also be a mineral hydrocarbon or
20 geothermal producing area; correct? That's -- mustn't
21 be, is that what the rule says?

22 DR. SCHNARR: That may be a reason for
23 a -- or one consideration in an aquifer exemption
24 application or approval. I might want to read through
25 the -- the text you're referring to. Do you see

1 something specifically?

2 MS. CZOSKI: Yeah, it's in A1. Are you
3 on the right page? It's on page 3.

4 DR. SCHNARR: Exhibit 2, page 3?

5 MS. CZOSKI: Exhibit 3. I'm sorry.

6 DR. SCHNARR: Exhibit 3, page 3?

7 MS. CZOSKI: Yes.

8 DR. SCHNARR: I'm sorry. Go ahead.

9 MS. CZOSKI: And it's in A.

10 DR. SCHNARR: Yes.

11 MS. CZOSKI: And B1.

12 DR. SCHNARR: Okay. I'm sorry. A and
13 B1?

14 UNIDENTIFIED SPEAKER: A1B1.

15 MS. CZOSKI: Yeah, A1B1.

16 DR. SCHNARR: There it is.

17 MS. CZOSKI: I'm sorry.

18 DR. SCHNARR: Yes, that is a criteria
19 that's listed in the text that you're citing.

20 MS. CZOSKI: And so New Mexico doesn't
21 have any control over identifying those reservoirs?

22 DR. SCHNARR: I'm really not the best
23 person to speak to the actual decision-making process
24 when it comes to EPA's consultation with the state on
25 this topic.

1 MS. CZOSKI: Okay. So if a Class VI
2 was going to be permitted into an area that might be
3 used for geothermal, but does not include, like -- how
4 would they prove that this should be an exempt
5 exempted aquifer?

6 DR. SCHNARR: Again, in this case, the
7 operator would be requesting an aquifer exemption only
8 if they actually wanted to inject into that zone. And
9 there are no aquifer exemptions allowed under Class
10 VI, other than expansions of existing aquifer
11 exemptions.

12 MS. CZOSKI: Okay.

13 DR. SCHNARR: I hope that answers your
14 question.

15 MS. CZOSKI: I think so. I might come
16 back to it.

17 DR. SCHNARR: Okay.

18 MS. CZOSKI: When I think a little bit
19 more about it.

20 And another question I have is that
21 it -- I'm assuming the amount of total dissolved
22 solids is coming from the EPA; correct? Or let's see,
23 in V. V, V, just a little further down.

24 DR. SCHNARR: Yes. This is EPA
25 regulatory text.

1 MS. CZOSKI: And what -- I mean,
2 there's some areas where they're desalinating water
3 for much -- of much higher TDS. Do those areas need
4 protecting, or would that have to come from the EPA?

5 DR. SCHNARR: I think if I understand
6 your question -- I may take this to -- to someone else
7 on the panel, but I just want to make sure I
8 understand the question. The USC regulations more
9 broadly and the Class VI regulation prohibits
10 injection into a USDW. One criteria to define a USDW
11 is that it has less than 10,000 milligrams per liter
12 of TDS. And it's your question, what about potential
13 water resources that have greater than 10,000 TDS?

14 MS. CZOSKI: Yeah. What if New Mexico
15 would want to access waters with a higher TDS that
16 have already been injected into?

17 DR. SCHNARR: Yeah. I -- I think it
18 may be helpful to go back to the original definition
19 of USDW, which has several criteria. It's on Exhibit
20 1, page 4. And it says that a "USDW means an aquifer
21 or a portion, A, which supplies any public water
22 system, or which contains a sufficient quantity of
23 groundwater to supply a public water system and," has
24 additional criteria in it. So I think under A, if
25 there was a water resource greater than 10,000 that is

1 supplying a public water system, it wouldn't meet the
2 definition of a USDW.

3 MS. CZOSKI: So it would have to be
4 already supplying water to a town, to a public water
5 system, for it to be included in that definition?

6 DR. SCHNARR: I'm just rereading
7 through this definition.

8 Do you want to --

9 MR. WRINKLE: No. I -- I was just
10 recalling it -- it may have said future use, but I was
11 going to verify that.

12 DR. SCHNARR: I think that the reading
13 of this text does say that -- my reading of it,
14 including Part 3A, B, and B, 1, 2, and 3 would say
15 that it has to be currently supplied. It could be
16 corrected.

17 MS. CZOSKI: In A -- sorry. In
18 19.15.43.8, which is Exhibit 3, A1B on page 3, it says
19 "It cannot now or will not in the future serve as a
20 source of drinking water."

21 DR. SCHNARR: This -- this is
22 specifically for exempted aquifers, which is a kind of
23 a separate definition than a USDW. So an exempted
24 aquifer is what would otherwise be a USDW, but has
25 been granted an aquifer exemption.

1 MS. CZOSKI: So no one could inject
2 into?

3 DR. SCHNARR: No, it's the opposite of
4 that.

5 MS. CZOSKI: Oh.

6 DR. SCHNARR: An exempted aquifer, you
7 can inject into. So the operator would be wanting to
8 inject into that zone, it is a USDW, otherwise, but
9 they say it's not really practical that it would ever
10 be used for several reasons. And they have made an
11 application for an aquifer exemption. That aquifer
12 exemption was ultimately approved. And again, you
13 can't have a new aquifer exemption under Class VI.

14 MS. CZOSKI: Okay. Okay. Let's switch
15 gears here. And I'd like to talk a little bit more
16 about areas of review. So I'm going to reference
17 Exhibit 3, Number 9C1B on page 5. And B covers a map
18 that needs to be provided as part of the permit. And
19 I'm wondering why only information of public record is
20 needed on this map and why proprietary information is
21 not included? And it's in the last sentence where it
22 says "Only information of public record is required to
23 be included on this map."

24 MR. EALES: I'm not seeing the word
25 "proprietary." Where is that?

1 MS. CZOSKI: I'm wondering why
2 proprietary data cannot be included on the map?

3 MR. EALES: And I'm not seeing the word
4 "proprietary," I guess. Is it --

5 MS. CZOSKI: It's not in there, that's
6 why I'm wondering.

7 MR. EALES: Okay.

8 MS. CZOSKI: Why is it only public
9 information allowed?

10 DR. SCHNARR: Yeah. This -- this is
11 exactly the same requirement as the federal CFR on
12 this topic. And I would say that there's other
13 sections, like the corrective action section, where
14 additional information on oil and gas wells are
15 required and other things. So I -- I'd say this could
16 be looked at as the minimum for what should be
17 included on the map. But on a project-specific basis,
18 additional information could be requested by the
19 director.

20 MR. EALES: The other thing I would add
21 to it from my take is that for an operator applying
22 for a permit, it's stating that you're obligated to
23 find all information publicly available. And there
24 may be a private neighbor dug a hole in the back of
25 his yard, and -- and you don't know about it, but

1 you're not obligated to go ask every neighbor for, you
2 know, did you dig a hole and didn't report it? So my
3 take on it would be that all information that's public
4 record is required, but I'm not seeing where it's
5 separating out proprietary, to your point. But I -- I
6 think that's the intent from my view, is from a
7 permitting standpoint, that you're obligated to seek
8 out all public information.

9 MS. CZOSKI: Is this a map that would
10 be shared with the public?

11 MR. EALES: Yes. In the hearing
12 process, your AoR and all information that you use in
13 your hearing is publicly available on the OCD site.

14 MS. CZOSKI: Okay. So if there was a
15 fault that maybe was found in proprietary seismic
16 data, that wouldn't be included on the map to the
17 public?

18 MR. EALES: Yeah. I would say well --
19 so there wouldn't be a map, but if there was a fault
20 identified in proprietary data, then it wouldn't -- it
21 wouldn't have to be presented in here according to
22 this. But there's a lot of public information -- go
23 ahead.

24 DR. SCHNARR: Sorry.

25 On this particular map, I would agree

1 with you. This is a very specific requirement. This
2 map is -- is -- I've had to grade this map many times,
3 and it is very specific. But there are other
4 requirements here to identify faults -- faults and
5 fractures, and typically, the Class VI application
6 will have many maps showing faults and fractures. To
7 the extent that there's no confidential business
8 information or any other issue associated with that,
9 it would be part of the permit application. And my
10 understanding is the ultimate part of what would be
11 available.

12 MS. CZOSKI: Okay. So let's see. Just
13 a little bit more about 3D Seismic. I know we've been
14 discussing this quite a bit. So I know 3D Seismic is
15 not required as the rule is written right now. It is
16 only needed at the direction of the director; correct?

17 MR. WRINKLE: Yes, that -- that is
18 correct.

19 MS. CZOSKI: So if, let's say, a
20 company comes in with a permit, and the director comes
21 back saying, hey, you need 3D Seismic here, that could
22 potentially hold up the permitting process by a lot
23 because 3D Seismic can -- you know, it takes a long
24 time to cover those large areas and get land
25 agreements from everybody. Don't you -- do you think

1 it'd be easier just to clarify that it should be
2 required at the beginning of the project?

3 MR. WRINKLE: I think that it --
4 discretion is probably the best way forward because in
5 New Mexico, we have known areas, right, where we would
6 require that, and then we have other areas that we
7 don't know much about that we might want to require
8 that. There's also areas that we know a whole lot
9 about, right, that we might already have that public
10 information to where we would require that. I think
11 it's a case-by-case basis. I -- you know, to be more
12 specific in the rule like this, and -- and some of the
13 -- the other questions that we've had, I think we --
14 we're -- we understand them and -- and we get the
15 point.

16 I -- I think in the -- on this
17 particular instance, I think what we did is we found a
18 -- a really good balance between what's in the rule
19 and what we can do in permitting. And then basically
20 what we always do in permitting currently with our --
21 with our other primacy and with this in the future is
22 whatever we do in the permitting process, we rely on
23 the rule that we can do that. So I think this falls
24 under that umbrella as well. But there are instances
25 right now where -- and review processes where we do

1 make decisions on if 3D seismic is warranted.

2 MR. EALES: And, I guess, just remind
3 me again, what's the OCD's turnaround time for these
4 permit approvals?

5 MR. WRINKLE: So the goal, I -- I
6 believe that we stated in our petition, was zero to
7 eight months; right? I mean, not it's -- of course
8 not going to be zero. Couple months. But let's just
9 say eight months is the goal. And, you know, that's
10 if everything comes in perfectly. And, you know, we
11 don't have any kind of questions or anything like
12 that. So it's, you know, going to be extremely rare
13 that that happens.

14 So you know, the -- the permitting
15 process, and I -- I think I said this yesterday, is
16 that it will -- it'll take as long as it -- it takes
17 until we are comfortable that it meets all the
18 requirements of whatever rule is promulgated. And
19 that we are confident in -- in the -- in the issuance
20 of that permit.

21 MS. CZOSKI: Okay. Thank you.

22 MR. WRINKLE: Uh-huh.

23 MS. CZOSKI: So in the same area in --
24 so on page 5, C -- no, or 2, ii. So it says in the
25 permit that "the location, orientation, and properties

1 of known or suspected faults and fractures that may
2 transect the confining zone in the area of review and
3 a determination that they would not interfere with
4 containment." And I am wondering why only faults that
5 could transect a confining zone are included in this
6 review?

7 DR. SCHNARR: The reason for that is
8 the -- the concern over the leakage through the
9 confining zone and the confining zone not having
10 integrity to contain the injected fluid. So the
11 primary focus would be on any transmissive faults or
12 fractures that may lead to leakage out of the
13 injection zone.

14 MS. CZOSKI: Could there be a case
15 where there could possibly be a fault or a fracture
16 above the confining zone and CO2 leaks from the well
17 into another zone that transmits a -- a fault fracture
18 that was not included into this review?

19 DR. SCHNARR: Yeah. In -- in my
20 experience, the combination of the requirement for
21 the, sort of, publicly available faults and the
22 identification of faults that potentially could
23 penetrate the confining system really kind of covers
24 all depths and all faults are disclosed at the end of
25 the day.

1 MS. CZOSKI: Do you think just in the
2 rule, it maybe it should say instead of may transect
3 the confining zone, just the all faults in the area of
4 the review, or faults or fractures?

5 DR. SCHNARR: Yeah. I think that may
6 be reasonable. Something we can take under
7 advisement.

8 MS. CZOSKI: Okay. Thank you.

9 So in this same area, in letter E and
10 same page 5, so it requires that "Maps and
11 stratigraphic cross sections indicating the general
12 vertical and lateral limits of all USDWs, water wells
13 and springs within the area of review, their positions
14 relative to the injection zones, and the direction of
15 water movement where known." And I'm wondering if in
16 these maps and stratigraphic cross sections, there
17 needs to be an inclusion of any mineral or geothermal
18 resources so that the people reviewing the permit know
19 what other mineral resources might be in this area?

20 MR. WRINKLE: Yeah. I -- I see where,
21 you know, being more specific would -- would help
22 here, but it -- it's kind of -- it's built in because
23 of the Oil and Gas Act. That's kind of one of the
24 first things that we would look at is, you know, where
25 are those minerals at? Where -- where would they

1 potentially be?

2 It -- it is an internal guidance when
3 we were looking at injection wells. For us, the --
4 the first thing that we look at is any waste or, you
5 know, potential causing of waste. And then, you know,
6 they would -- they would have a very hard time getting
7 that permit. But I can see where you're coming from
8 and be a little bit more specific there for the
9 operator to provide that map.

10 MS. CZOSKI: Yeah. So even if, like
11 what was mentioned earlier, damages could potentially
12 occur to minerals, even if the injection is not
13 occurring in -- or even if there are minerals --
14 sorry, let me start that again. There could be
15 damages to minerals outside of the injection zone?

16 MR. WRINKLE: There -- there's a
17 potential, yes.

18 MS. CZOSKI: And I know -- I mean, you
19 mentioned the Oil and Gas Act. And I know OCD permits
20 wells related to that, all the -- Class I through V.
21 I don't know -- how would this work with ECAM and
22 their geothermal rules and working with them to make
23 sure that there's no issues with geothermal?

24 MR. WRINKLE: Well, I mean, we -- we
25 have a close relationship with -- with ECAM and the

1 geothermal folks over there. And if it is classified
2 as mineral ownership, the -- the geothermal mineral
3 ownership, then it would fall under our -- our
4 obligation to prevent waste.

5 MS. CZOSKI: So you would work with
6 ECAM to understand where these geothermal resources
7 might be to verify these maps submitted in the permit?

8 MR. WRINKLE: Yes, I believe so.

9 MR. EALES: One thing I would add, just
10 from -- from the permit requester's viewpoint, because
11 of those things changing significantly in each one of
12 these departments, it would be very difficult to -- to
13 make that a requirement to know the latest identified
14 area for geothermal versus right now, strat maps are
15 required to show all the layers and the formations and
16 the formations are known for certain things. And then
17 in your permit itself, you have to prove it in time
18 zones to ensure that the CO2 stays where it's supposed
19 to go.

20 But to then add on the, I guess, the
21 latest and greatest designation of a geothermal or
22 some other things, that's -- that's definitely
23 prescriptive in some areas where it may not even
24 apply, but I don't know. I just would see a little
25 bit of cautionary in that one.

1 MS. CZOSKI: Do you think that would be
2 a, like, a good starting point for the permittee to at
3 least present and then the OCD could verify?

4 MR. EALES: I tend to think that -- so
5 I do know that the permittee does have to submit all
6 the stratigraphic layers and if it's part of that AoR
7 and their intended injection zone. I think at that
8 point, though, based upon Justin's testimony, that the
9 OCD is going to be much more tied to the other
10 regulatory bodies as to what the purposes are for some
11 of these. And to put that on an individual operator
12 would be very challenging, if not impossible.

13 So I -- I do think going through the
14 normal permitting process, it does identify where you
15 intend to eject your containment zones and then all
16 other strat levels that are reviewed by the OCD. And
17 I personally feel it sits best for the OCD to do what
18 Justin talked about.

19 MS. CZOSKI: I just want to verify
20 because in E, it just says that "maps and
21 stratigraphic cross sections have to happen where
22 there's USDWs, water wells and springs," not the
23 entire not the entire geologic section?

24 MS. RANEY: Up above that in Item C, it
25 says "Information on the geological structure and

1 hydrogeologic properties of the proposed storage site
2 and overlying formations, including," et cetera, et
3 cetera.

4 DR. SCHNARR: In addition to that, I
5 would point to the part in E where it says "their
6 positions relative to the injection zones." And in
7 practice, those stratigraphic cross sections go all
8 the way from the injection zone to surface.

9 MS. CZOSKI: Okay. And then in F, just
10 below that, it asks for "Baseline geochemical data on
11 subsurface formations, including all USDWs in the area
12 of review." And I guess somewhere else, it also talks
13 about fluid samples. But especially in areas where
14 maybe there hasn't been as much development, how would
15 an operator or a permittee know that there could be an
16 interval, maybe, of high H2S if that isn't sampled
17 for?

18 DR. SCHNARR: I think that this would
19 be covered under the distinction between the permit to
20 construct and the authorization to inject. This would
21 include all information that's available at the time
22 of the initial permit application, but additional
23 information would be collected during the construction
24 of the injection well. And that information is
25 required to be provided to the director prior to

1 authorization to inject.

2 MS. CZOSKI: It seems like -- correct
3 me if I'm wrong, but it seems like in that -- when
4 it -- before the authorization to inject when they're
5 collecting the data, is it only needing fluid samples
6 from USDWs and the injection reservoir?

7 DR. SCHNARR: I would actually want to
8 go to the pre-operational testing section, if I could
9 find it.

10 MS. CZOSKI: Yeah.

11 DR. SCHNARR: Maybe it's on page 12.
12 Let me take a look.

13 MS. CZOSKI: Oh, I think I found it.
14 It's 3 on Page 13.

15 DR. SCHNARR: Yes. I read through it.
16 So I think this -- this is broad enough to give the
17 director the authority to require that information in
18 the pre-operational testing plan that is part of the
19 permit application, and other intervals that there may
20 be some concern.

21 MS. CZOSKI: Okay. Let's see. Okay.
22 So now I -- kind of another area of review question
23 is -- we talked a little bit about yesterday, we've
24 seen in some of the exhibits that the CO2 plume will
25 not spread out radially from the well perfectly. It

1 has geologic constraints; correct?

2 DR. SCHNARR: I'm sorry. I was looking
3 to also supplement my previous answer.

4 MS. CZOSKI: Oh, sorry.

5 DR. SCHNARR: Yeah. So I -- I
6 apologize. But also on page 12, or H1, also includes
7 additional information on collection of "salinity of
8 any formation fluids and all relevant geologic
9 formation," so I'll just point to that as well.

10 And then I apologize, but I would ask
11 you to repeat the question.

12 MS. CZOSKI: Oh, yeah. No problem. So
13 we discussed yesterday that a CO2 plume will not, you
14 know, spread out radially and perfectly. It's
15 controlled by reservoir characteristics; correct?

16 DR. SCHNARR: I think it's fair to say
17 that in most cases, it's not going to be a perfect
18 circle surrounding the injection well.

19 MS. CZOSKI: Yeah. And if the plume
20 went out of the area of review, would that be grounds
21 for a permit to be terminated or at least shut in
22 until --

23 DR. SCHNARR: I think it would be
24 grounds for a AoR reevaluation at a minimum. And
25 beyond that, I probably would have to reference some

1 of the text here.

2 But I will say that in many cases, if
3 not most cases, the area of review is larger than the
4 plume because it also includes the area of elevated
5 pressure. But any non-conformance of the predicted
6 area of the plume and the actual area of the plume
7 would be -- would -- would likely trigger a -- an area
8 of review reevaluation.

9 MR. EALES: Yeah. I'll add to that.
10 The supplement's statement in that the requirement for
11 a -- a continual or a revisited area of the review or
12 frequency of the area of reviews, you're going to
13 identify if there's a -- a concern that you're seeing
14 that might go outside of that original AoR and adjust
15 it well before you're seeing it just go out. But we
16 might take to [inaudible.]

17 MS. CZOSKI: And so it would continue
18 to inject; correct?

19 DR. SCHNARR: Well, Mr. Eales brings up
20 a really good point. The area of review, even if it
21 was defined by the plume, is the plume at its largest
22 extent, which is typically at the end of the project
23 or even maybe many years after the project in the
24 post-injection site care period. So the data that's
25 collected at the early phases of the project may show

1 that the model and -- and the modern data is not in
2 conformance a hundred percent, but it -- that can be
3 true and it also can still be within the area of
4 review because the area of review is defined as the
5 maximum extent ever over the lifetime of the project.

6 MR. EALES: Yeah. And one thing I'll
7 add to that, and -- and that maximum extent is you
8 have to take the most conservative route of the
9 maximum permitted volume of pressure from day one
10 every day of operation for 50 years, and the
11 likelihood of a well injecting at maximum volume is
12 next to none. That's just -- that's a limitation, and
13 if you're that close to that limitation in your normal
14 operation, it's -- you're right on the edge of the
15 violation and shutting.

16 So normally there's a ramp-up in time
17 and -- and that area of review is extremely
18 conservative, and -- and you'll see within that. But
19 then in addition, we point out you have a frequency
20 requirement to continue reevaluating the actual
21 injection. And what you normally see with that is,
22 again, if you've got a 50-year worst-case scenario,
23 and then you input your actual volumes and pressure,
24 it's -- it's going to be much smaller.

25 MS. CZOSKI: Though, I mean,

1 theoretically, the CO2 could reach, like, a channel
2 sand that was previously unknown with higher porosity
3 and travel faster outside of the area of review?

4 MR. EALES: Yeah. Theoretically,
5 you're right.

6 MS. CZOSKI: So it would be able to
7 keep -- I guess, how would you know if that was
8 happening if it was --

9 MR. EALES: There's a requirement in
10 the monitoring to integrate and to help notice -- to
11 identify -- to be able to detect the plume and know if
12 that's happening or not happening. So some common
13 methods of doing that would be a -- a baseline -- or a
14 base walkaway and understand the imagery before you
15 inject. And then a frequency where, if you'd want,
16 you can take another seismic shot and see if the plume
17 is -- like Greg said, it's not going to be a perfect
18 circle, but see what the plume characteristics are.

19 MS. CZOSKI: So what would happen in
20 that case if the proper land agreements or leases
21 weren't in place?

22 MR. EALES: I think that's part of that
23 area of review; is there'd be a number of things you
24 would have to look at. If you're an operator, when
25 you perform, and you see something that seems to be

1 going a different way than what we model and what you
2 understood in drilling, then you have to take those
3 actions. So that's the question that each one will
4 have a different possible action you may have to take.

5 MS. CZOSKI: So the well might be
6 injecting in trespass then?

7 MR. EALES: No, it wouldn't be if
8 you're looking at things in advance. So I -- I think
9 where I'm trying to express is you don't wait until
10 the very end; there's --there's a requirement for a
11 frequent area of review. And you would want to
12 understand that, and it's required to understand it
13 early proactively to avoid exactly what you're talking
14 about. That's -- that's the point of an AoR, receives
15 frequency of review.

16 MS. CZOSKI: But I mean, it still could
17 be injecting for, like, six months before an area of
18 review happens again? And it could be, like,
19 migrating out of the area of review for, you know,
20 several months before?

21 MR. EALES: And, Greg, you can talk to
22 this further than me with, you know, about --

23 UNIDENTIFIED SPEAKER: Go ahead, Greg.

24 MR. EALES: But what I would say,
25 again, you're doing a worst-case scenario of 50 years

1 maximum volume. And a year from that point, it's
2 going to -- even if -- even if there was some form of
3 worst-case channeling, the volume is so -- so
4 negligible compared to that, that that initial AoR,
5 the likelihood is very low that that scenario would
6 exist. But that's what frequency then allows you to
7 do reassessments.

8 MS. CZOSKI: Okay. But yeah, it still
9 could happen, it sounds like, or even though if it's
10 rare?

11 MR. EALES: Very, very rare, yeah.

12 DR. SCHNARR: And this is an area of
13 increased stringency compared to the federal rule
14 because of requiring the initial two-year reevaluation
15 after a director starts to address this concern. So
16 like in my direct testimony, I talked about sort of
17 how quickly you have to move through that truing up
18 your model and your data. And so the additional
19 stringency requirements for two years after the
20 project starts and then no more than four years really
21 makes you move through that process much quicker to
22 address the concerns that you have.

23 MS. CZOSKI: Okay.

24 MR. EALES: And I think what you're
25 communicating would be, so if there was a 50-year

1 worst case scenario, radial or some -- some shape, and
2 there happened to be a channel with sand, there may be
3 a line in that amount that might touch something. But
4 it -- it would be very rare if it were to happen and
5 put what it would be this one strange change. I'm
6 just not even familiar within a situation in which
7 I've heard of that, you know, occurring within a one
8 or two-year period just because of how conservative
9 the AoR is.

10 MS. CZOSKI: Okay. Thank you.

11 And I guess in your experience of
12 reviewing these, how large are area of reviews, like,
13 in general?

14 DR. SCHNARR: I'm sorry. I probably
15 wouldn't want to be able to give you an -- an area off
16 the top of my head. I might want to go back and look
17 at, sort of, what's possibly available out there. And
18 it is very project-specific based on the amount that's
19 being injected and also the pressure condition of the
20 reservoir prior to injection and the AoR delineation
21 methodology, it's -- but I -- I would want to go back
22 and step in my notes a bit. I think at some point I
23 may have actually looked at this, but I don't know off
24 the top of my head.

25 MS. CZOSKI: Okay. So if an AoR, let's

1 say it could span -- I don't know. Without any
2 examples, I'm just going to -- I would guesstimate.
3 What if it spanned two miles, let's say, or a mile,
4 that would likely go over multiple land ownerships,
5 especially because the plume, it won't be, like, fit
6 into a perfect square, like our leases are in section
7 township ranges, so how could we even permit and drill
8 a Class VI well without that framework to connect
9 different land types?

10 MR. WRINKLE: So I'm just trying to
11 understand your -- your question here. So this would
12 be, I think, taken care of in the -- the pre-
13 construction review that you have the ability and
14 right to those areas; right? Am I understanding that
15 right?

16 MR. EALES: So -- if you could ask it
17 again one more time? So if it could have a two-mile
18 diameter or a one-mile -- just instead say a mile --

19 MS. CZOSKI: Yeah.

20 MR. EALES: -- and there's multiple
21 surface owners. So what was the question, though?

22 MS. CZOSKI: So how could this be
23 permitted if there's no unitization frame -- like,
24 regulatory framework in place if it's crossing
25 multiple landowners?

1 MR. EALES: Can you speak to
2 unitization?

3 MR. WRINKLE: Me either. I -- I would
4 have to refer to somebody with more experience with
5 unitizations.

6 MS. CZOSKI: But as part of -- would
7 these be able to be permitted if there isn't land
8 access already?

9 MR. EALES: So what I -- what I can
10 speak to is in a Class II well, you do have to have
11 ownership. You have to have -- of -- of the injection
12 location, but you have to notify all parties that are
13 affected within the AoR, so they're aware of it, and
14 they have the right to protest or raise concerns. But
15 there is not that requirement within that protocol.
16 I'm not sure how it would be different with this.

17 MS. CZOSKI: Do you think that should
18 be a requirement that a well can't be permitted until
19 there's the proper land agreements in place?

20 MR. WRINKLE: Holistically, it sounds
21 right, but I think this -- and correct me if I'm
22 wrong, Jesse might address this in closing?

23 MR. TREMAINE: I -- I think this is
24 something that we will need to address in closing.
25 And I -- I have explained to the commission in the

1 past that there are different parts of this program.
2 We broke them up into logical chunks that relates to
3 the same subject matter, the same evidentiary basis,
4 and the same set of witnesses. We are moving forward
5 with a rulemaking application related to protection of
6 USDWs, the groundwater, and the permitting process.

7 So Mr. Wrinkle testified that the
8 representation of the right to inject is something
9 that the division looks at in reviewing permits in the
10 permitting review and decision. If we're looking at
11 something that's outside the scope of this, that's
12 a -- that's another question. There -- the department
13 is looking at unitization -- potential need for
14 unitization. But we're talking about, in that
15 context, we're talking about a fact pattern that
16 involves percentages of willing and unwilling
17 participants. We're not talking about that fact
18 pattern here.

19 MS. CZOSKI: I just don't see how these
20 can be permitted without having some of that in place
21 already. But let's see.

22 DR. SCHNARR: I'll just reiterate what
23 I said yesterday, that right now, EPA Region 6 can
24 evaluate permits in New Mexico, and the intent of this
25 is to take on their review capacity.

1 MS. CZOSKI: Okay. Has there -- there
2 hasn't been any permitted wells, Class VI wells, in
3 New Mexico yet, though; right?

4 DR. SCHNARR: There is one that I'm
5 aware of that's in the permit review stage.

6 MS. CZOSKI: So about the area of
7 review again, can -- let's say there's -- you know,
8 the area of review for a Class VI well, can an oil and
9 gas operator drill inside of that area of review for
10 minerals not in the injection zone?

11 MR. EALES: You're talking in a
12 different formation level?

13 MS. CZOSKI: Yeah.

14 MR. EALES: Yeah. So absolutely, an
15 operator can drill into a producing formation such as
16 the Wolfcamp and produce an unconventional well from
17 that Wolfcamp, which is within -- again, an area of
18 review is latitudinally spatial. So those producing
19 wells are naturally going to be within that AoR, but
20 in a very different formation. Thus, the importance
21 of having the containment proof to be able to keep the
22 injectate within the injection zone and contained.

23 MS. CZOSKI: So they could drill
24 through a injection zone --

25 MR. EALES: Yes.

1 MS. CZOSKI: -- to get to oil and gas?

2 MR. EALES: Correct.

3 MS. CZOSKI: And do you think -- could
4 that significantly increase drilling costs to have to
5 drill through, like, a higher-pressured carbon dioxide
6 zone?

7 MR. EALES: No, it doesn't -- it
8 doesn't significantly increase -- what happens is a --
9 and again, in the experience that I have with this in
10 the Class II arena, they'll be aware that this is it's
11 part of the permitting process for their wells and
12 their APDs. They'll be aware themselves and with OCD
13 support, publicly available information that there's
14 an injector in that area. Same thing with a -- an
15 SWD. They could be injecting in a shallow well, like
16 the Delaware Mountain Group in the area I'm familiar
17 in, and that they need to drill through that to get to
18 the Wolfcamp, so what they'll do is anticipate that.
19 And let's say that you need 8.5 pound mud to go
20 through a normal formation, the Bell and Cherry Canyon
21 to get to the Wolfcamp, you would anticipate, and you
22 would use higher-weight mud, maybe go up to a 9, 9.5.

23 But it's -- it's not a significant
24 cost. It's just something that drilling companies are
25 very used to and being able to understand it. Because

1 they also know that sometimes you could be drilling
2 through an area where there's been no injection, but
3 there's just an anomaly. And the procedures and
4 practices basically require them to, through a safety
5 standpoint, anticipate that there may be an increase.
6 And so they're well versed in, again, adding very --
7 doing things to make it heavier until they get through
8 the zone and case it.

9 MS. CZOSKI: Okay.

10 MR. CHANG: May I request a brief
11 recess or an afternoon break?

12 MS. CZOSKI: Oh, that's fine.

13 THE HEARING EXAMINER: All right.
14 Mr. Chair, 3:10, is that okay?

15 MR. CHANG: Sure.

16 THE HEARING EXAMINER: All right.
17 3:10.

18 (Off the record.)

19 THE HEARING EXAMINER: It's 3:10.
20 Let's come back from the break, please.

21 Commissioner Czoski, do you have
22 additional questions of the panel?

23 MS. CZOSKI: Yes, I do. So I guess I
24 still want to talk a little bit more about the area of
25 review and the notification area. So do you think

1 allowing a permit to be issued without notice to
2 persons with mineral interests becomes a correlative
3 rights issues issue?

4 MR. WRINKLE: If -- okay. Without
5 mineral interest, is that what you're saying? Or with
6 mineral interests?

7 MS. CZOSKI: With mineral interests.

8 MR. WRINKLE: Okay. I was just trying
9 to find the section where it says who needs to be
10 notified.

11 MS. CZOSKI: Yeah. If you could find
12 that, I appreciate it.

13 MR. WRINKLE: Yeah.

14 MR. EALES: Do you mind repeating the
15 question again?

16 MS. CZOSKI: Do you think that allowing
17 a permit to be issued without notice to persons with
18 mineral interests becomes a correlative rights issue?

19 MR. TREMAINE: I -- I would chime in.
20 I'll let Mr. Wrinkle testify as to the facts and the
21 process for -- for these permitting decisions and
22 determinations. But correlated rights and -- and
23 prevention of waste are -- that's getting in calling
24 for a legal conclusion; that would be a
25 multidisciplinary determination.

1 But the facts and circumstances of the
2 permitting decisions and specific notification
3 requirements that address that, I believe, are within
4 Mr. Wrinkle's or the rest of the witness's testimony.

5 MR. WRINKLE: Yeah. So -- so to answer
6 your question -- I think I can answer anything
7 specifically in Exhibit 1. I think -- believe that it
8 starts at the bottom of page 5, and it's the Public
9 Notice of Permit Actions and Comment Periods.

10 MS. CZOSKI: I'm sorry. At the bottom
11 of page 5, you said?

12 MR. WRINKLE: Yes. And -- and the --
13 the title of the -- the section is "Public Notice of
14 Permit Actions and Public Comment Periods." So this
15 is what we would be looking at to make sure that these
16 listed entities were provided notice.

17 MS. CZOSKI: So I believe in 5B, it
18 does mention the State Land Office, but I don't see
19 anywhere in here that it mentions -- it doesn't break
20 down notification of mineral interests that need to be
21 notified specifically. So that could be lessees.
22 That could be depth severances that are put into
23 County Court. That could be different operators. Is
24 that specified anywhere?

25 MR. WRINKLE: The only place that I

1 think it would be covered is there's a -- another
2 subparagraph that is -- is basically a -- a catchall.
3 Let me -- that -- it -- it -- is it E?

4 MS. CZOSKI: Yes.

5 MR. WRINKLE: Yeah. So E, and it's the
6 last sentence of that for -- let's see. Not the last
7 sentence. "To give notice of action in question to
8 persons potentially affected by it." But you are
9 correct that it does not specifically call out mineral
10 or -- or surface owners.

11 MS. CZOSKI: Do you think it should
12 specify that?

13 MR. WRINKLE: I -- I think it's implied
14 that anybody that has any activity or, dare I say,
15 standing in the -- in the area of review should be
16 noticed. And it specifically calls out, you know,
17 other state agencies, water supply folks, and just
18 basically anybody and everybody that's in that
19 affected area.

20 MS. CZOSKI: Who's going to be doing
21 that notifications?

22 MR. WRINKLE: So that -- that is up to
23 the -- the applicant, and then we would review those
24 for completeness.

25 MS. CZOSKI: So you would ensure

1 without the guidance in the rule that mineral -- both
2 surface and mineral estates need to be addressed, that
3 the OCD would review those?

4 MR. WRINKLE: I -- I think we would
5 look at it to make sure that they covered every avenue
6 within that area, because the way that this is written
7 is -- is kind of all-encompassing at the moment.

8 MS. CZOSKI: Do you think it might be
9 useful to just clarify that it needs to be
10 notification of both surface and mineral estates and
11 people with mineral interests?

12 MR. WRINKLE: I -- I think it could be
13 potentially useful for extra clarification. I think
14 it is something that -- that we could take under
15 advisement and look into to see if that would add
16 benefit to the rule text.

17 MS. CZOSKI: Okay. Thank you. And
18 would that review include, let's say, leases for
19 different types of minerals? You know, there could be
20 potash, it could be oil and gas, it could be water.
21 Let's -- or SWDs, depth severances, because those are
22 recorded at the County level, you know, not at the
23 State Land Office level, at the BLM level. And would
24 that need to occur to make sure that there's no
25 correlative rights issues?

1 MR. WRINKLE: I -- I think that
2 internal guidance while -- while reviewing, you know,
3 any standard operating procedures that we develop in
4 the review process would be all encompassing of every
5 bit of information that would be in that area now that
6 would be available.

7 MS. CZOSKI: And So once this
8 notification goes out, how long does an affected party
9 have to protest or respond?

10 UNIDENTIFIED SPEAKER: Do you know
11 that, Jennifer?

12 MS. RANEY: 30 days.

13 MR. WRINKLE: It's 30 days.

14 MS. CZOSKI: Would you consider
15 lengthening that time? That isn't a whole lot of time
16 for a review.

17 MR. WRINKLE: Sorry. I'm just thinking
18 of different things in my head.

19 MS. CZOSKI: Yeah. Please.

20 MR. WRINKLE: Yeah.

21 MS. CZOSKI: Take your time.

22 MR. WRINKLE: Potentially.

23 MS. RANEY: I think it does state in --
24 under 4 "Public notice of public hearing should be
25 given in at least 30 days.

1 MS. CZOSKI: Do you think it'd be good
2 to just make -- just add -- you know, just have it 60
3 days, then that would just be the standard?

4 MR. WRINKLE: It's -- it's something
5 that we can take a look at. I think we would have to
6 look at some other areas to see if it jives. But, you
7 know, with the text saying "at least," I think that
8 gives us a -- a lot of discretion there.

9 MS. CZOSKI: Okay. And would the OCD
10 consider doing a comprehensive review of all mineral
11 resources and interests within two miles of the
12 location of the permit? This could help aid in better
13 understanding of possible conflicts that could arise.

14 MR. WRINKLE: I -- I don't want to
15 commit to anything right -- right now without going
16 and consulting with my technical team to see what --
17 what benefit that would add, especially if, you know,
18 the areas of review are such a spectrum in size.
19 There could be some that are larger than that, that
20 some that are considerably smaller. So I -- I'm just
21 wondering, you know, if -- if we did do a minimum of
22 two miles, then, you know, what would that benefit,
23 would that give us any value, really, on -- on site-
24 specific projects?

25 MR. TREMAINE: May I ask a clarifying

1 question?

2 MS. CZOSKI: Yes.

3 MR. TREMAINE: It's going to land on my
4 desk. Are -- are you asking if -- if -- the question
5 was, would the OC, some version of it, would the OCD
6 consider undertaking a comprehensive review? From
7 what I understood from some of the comments, was the
8 proposal for a minimum radius for the area of review?
9 And I'm not sure if I'm confusing those concepts. Are
10 you asking the OCD to undertake a review,
11 comprehensive review of mineral and other interests,
12 or are you asking the OCD to consider modifying the
13 area of review language?

14 MS. CZOSKI: I guess more modifying the
15 area of review language to include some kind of extra
16 buffer. But also, I mean, the OCD, to verify that the
17 permittee got all this information correctly, they'd
18 have to verify that they have covered all of the
19 notices that need to go out; correct?

20 MR. TREMAINE: Okay. Thank -- thank
21 you for clarifying. We'll discuss.

22 MS. CZOSKI: Okay. So let's say
23 there's an SWD well that's injecting into a deeper
24 zone, for example. And, I guess, if there was an SWD
25 and the CO2 injection happening in the same zone,

1 would that SWD well operator be notified?

2 MR. WRINKLE: Yes. As -- as it's
3 written here, if they fall inside that -- that AoR,
4 then -- then they would have to be notified.

5 MS. CZOSKI: Okay. And I guess if that
6 SWD was permitted, you know, before the Class VI, and
7 the pressure is increasing the reservoir, would that
8 SWD have to change their injection requirements based
9 on the increase in pressure in the reservoir?

10 MR. WRINKLE: I believe that the
11 incoming permit, and, you know, Greg, help me with --
12 here if you can, is they would have to take into
13 consideration the injection of the existing SWD and --
14 and put that into their model and not interfere with
15 what is already permitted in the area.

16 MR. EALES: And I can add to that. If
17 there was an existing SWD injecting into the same
18 zone, number one, to your point, if it was in the AoR,
19 it would have to be area of influence. And under E,
20 it could be possibly affected by the application. It
21 would have to be noticed. And the maximum volumes and
22 pressures that are permitted for that first SWD have
23 to be incorporated into the new applicant's modeling.

24 And so that in itself has already
25 demonstrated a potential increase in reservoir

1 pressure due to the maximum volume and pressure for
2 the permitted life of the well. And so that,
3 basically, the one that would be coming in new would
4 be the one receiving the restrictions knowingly in the
5 permitting process.

6 MS. CZOSKI: So is that anywhere in
7 this rule saying that, like, previous permitted they
8 could like -- SWDs, for example, would have priority
9 over -- or, you know, they would have to change
10 their --

11 MR. EALES: And I'll let Greg talk to
12 this in more detail. But from my understanding,
13 it's -- it's not in that level of detail. But in the
14 permitting process, you have to understand the
15 pressures of the formation you're injecting into,
16 the -- the fluid, you know, characteristics. And as
17 the applicant, you have to consider that pressure is
18 basically either it's a greenfield area, or you have
19 to consider, again, a -- a permitted well where that
20 pressure front is there already, and it would limit
21 your -- your application.

22 So if you were going into a greenfield
23 area, no other injectors in that space, and let's say
24 that -- two miles, then you are -- you have to
25 understand the [inaudible] permeabilities of your

1 injection formation and -- and the natural pressures
2 you expect to see. But if you're going into an area
3 and you want to permit next to an active and permitted
4 well, then you know yourself that you are taking a lot
5 lower pressure and volume than you would in a
6 greenfield area.

7 And those things already guide
8 decisions that are being made by operators to look for
9 areas where it is more of a greenfield than in an area
10 of competition. Because through this permitting
11 process, you -- we get back to the fracture gradient
12 requirement that you cannot inject above 90 percent of
13 fracture gradient. And that is additive from another
14 injector in the area. But if it's already there, you
15 have to consider that.

16 So yes, it's contemplated in the
17 permit, but it's not as specific as what we're using
18 them to -- to describe this.

19 MS. CZOSKI: Do you think that'd be
20 important to have in the rule to state that, you know,
21 existing instruments would not be affected by Class
22 VI?

23 MR. EALES: I think in my mind, you
24 would run into unintended consequences of that, trying
25 to choose the right language based upon things that

1 are really tied more to exactly what -- what this
2 language is focused on, and that's the subsurface
3 pressures, fractured pressure gradients, and all of
4 those things. So I actually wouldn't recommend it
5 because it's built into the permitting process.

6 MS. CZOSKI: So let's say there was
7 there -- you know, CO2 and SWD were injecting into the
8 same zone and there was a induced seismic event, how
9 would they figure out who's responsible and who would
10 be responsible for damages to the other well?

11 MR. EALES: So I would say, and -- and
12 the reason I'm -- I'm giving this answer is because
13 there's such a similarity to Class II AGIs and SWDs
14 and that are -- it's already, you know, occurring
15 throughout New Mexico where they're -- injection in
16 the same zone. It's the same intended zone for
17 injection.

18 And so what I'm aware of, and Justin
19 can speak to this more thoroughly, is that if there
20 was a seismic event, again, there would be a
21 triangulation, there would be an -- characterization
22 of the event. And then there would be a OCD -- number
23 one, the operators have to report. OCD immediately
24 begins to try to assess where that came from, what was
25 the influencer, and makes -- make corrective actions

1 at that point.

2 Justin?

3 MR. WRINKLE: Yeah. I mean, the -- so
4 if -- if this scenario took place and each one of
5 these wells were located within a zone that required
6 them to shut in or do 50 percent rejection, and let's
7 just say that they -- are you saying, like, they
8 communicated with each other or one well caused the --

9 MS. CZOSKI: Yeah. Let's say the -- I
10 guess, for example, let's say the CO2 well caused the
11 induced seismic or caused the -- the injection
12 pressures for both wells need to reduce, who would
13 cover those damages?

14 MR. WRINKLE: So --

15 MR. TREMAINE: If I may? I -- I
16 apologize for interjecting again. But damages are a
17 civil remedy, and they're not within the purview of
18 the Energy Natural Resources Department or OCD,
19 specifically, any of its divisions. So this is a
20 legal argument, Mr. Winkle, and none of the witnesses
21 can testify to this.

22 The -- the issue, which I would
23 distinguish here, is that the division will be
24 responsible for determining whether there are any
25 permit violations, whether there are any corrective

1 actions necessary, whether there's an area review or a
2 cessation requirement necessary. If there are any
3 civil penalties that are appropriate. If there are --
4 if there's any need to, in extraordinary
5 circumstances, refer the violation for criminal. You
6 know, potential criminal, that's never happened yet,
7 but it's possible. And the civil damages are another
8 matter entirely. They will not be addressed in this
9 rule or in any OCD rule.

10 MS. CZOSKI: Okay. I guess, so I --
11 kind of talking about money makes me want to move to
12 financial assurances next, if that's okay.

13 So the New Mexico State Land Office
14 wants to ensure that a company, or operator, or a
15 person has sufficient financial assurance prior to the
16 operation of wells because don't -- you know, we don't
17 want the taxpayers to be left with any burden of
18 financial assurance not being accurate. So on that,
19 can you please remind me what is covered under the
20 financial assurance? Is it just the wellbore? Is it
21 surface damages? Is it general damages, endangerment
22 to USDWs? Does the financial assurance cover all of
23 those possibilities?

24 MR. TREMAINE: Well, I'll begin by
25 pointing you to the proposed rule at Exhibit 3,

1 beginning at page 8, under "Financial Responsibility."
2 And then under Part 1B "The qualifying instruments
3 must be sufficient to cover the cost of corrective
4 action." And that term refers to addressing
5 artificial penetrations and abandoned wells within the
6 area of review. "Injection well plugging," which is
7 the plugging of the injection well or wells. "Post-
8 injection site care and site closure" is the
9 monitoring that happens after -- and then the final is
10 "Emergency and remedial response."

11 And so I think that may -- partially
12 address your question. I think that -- are you asking
13 really about when it comes to emergency and remedial
14 response, what kind of emergencies and, like, what are
15 we impacting?

16 MS. CZOSKI: Yeah, let's say -- I mean,
17 it was mentioned earlier that theoretically, a CO2
18 well could leak into a reservoir that has
19 mineral -- minerals that are being affected. Would
20 this bond cover that damage?

21 MR. WRINKLE: I -- I think, and Jesse
22 can correct me if I'm wrong, but I think if that took
23 place, then that would also fall under the -- the
24 civil matter of damages.

25 MR. TREMAINE: Sorry, I missed it. I

1 can answer the question from a technical perspective.

2 MR. WRINKLE: So as -- as written, I do
3 not believe that bonding covers any mineral
4 degradation if the well communicates with a producing
5 reservoir.

6 MR. TREMAINE: Yeah. I apologize if I
7 missed something here. Again, as I said earlier,
8 damages, civil damages, would be outside the scope of
9 the rule.

10 MS. CZOSKI: What about, like, lost
11 royalties to the State, would that be --

12 MR. TREMAINE: OCD does not regulate
13 royalties.

14 MS. CZOSKI: And I guess this was kind
15 of another part of the question. So does -- will this
16 cover -- the bond cover any potential environmental
17 hazards that could occur?

18 DR. SCHNARR: Under Part C of the same
19 section on page 9, it says "The financial
20 responsibility instruments must be sufficient to
21 address endangerment of underground sources of
22 drinking water." Other than that, the -- Part B4
23 references the emergency and remedial response
24 activities. And in practice, it would cover
25 addressing any issues that are identified in the

1 project's emergency and remedial response plan.

2 MS. CZOSKI: Okay. So do you think
3 it -- it would be good to have the bond amount
4 increase every five years or so based on a consumer
5 price index?

6 MR. WRINKLE: One second. I think that
7 there is a clause in here that demonstrates that they
8 have to account for inflation.

9 DR. SCHNARR: You can read E2 in this
10 section. "The owner or operator must provide any
11 updated information related to their financial
12 responsible instruments on an annual basis and if
13 there are any changes, the director must evaluate
14 within a reasonable time frame of the financial
15 responsibility demonstration to confirm that the
16 instruments used remain adequate for use." I'm not
17 sure if that's comprehensive of everything about that
18 issue in here, but I -- I believe it is -- partially
19 covers it.

20 MS. CZOSKI: So I believe that the
21 bond -- the cost estimate is done by a third party to
22 verify; is that correct?

23 DR. SCHNARR: That's correct.

24 MS. CZOSKI: Okay. And --

25 DR. SCHNARR: Yeah. Sorry. Go ahead.

1 MS. CZOSKI: Oh, no. Go ahead.

2 DR. SCHNARR: Do you want to point to
3 where that is, but it sounds like you already have it?

4 MS. CZOSKI: Yeah. Yeah. I think I
5 do. Let's see.

6 MS. RANEY: On Page 10, if you look at
7 three, Part B "During the active life of the geologic
8 sequestration project, the owner or operator must
9 adjust the cost estimate for inflation within 60 days
10 prior to the anniversary date of the establishment of
11 financial instruments used to comply with Paragraph 1
12 of this subsection and provide this adjustment to the
13 director."

14 MS. CZOSKI: Okay. Thank you.

15 And on page 11, Number 6, it says "The
16 director must approve the use and length of pay-in-
17 periods for trust funds or escrow amounts." Does that
18 mean that all full -- the full financial assurance
19 will be accounted for before operating, drilling, and
20 permitting? Or maybe not permitting, but drilling the
21 Class VI?

22 MR. WRINKLE: I think this falls under,
23 where I mentioned earlier, I know that there's a
24 process when you're reviewing the trust fund, the
25 self-insurance, and -- and that does fall under the

1 OCD legal rather than the [inaudible] Compliance
2 Bureau for normal bonds.

3 MS. CZOSKI: Okay. And the bond is
4 kept on file for the entire post-injection site
5 closure period; right? Which is -- is that a max of
6 50 years? I know it could be less if deemed by the
7 injection.

8 DR. SCHNARR: I can answer that. One
9 part of the question about the post-injection site
10 care period?

11 MS. CZOSKI: Uh-huh.

12 DR. SCHNARR: Is it default to 50
13 years? They can try to demonstrate that their
14 project-specific assumption is shorter than that. But
15 in practice, it has to do when they can demonstrate
16 non-endangerment. So there are instances where it
17 could be larger than 50 years or shorter than 50
18 years.

19 MS. CZOSKI: So you can't ask for more
20 than 50 years? Or the director could ask for more
21 than 50 years?

22 DR. SCHNARR: I don't believe that is
23 envisioned in the Class VI program, that the default
24 would be greater than 50 years. But in -- at the --
25 during this phase of the project, when they actually

1 are monitoring, if they can't show non-endangerment at
2 50 years, they would be required to continue longer
3 than 50 years.

4 MS. CZOSKI: Okay.

5 MS. RANEY: And to answer your question
6 about the PISC, or post-injection site care, on page 9
7 on 3, under the Requirements of Financial Instruments,
8 it says it must also cover the post-injection site
9 care and site closure.

10 MS. CZOSKI: Okay.

11 DR. SCHNARR: Thank you for your input.

12 MS. CZOSKI: Thank you. So what
13 happens if something happens right after the post --
14 you know, let's say it's 50 years, what happens if
15 something -- if there's a danger or damage, you know,
16 51 years, who's responsible for paying for those
17 damages if the bond is no longer on file?

18 Go ahead.

19 MR. WRINKLE: Yeah. So if once they
20 meet the -- the -- excuse me, what was the --

21 MR. TREMAINE: Non-Endangerment
22 Demonstration.

23 MR. WRINKLE: Non-Endangerment
24 Demonstration, which is a very intense bar to pass, if
25 that was to happen, then it would fall on -- on the

1 State, just like a -- a well that does not have a
2 bond.

3 MR. TREMAINE: If -- if I may, I -- I
4 would agree this is outside the scope of rule. I may
5 refer the Commission to 74-14, that is the geological
6 Carbon Storage Stewardship Fund. There's a fund
7 created for that post-endangerment finding. That is
8 beyond the scope of this permitting and non-
9 endangerment, so we haven't addressed it. But that --
10 that is where the authority in that fund lies.

11 MS. CZOSKI: Okay. Thank you. That
12 was going to be my next question to see if there's
13 something similar to a oil and gas reclamation fund,
14 which it sounds like there is.

15 And would the State Land Office be
16 able to call on financial assurance if there was non-
17 compliance on State lands?

18 MR. WRINKLE: I -- I don't believe I'm
19 qualified to answer that.

20 MS. CZOSKI: Okay. Sorry. I have one
21 more question about this. I'm trying to figure out
22 where it is in the -- maybe if someone can help me if
23 they know where it is faster. I'm looking for reasons
24 that a director can ask for a higher bond.

25 MR. TREMAINE: Are you referring to

1 page 9? That would be E, three iii "The director may
2 disapprove the use"?

3 MS. CZOSKI: I'm sorry about this.
4 Let's see. I guess I could just, kind of, ask it in a
5 more general question. Can the director ask for
6 higher bonds due to compliance issues?

7 MR. WRINKLE: I -- I think that on page
8 9 of Exhibit 3, E3 is the one place where it said the
9 director may disapprove the use of a -- a financial
10 instrument if he or she determines that it's not
11 sufficient to meet requirements of this section. I'm
12 not entirely sure, without a little bit more review,
13 if it's due to compliance reasons.

14 MS. CZOSKI: Would that be something --
15 if it's not in here, would that be something that
16 might be included into the rule to raise bonds for
17 non-compliance issues?

18 MR. WRINKLE: Being -- being it a -- a
19 compliance kind of legal legal issue, I don't think I
20 have the expertise to answer that. That would
21 probably be left to an attorney to decide if that
22 would valid justification of the raising FA.

23 MS. CZOSKI: And so I know there was
24 some discussion about permit transfer. And I was just
25 wondering if you could kind of explain what that

1 process would look like in the review process of
2 the -- the operator that will be getting the permit?

3 MR. WRINKLE: Yeah, if somebody can
4 help me find that? I know that that is an area where
5 we were more stringent than the EPA, where automatic
6 transfers are -- are not allowed in this draft rule.

7 MS. CZOSKI: So I know -- it's in
8 Exhibit 2.

9 MR. WRINKLE: Uh-huh.

10 MS. CZOSKI: There's two parts I think
11 we're talking about this.

12 MS. RANEY: Eleven and twelve.

13 MR. CHANG: Thank you. Page 10.

14 MS. CZOSKI: Yeah. Page 10G, there's
15 one part where they discuss transfers.

16 MR. WRINKLE: Okay. Just reading
17 through this here, it says "Only if the permit has
18 been modified or revoked and reissued under Subsection
19 H, 19.15.42.11, or minor modification made under
20 Subsection J, 19.15.42.11 to identify the new
21 permittee incorporate such other requirements as being
22 necessary under the Safe Water Drinking Act."

23 MS. CZOSKI: And will the companies
24 getting the getting the permit transferred to them,
25 would they need to go through the same stringency

1 review of financial assurances as the original
2 permittee?

3 MR. WRINKLE: Yes. That -- that's been
4 the -- the normal case in other classes and with oil
5 and gas wells.

6 MS. CZOSKI: And so they would have to
7 get a bond?

8 MR. WRINKLE: Yes.

9 MS. CZOSKI: Okay. Okay. Let's see.
10 Okay. I kind of want to talk a little bit about the
11 rulemaking outreach now.

12 Ms. Raney, did the OCD reach out to the
13 BLM for comment? They seem like they're important
14 stakeholders in this process.

15 MS. RANEY: The OCD communicated with
16 the BLM directly.

17 Okay. Did the OCD reach out to the
18 BLM?

19 Mr. Wrinkle, I don't know if you'd be
20 the best person --

21 MR. WRINKLE: Yeah. In -- in this
22 particular context, during the -- the development of
23 the rule, we -- we as a group, along with contractors,
24 contacted the BLM when Ms. Raney did.

25 MS. CZOSKI: Did they provide any

1 feedback to the rule?

2 MS. RANEY: It was my -- I don't have
3 this in writing; it's my understanding they don't
4 comment directly on rule-making process.

5 MS. CZOSKI: Okay. And was there
6 outreach to the Energy Conservation and Management
7 Division about new geothermal rules and geothermal
8 permitting?

9 MS. RANEY: In -- in communication with
10 them on -- on geothermal rules in general, because
11 it's -- it's related to what the PRRC works on, making
12 them aware of this process.

13 MS. CZOSKI: But they weren't given an
14 opportunity to comment were they?

15 MS. RANEY: The public comment period
16 was made available to everyone and posted publicly.

17 MS. CZOSKI: Okay. And I know the
18 State Land Office met with Ms. Raney and Mr. Eales in
19 late October, I think you stated. And in that
20 discussion, we talked about Exhibits 1, 2, and 3, but
21 there was also another area of reserve, 4, and that
22 was shared at the beginning of this rulemaking process
23 for people to look through. And that was an area that
24 covered a lot of mineral rights and unitization and
25 other concerns. And I was wondering why that was not

1 included in this rulemaking.

2 MR. TREMAINE: If I may? The -- the
3 decision to move forward with the rulemaking package
4 was a decision that was made -- consultation
5 between -- and their leadership and counsel. This
6 technical team is here to support the rulemaking
7 package before the Commission.

8 As I said earlier, this is an issue,
9 this is a topic, there is draft language, and it is
10 something that we are actively working on. It is a
11 distinct subject matter. It's a distinct factual
12 record necessary to support it. There are distinct
13 legal arguments and principles. It is not before the
14 Commission, respectfully.

15 MS. CZOSKI: Okay. And so I know you
16 said yesterday that the OCD was supposed to reach out
17 to us with -- reach out to the State Land Office with
18 more commentary on our concerns.

19 And, Mr. Winkle, can you confirm that
20 you or someone from the OCD got back to the State Land
21 Office regarding our comments on the rule?

22 MR. WRINKLE: So my participation in
23 this project, the -- the most that I know about the
24 comments were I was consulted on them. And then we
25 did turn in the -- the FAQ, but I cannot confirm that

1 anybody that I know of did get back to the SLO. Maybe
2 some of my panel members do, but I personally do not.

3 MS. CZOSKI: Okay.

4 MS. RANEY: I was told that OCD Counsel
5 would communicate directly with the State Land Office.

6 MS. CZOSKI: Okay. So yeah, I guess no
7 one confirmed that that happened?

8 MR. TREMAINE: I don't have the date in
9 front of me, I can confirm that Counsel had discussed
10 some of these issues with the State Land Office.

11 MS. CZOSKI: Okay. So earlier, I
12 think, today, the days are blending with the others.
13 Sorry. Ms. Raney, you said that at times there might
14 need to be an agreement with a tribe, you know, for a
15 Class VI permitting rule. Do you think that it would
16 be important to put in the rule that a copy of this
17 agreement must be submitted with the permit in order
18 to protect those interests?

19 MS. RANEY: I believe for a complete
20 permit, any agreements would need to be submitted with
21 the permit documentation.

22 MS. CZOSKI: Okay. And so do you
23 believe that this should extend to all landowners?

24 MS. RANEY: The agreements with all
25 landowners? Is that what you're saying?

1 MS. CZOSKI: Yes. That they can --
2 that they have the instrument in place to operate a
3 Class VI well?

4 MR. EALES: You're asking -- just for
5 clarity from what I'm hearing, you're asking prior to
6 permitting that an operator is required to get these
7 force-based agreements with all landowners prior to
8 permit process?

9 MS. CZOSKI: Yes. Do you think that
10 should happen?

11 MR. EALES: I think Jesse might have
12 answered that earlier from a legal standpoint. I
13 think that's more of a legal question. I'll let
14 Jennifer answer that question.

15 MR. TREMAINE: I think the testimony
16 that you referred to was about MOAs between government
17 entities. So if there's --

18 MR. EALES: Yeah.

19 MR. TREMAINE: I think there's a permit
20 that will cross the state or any sovereign boundary,
21 the expectation is that there will be an MOA in place
22 before that is permitted. And --

23 MS. CZOSKI: Okay.

24 MR. EALES: Did I understand -- it
25 sounded like the question was -- it started with,

1 like, a sovereign nation, but then it led into all
2 surface owners, irregardless of sovereign nations?

3 MS. CZOSKI: Yeah. Do -- do there need
4 to be, you know, leases in place before a well could
5 be permitted so that they can operate on that land?

6 MS. RANEY: I don't see any question.

7 MR. WRINKLE: Yeah. No, I -- I think
8 this would fall into the unitization conversation,
9 which I -- I think is going to be visited at a -- at
10 a later time.

11 MS. CZOSKI: Okay. I guess, has there,
12 in your experience with permitting these, has anything
13 been permitted without having these agreements in
14 place?

15 MR. WRINKLE: Are -- are you talking
16 about between two government entities or just mineral
17 leases?

18 MS. CZOSKI: Well, in this case, it
19 would be not a mineral lease, but -- yeah. I mean,
20 can a well -- have you ever had experience where a
21 well is permitted without having the proper
22 instruments in place to operate on land? And I
23 know -- from Class VI experience?

24 MR. WRINKLE: Yeah. Go ahead.

25 DR. SCHNARR: In my role working with

1 applicants on the Class VI application process, that's
2 not information that I would typically or always have
3 knowledge of.

4 MS. CZOSKI: Okay. And I just want to
5 verify, CO2 sequestration is tied to the pore space;
6 correct? I think in New Mexico, I should say.

7 DR. SCHNARR: I was going to ask if you
8 meant, like, physically or legally? I didn't
9 understand the context of the question.

10 MS. CZOSKI: More, like, within terms
11 to the estate, so.

12 MR. WRINKLE: I -- I don't know. It's
13 not in the context of the rule.

14 MR. TREMAINE: Our -- our witnesses
15 cannot testify as to the estate. I would refer the
16 commission back to 74-14, which defines the attachment
17 of pore space to the surface estate, also the
18 subserving estate.

19 MS. CZOSKI: Okay. Thank you.

20 MR. TREMAINE: Relative to [inaudible.]

21 MS. CZOSKI: Thank you.

22 And I know yesterday we discussed --
23 there was some confirmation that the pooling orders or
24 the State Land Office can't be forced to pool;
25 correct?

1 MR. WRINKLE: From what I recall on the
2 statute that I read, that is, I believe, what it said.

3 MS. CZOSKI: But in that statute, it's
4 only referring to unleased mineral estate. So that
5 would be different than -- than carbon sequestration
6 because that's tied to the surface estate?

7 MR. WRINKLE: Without having that piece
8 of legislation in front of me, I -- I don't think I
9 would have an opinion.

10 MS. CZOSKI: Okay. And then -- so I
11 guess if -- so who owns carbon dioxide in a formation
12 before injection?

13 MR. TREMAINE: Our witness cannot
14 testify to that.

15 MS. CZOSKI: Okay. Are you aware that
16 the State Land Office statutory oil and gas leases
17 allows for carbon sequestration production?

18 MR. WRINKLE: Not -- not in depth.

19 MS. CZOSKI: So that's -- so who owns
20 the carbon dioxide after it's been injected?

21 MR. WRINKLE: Yeah, I -- I can't answer
22 that question.

23 MS. CZOSKI: Okay. I don't know -- I
24 don't know if this is contemplated in the rule, but
25 who -- so once the CO2 is injected and the post-

1 closure site inspection period -- sorry, I can't read,
2 the word is wrong. But after that period is over, is
3 that CO2 tied to the mineral estate or --

4 MR. WRINKLE: I -- I -- I'm not
5 qualified to -- to answer that.

6 MS. CZOSKI: Okay. So if there was a
7 oil and gas lease in the same area as a Class VI
8 permit, would -- and that oil and gas lease has the
9 ability to produce the CO2, how would the OCD handle a
10 situation like that?

11 MR. WRINKLE: Are you -- are you saying
12 that their target formation would be the -- the CO2
13 that's being sequestered, or?

14 MS. CZOSKI: Well, under statutory oil
15 and gas leases, they can produce CO2, and it's not
16 depth severed at all; it's for the entire interval.

17 DR. SCHNARR: They already asked you --
18 reference what I said yesterday?

19 MR. EALES: Go ahead.

20 I'm not following it very well. Say it
21 one more time?

22 MS. CZOSKI: So let's say there is a
23 Class VI well and there -- well, let's say there's an
24 existing oil and gas lease well, and then there's a
25 permit for -- like, the area review is on the same

1 geographics plot. The oil and gas leases allow for
2 carbon dioxide production. So how would the OCD
3 handle a case like that where, you know, they might be
4 injecting CO2, but the oil and gas lease could produce
5 that CO2?

6 MR. WRINKLE: So you're saying the
7 mineral formation has CO2 in it, like the Wolfcamp?

8 MS. CZOSKI: No. Let's say they were
9 injecting CO2 into an interval?

10 MR. EALES: Yeah, I'm not following
11 you. I'm not following you. I'm sorry.

12 MS. CZOSKI: So if a well is injecting
13 CO2 into a -- just make a -- I'll just say Wolfcamp
14 even though that doesn't make sense geologically.
15 Let's say it was injecting into the Wolfcamp, but
16 there's an existing oil and gas lease there that has
17 the ability to produce CO2 under our statutory leases.

18 MR. EALES: Okay.

19 MS. CZOSKI: So --

20 MR. EALES: And what's the question?

21 MS. CZOSKI: So --

22 MR. EALES: If somebody's injecting CO2
23 into an oil and gas formation that has CO2 in it?

24 MS. CZOSKI: No. Well, it's -- so if
25 they're injecting CO2 into any formation, the oil and

1 gas lessee could produce that CO2 under our statutory
2 leases. And I was wondering how the OCD would handle
3 a case where there are those overlapping interests?

4 MR. EALES: I can't answer that.

5 MR. WRINKLE: So I -- I think what --
6 what you're -- what you're -- the hypothetical is, is
7 a Class VI well is permitted, and then within the AoR,
8 an entity has the option to produce CO2 from an area?

9 MS. CZOSKI: Yes.

10 MR. WRINKLE: Okay. So they would
11 drill into the confining layer and produce the CO2
12 that is being injected for permanent storage?

13 MS. CZOSKI: Yes. Under our statutory
14 leases, they can't inject -- or they can't produce
15 CO2.

16 MR. WRINKLE: Okay. I -- I think that
17 would be an order of operations. The -- the
18 legalities of that, I can't talk about. But I -- you
19 know, if you have a permit and a certain AoR and
20 somebody wanted to drill, an APD, a permit to drill,
21 we're going to look at that zone that they are
22 targeting and see if there's any permits already
23 there. But I think that -- it -- it really is kind of
24 a -- a legality ownership question.

25 MS. CZOSKI: But don't you think that

1 clarification should be in the rule for permitting?

2 MR. EALES: I actually have a question.
3 So what -- what -- why would an applicant or operator
4 want to do that?

5 MS. CZOSKI: I -- you know, it's just
6 the way the statutory lease is set up, so it gives
7 them the option, dependent on why.

8 MR. EALES: Yeah.

9 MR. WRINKLE: I -- I would have to
10 think on -- on that a lot more before I -- I had an
11 opinion about putting it in this specific rule.

12 MS. CZOSKI: Okay.

13 MR. WRINKLE: Rather than somewhere
14 else that has to do with, you know, ownership
15 [inaudible] things.

16 MS. CZOSKI: Okay. So you agree,
17 though, that a permittee should have a lease before
18 injecting or before the permitting process?

19 MR. WRINKLE: I think holistically, you
20 should have the right to -- should be -- let me
21 rephrase this. You should meet all the legal criteria
22 before you apply for a -- a permit to do anything.

23 MS. CZOSKI: Okay. And I guess there's
24 been a lot of discussion about guidance rather than
25 what's in the rule today. And I am just wondering

1 when can guidance change? Can that change by
2 director? Can that change by governor? Can that
3 change on a whim? What is that guidance?

4 MR. WRINKLE: So guidance is -- is
5 basically an extrapolation of what is in a rule text.
6 So guidance can't just change other than maybe small
7 changes to parameters, but they still are in line with
8 the rule text. So it leaves you a very narrow window.

9 For -- for example, in our strata
10 isolation rule, it is, I think, two paragraphs. In --
11 in my particular bureau, we have written more than 20
12 pages of guidance off of that two paragraph in that.
13 That has not changed, at least since I've been here,
14 for five years. So I -- I believe that, you know,
15 guidance is -- is -- has a very narrow bumper of -- of
16 where you can go with that based upon what's written
17 in the rule.

18 MS. CZOSKI: Okay. Thank you.

19 So just one more question is -- so at
20 the Land Office, there have been no leases issued for
21 carbon sequestration. And a carbon sequestration
22 lease would be needed where there is no oil and gas
23 lease, if we're going to say that, you know, so that
24 the producer of the -- or the oil and gas lessee can't
25 produce that carbon dioxide. And do we need to get

1 a -- we would need to get a lease -- or the operator
2 would need to get a lease from the Commissioner before
3 leasing -- or before injecting; correct?

4 MR. WRINKLE: I -- I'm not sure.

5 MR. EALES: For what you're reading in
6 the rule or --

7 MS. CZOSKI: Well, based on the State
8 Land Office statutory oil and gas lessees.

9 MR. TREMAINE: Yeah, our -- our
10 witnesses can't speak to the State Land Office
11 statutes.

12 MS. CZOSKI: Okay.

13 MR. TREMAINE: But I think -- I would
14 direct you to Mr. Winkle's redirect, and I would offer
15 that it is the -- yeah, the position of the division
16 that we are not including the Land Office. But
17 they're separate regulatory and statutory schemes, so
18 the Land Office has to enforce its own lease of
19 interest.

20 MS. CZOSKI: Okay.

21 MR. CHANG: For a clean record, I'm
22 going to ask that you frame your interjections as
23 objections as opposed to -- because it kind of feels
24 crossing the line into testifying from Counsel
25 sometimes. So if you want to just frame those as

1 objections, then we can be open about it for the
2 record. Thanks.

3 MS. CZOSKI: Thank you for that. But
4 for the record, the pooling is mineral estate and off-
5 surface estate.

6 So I've raised areas of significant
7 concern where people may have significant interest and
8 not receive notice, or their property might be
9 affected from these permits. For example, not
10 addressing units, increased drilling costs. And while
11 I appreciate the panel and the OCD noting they can
12 later provide answers or make these rules that will
13 allow for Class VI permitting to move forward, I think
14 as a matter of transparency, and to allow parties who
15 have had major appearance here, ample time and
16 opportunity to review proposed changes and solutions
17 to major issues that we've heard at this hearing.

18 So this -- we should table this hearing
19 for 60 days and allow the OCD time to consult with the
20 EPA and allow the OCD to file additional proposed
21 rules or amendments that will allow Class VI
22 permitting related to the ownership of CO2 unitization
23 and other issues.

24 MR. CHANG: Any further questions?

25 MS. CZOSKI: No.

1 MR. CHANG: Okay. Okay. Thank you.

2 THE HEARING EXAMINER: I was just going
3 to invite Chair Chang to ask his question.

4 MR. CHANG: Sure. And I wasn't
5 planning on very, very many, but how about we take a
6 brief break for everybody's sake? We've been at this
7 for a while. Come back in, let's say, I don't know,
8 ten? 4:20? Thank you.

9 (Off the record.)

10 THE HEARING EXAMINER: It's 4:20.

11 Chair Chang, do you have questions of
12 this panel?

13 MR. CHANG: You know, I was quite sure
14 that I wouldn't by the time we got here, but just a
15 couple very, very quick ones, hopefully. I'll try to
16 get everybody out of here as soon as I can. I know
17 it's been a long day.

18 Could I ask -- I'm not sure which
19 panelist this is for, but I'm looking at proposed
20 rules, this would be Exhibit 2, 19.15.43.8A1. Give
21 everybody a second to get there, just so that we're
22 all on the same page.

23 MR. EALES: Which page?

24 MR. CHANG: It's page 3. Top half.
25 Not at the very top, top half. 19.15.43.8. Tracking?

1 And then A, "Criteria for exempted
2 aquifers." Is everybody with me? Okay. On the
3 second line there, I see Subsection YY of 19.15.41.7.
4 When I went to look at 19.15.41.7, I was unable to
5 find Subsection YY. Is YY merely a placeholder like
6 XXXX for, like, in dates, or is that a typo? If
7 nobody knows it, then that's fine. I can take that as
8 an answer.

9 DR. SCHNARR: I -- I think I do know
10 the answer. What would make the -- what would make
11 the most sense to me is that is a typo. It should
12 refer to the definition of an underground source of
13 drinking water, which is at 19.15.41.7U3.

14 MR. CHANG: No other opinions from --
15 no contradictory opinions from any of the other
16 witnesses?

17 And just since we've had a bunch of
18 questions around some -- the scope of the statute here
19 I rulemaking, I think I already know the answer from
20 your respective resumes, but I just wanted to poll our
21 panel here. None of you have -- hold juris doctorates
22 or practice law; is that correct?

23 MR. EALES: That's correct.

24 MS. RANEY: Correct.

25 DR. SCHNARR: Correct.

1 MR. CHANG: This --

2 MR. WRINKLE: Correct.

3 MR. CHANG: Thank you. So this
4 application proposes to promulgate rules authorized by
5 the Safe Drinking Water Act, the Oil and Gas Act, and
6 the Stewardship Act. That's my understanding from the
7 briefing. And the Commission has already had to
8 entertain a motion to dismiss on -- for alleged lack
9 of statutory authority. So when my fellow
10 commissioners asked you to opine on a number of
11 hypothetical additional -- proposed additional
12 languages and new policies, there's -- I remember
13 extensive discussion of proposed new conditions or new
14 language. Many of you did offer opinions, but I just
15 want to confirm for the record that those are
16 scientific or engineering opinions and you are not --
17 and not legal opinions; correct?

18 MR. EALES: That's correct.

19 MR. CHANG: Would any of you be
20 qualified to opine as to whether any of the proposed
21 or discussed language would be legally permissible
22 under the scope of our -- the enabling statutes under
23 which we're trying to promulgate a rule or under which
24 the applicant is trying to promulgate a rule?

25 MR. EALES: No.

1 MR. CHANG: And just to be clear, so
2 none of you are able to offer a opinion, a qualified
3 opinion, as to whether any of the proposed additional
4 language is within the Commission's statutory
5 authority to adopt?

6 MR. EALES: That's correct.

7 MR. CHANG: The rest of you, same?

8 MR. WRINKLE: Correct.

9 MS. RANEY: Correct.

10 DR. SCHNARR: Correct.

11 MR. CHANG: Thank you all very much.
12 That's all I have.

13 I understand there is interest in -- I
14 think that's all we have for this panel; right?

15 MS. CZOSKI: Can I -- do you mind if I
16 say something real quick?

17 MR. CHANG: Please.

18 MS. CZOSKI: So just for the record, I
19 want to reiterate the issues that I raised concerning
20 mineral ownership, unitization, and regulatory
21 framework that is said to be -- that will be dealt
22 with at a future date. I want to make a motion to
23 table this for 60 days to allow the OCD to research a
24 lot of the issues they said they would need to consult
25 on and provide answers to those raised issues. And

1 then deemed appropriate, allow the parties who have
2 entered an appearance time to review those significant
3 modifications. I believe this will make the rule
4 making process more transparent.

5 MR. CHANG: I think we are --just on a
6 procedural ground, I think there's no further
7 questions, right, so we are at a point where we can
8 entertain a motion?

9 THE HEARING EXAMINER: Yes. Hold on
10 one second.

11 Mr. Tremaine, is there any reason not
12 to excuse the second panel?

13 MR. TREMAINE: Please excuse them.

14 THE HEARING EXAMINER: Thank you very
15 much. You're excused. Thank you very much, Panel.

16 And I don't know if it's helpful,
17 Mr. Chair, to say what we ordinarily do in a complex
18 rulemaking for the four or five boards and commissions
19 I work for. But typically, the applicant does have
20 changes, adjustments at, you know, large or small, to
21 the petition originally filed based on what they heard
22 during the hearing. And there's time after the
23 hearing is complete, we're not yet done, we have five
24 more witnesses to hear from for that adjusted kind of
25 best and final offer, if you will, to come in. And

1 all parties at the same time are given an opportunity,
2 including the applicant, to lay out their written
3 closing argument, which often the Board of
4 Commissioners invites argument on particular issues.

5 Now, I'm certain, or I imagine,
6 Mr. Tremaine has been taking notes as to the legal
7 issues that the Commissioners have expressed interest
8 in and would intend to address those particular
9 issues. I wouldn't think that the Commission was that
10 close to deliberation regardless. That is to say, to
11 my knowledge, you hadn't expressed an intent to
12 deliberate this week or even next week, but I did want
13 to lay out our ordinary post-hearing process. And
14 then -- and that's -- I'm done.

15 MR. CHANG: I'll invite you to make
16 your motion now again, just for the record.

17 MS. CZOSKI: Okay. Thank you. Sorry
18 about the rule --

19 MR. CHANG: That's okay.

20 MS. CZOSKI: So I guess I'll just say
21 the whole thing again? Okay.

22 For the record, I just want to
23 reiterate issues that I raised about -- concerning
24 mineral ownership, unitization, and a lot of
25 regulatory framework that's missing to allow Class VI

1 permitting and drilling to move forward. I want to
2 make a motion to table this for 60 days to allow the
3 OCD time to research a lot of the issues they said
4 they needed to consult on and provide answers to those
5 other raised issues. If deemed appropriate, then
6 allow parties who have entered an appearance time to
7 review these significant modifications. I believe
8 this will make the rulemaking more transparent.

9 MR. CHANG: I just want to make sure I
10 get the verbiage right. So there's some explanatory
11 words in there, but primarily your motion is so moved
12 by Commissioner -- "Czoski"?

13 MS. CZOSKI: Yeah.

14 MR. CHANG: To table the current
15 petition in front of us for 60 days?

16 MS. CZOSKI: Yes.

17 MR. CHANG: Is there a second for the
18 motion?

19 DR. AMPOMAH: Mr. Chair, so when you
20 say there's a second for the motion, can you explain a
21 little bit to me what I'm -- if I'm saying yes or no,
22 what I'm -- what am I saying it to? So I just want to
23 know if I say I second, what does that mean? Or let's
24 say if I want more discussions?

25 MR. CHANG: Yes. So typically, a

1 motion is -- not my understanding, and I'm sure
2 Commission Counsel can correct me if I'm wrong, but my
3 understanding is without a second, a motion can't even
4 be debated. You are welcome to second a motion for
5 the purposes of allowing debate. You reserve -- a
6 second reserves the right to object for voting in the
7 motion after debate.

8 DR. AMPOMAH: Okay. So then I second
9 for us to discuss.

10 MR. CHANG: Okay. There's motion and a
11 second. I will open the floor to the movement, if you
12 want to give any further additional arguments or
13 recommendations.

14 MS. CZOSKI: Sure. There was issues
15 raised about mineral ownership, who owns the CO2, and
16 how that can be -- who owns the CO2 once it's injected
17 after the post-closure period? That was not brought
18 up in this rule.

19 There's also questions of how a Class
20 VI well can inject into an area that has multiple land
21 ownership without any unitization process in place
22 already. There is also issues with -- there's some
23 mineral ownership questions. It's not very clear on
24 who gets notified in the rule. And from the State
25 Land Office's point of view, or from our statutory

1 leases, that an oil and gas lessee can produce CO2.

2 And that goes back to the ownership
3 question. And if those two can overlap, as well as
4 who owns the CO2, yeah, in the long term. Would that
5 be the State or -- yeah. I think there's just a lot
6 of questions on how this can get permitted without a
7 lot of that basis in place.

8 MR. CHANG: So a couple of questions
9 from me -- well, actually, you know what, Commissioner
10 Ampomah, you go first.

11 DR. AMPOMAH: Okay. So, Commissioner,
12 I do have a couple of questions for you. So my first
13 question is, this rule was more or less published for
14 a period of time. So I just want to know, was the
15 State Land Office not aware of the rule being
16 published?

17 MS. CZOSKI: We gave comment on these
18 three parts of the rule and Reserve 4. And it sounded
19 like the -- there's some question on if we received
20 commentary back and if our concerns and questions were
21 implemented in this rule.

22 DR. AMPOMAH: My next question will be,
23 why is the State Land Office not in appearance? They
24 did have the opportunity to make an appearance.

25 MR. CHANG: As a finding.

1 DR. AMPOMAH: As a finding?

2 MS. CZOSKI: Yes, I believe so. But
3 I'm not a legal, so I'm not sure. I'm not an
4 attorney, so I'm not sure.

5 DR. AMPOMAH: Commissioner, so let me
6 ask, so if you look at some states, and I'll use
7 Arizona State, for example. So Arizona went in to go
8 through the entire process again to get primacy,
9 separate from the pore space issues, you know? So
10 they are now working through that.

11 So if you look at the purpose of UIC
12 Class VI, from my experience, it is to protect the
13 USDW. That has been really established in the rule
14 that we are dealing with. So from my technical point
15 of view, it's going to be extremely tough for me to
16 really more or less agree to the fact that we should
17 mute, especially when State Land Office did have the
18 opportunity to make an appearance as a party, and then
19 also this is not the first time that UIC Class VI
20 primacy process has gone through without, let's say,
21 an actual pore space. They have dealt with, you know,
22 not that forum.

23 So I'm still struggling from a
24 technical point of view, as I sit here, UIC Class X is
25 to protect the USDW and not necessarily mineral

1 estates. So I'm not -- I'm still struggling to see
2 how I can agree with you on this.

3 MS. CZOSKI: Well, in that -- can I ask
4 you a question?

5 DR. AMPOMAH: Sure.

6 MS. CZOSKI: So in your example in
7 Arizona, you said that the Class VI primacy rules move
8 forward. Have any of them actually been permitted
9 yet?

10 DR. AMPOMAH: That's a good question.
11 They are going through the process, and there is no
12 application, as I'm aware, that has been submitted to
13 Arizona. I do know there are applications in
14 process -- in progress that are yet to be submitted,
15 but there has not been any application that have been
16 submitted to the Arizona ADEQ, as they would call it,
17 yet.

18 MS. CZOSKI: Do you -- I just feel like
19 the permits can't get issued without having the land
20 in place.

21 DR. AMPOMAH: And from -- so I'm
22 speaking from a technical point of view. Do you
23 believe that is a legal question or a technical
24 question?

25 MS. CZOSKI: I mean, more of a legal

1 question.

2 DR. AMPOMAH: And I cannot respond to
3 legal -- I cannot respond to a legal matter as of now.
4 But the Chair is a lawyer.

5 MR. CHANG: Well, and we have
6 Commission Counsel, but --

7 DR. AMPOMAH: Okay. Yeah, for sure.

8 MR. CHANG: But putting that aside for
9 a moment, let's -- perhaps I can also ask some
10 questions that might help.

11 Can I better get a sense of what you
12 think could be accomplished in 60 days? That's a
13 specific time frame that's -- what are you hoping the
14 parties with or without -- or, you know, might be able
15 to accomplish in 60 days?

16 MS. CZOSKI: Thank you. I appreciate
17 that question.

18 So Reserve 4 was already -- these
19 frame -- a lot of this framework was already written,
20 and we reviewed it at the initial public comment
21 period or when they were sharing the draft rules. So
22 I think a lot of it, it might be already written. And
23 then if that could be submitted, that we could review
24 it and comment on that and question that. So --

25 MR. CHANG: Okay. So Reserve 4, which

1 is not --- which you're talking about something that
2 was contemplated, but not currently in front of --
3 filed in front of us at the moment; right?

4 MS. CZOSKI: Yeah.

5 MR. CHANG: Not in the ruling?

6 MS. CZOSKI: Yes.

7 MR. CHANG: I guess, 60 days, it seems
8 like if you're asking for a -- well, here's where I'm
9 struggling, because if we simply want Reserve 4 in,
10 whether or not that's -- what that is, I can't comment
11 because it's not currently in front of us. But that
12 shouldn't take specifically 60 days. We could
13 potentially achieve that in less than 60 days. But I
14 guess the question becomes, why was Reserve 4 not
15 included in the first place? I can only presume that
16 the applicants had reasons and challenges for not
17 including reserve four. And I don't know whether 60
18 days, 90 days, or 9 minutes is going to solve that.
19 Does that make sense?

20 I'm trying to figure out how we got,
21 like -- yeah. If that's a -- if you can read my mind
22 and try to figure out what I'm trying to ask here.

23 MS. CZOSKI: No, I understand. Sixty
24 days seems a sufficient time in my point of view to
25 reserve -- to review and report. But, you know, I'm

1 open to other time periods.

2 MR. CHANG: What if there's, for
3 reasons that we don't know right now, there --
4 there's, I don't know, whether legal or whatever other
5 constraints, the parties are unable to bring Reserve 4
6 to us, even within 60 days. Like, should we -- do you
7 want them to brief the issue of -- and I guess I'm
8 struggling to know whether or not by granting an
9 extension, we're actually going to be able to resolve
10 what you're hoping to resolve?

11 MS. CZOSKI: By adding in a lot of
12 these issues that were raised and allowing for time
13 for review and comment and be able to question, again,
14 that would be helpful, Mr. Chair.

15 DR. AMPOMAH: So, and like Felicia was
16 telling us, there has been instances, even in the
17 difficult one that we dealt with, was the plug-in, the
18 financial rule. What happened was that we listened to
19 all the parties. And then after that, we gave them
20 the opportunity. These are all the questions that
21 came, go back, sit down, try and resolve all these
22 differences, and then come back to us. And it really
23 worked.

24 So I'm just struggling, now giving
25 other parties the opportunity to present their case,

1 and State Land Office is not really a party to this
2 case, so I'm still struggling to see how we should
3 mute everything and then allow 60 days that it was not
4 even brought by any of the applicants. So --

5 MR. CHANG: Well, I sort of -- and to
6 that line, here's my concern, because, sure, so even
7 if the Commission agreed to a 60-day extension, we
8 can't order a party to order -- I mean, unless you're
9 contemplating ordering a party to bring a specific
10 rule to us. But that puts us in a very awkward
11 position of becoming a party and asking for support.

12 So I mean, if Reserve 4 is something
13 that is just not in front of us right now, but you
14 think is important, why couldn't -- well, of course,
15 again, we all want to be careful of drawing a line
16 between your role here as a commissioner and SLO as a
17 potential party. But why couldn't SLO bring a second
18 parallel rulemaking with Reserve 4? Why does like --
19 how does pausing this necessarily bring something
20 that's not in the scope of what's in front of us at
21 the moment?

22 Because I'm -- I mean, if the State
23 Land Office wants to bring Reserve 4, we'd be happy
24 to -- anybody can petition us for additional rules and
25 more rules; right? So if Reserve 4 is not, I guess,

1 meant to be something parallel to or adjacent to, but
2 not conflicting with the current proposals in front of
3 us, wouldn't perhaps SLO petitioning us on Reserve 4
4 be a better solution than pausing this rulemaking?

5 MS. CZOSKI: It doesn't necessarily
6 have to be Reserve 4. It's just addressing the
7 concerns that we raised. But for the other question,
8 I'm not an attorney, so I'm not -- I don't really know
9 how the answer to that. Yeah, sorry.

10 MR. CHANG: That's okay.

11 DR. AMPOMAH: Chair, I really want to
12 know what our Counsel also has to say about this.
13 Does he have any rights?

14 MR. SHANDLER: So, Mr. Chair, my job is
15 to provide options, and there's several moving parts
16 here. One moving part is something called the Reserve
17 4, which I I'm not really familiar with, but I'm going
18 to presume it was something that was written as Part 4
19 of this -- it seems like there's at least two
20 different models. And again, this is the first I've
21 heard about Arizona. But it appears the model in
22 Arizona is that there, the chain is -- the train is
23 two parts. Get the primacy done and then get the
24 lease and ownership stuff done at a second point.

25 It sounds like the State Land Office,

1 based on their public comment and -- that the State
2 Land Office thinks, no, the Arizona model is wrong.
3 You have to do it at the same time. If that's the
4 case, it's -- Reserve 4 can't just be brought up right
5 now. There's a whole rulemaking process. The public,
6 the interested parties all have to do its own, it's
7 not like -- I -- I don't think that's a viable option
8 that in 60 days that there could be a rulemaking for
9 Part 4.

10 So that's one part. Is the Arizona
11 model the better model, or is SLO's model the better
12 model? That sounds like a legal question, and it may
13 require some legal briefing.

14 The second part of the puzzle is, as
15 one of the commissioners said in the temporary
16 abandonment rule, is that this model was you and kind
17 of a new model, and Hearing Officer would know better
18 than I about history of stuff. But after the -- all
19 the parties were allowed to testify, all the
20 witnesses, the lawyers went back and they spent around
21 two or three months trying to negotiate terms. And
22 then they came back with some agreed terms and some
23 unagreed terms.

24 It sounds like that model may be used
25 again here based on a lot of the comments from the

1 panel, the second panel saying, we'll look at that.
2 We might give you a new red line. We haven't even
3 heard from the environmental groups' witnesses. They
4 sound like they have around 20 different amendments
5 that they'd like to log in that will be debated
6 probably in the next 48 hours.

7 So again, my job is to provide options.
8 And one option would be you could vote to -- to table
9 this. That would mean everything would be kind of
10 frozen in place in terms of the other witnesses. But
11 that would allow these two major groups, SLO and OCD,
12 to negotiate the hearing. Or you could deny the
13 motion and say, okay, we want to hear from the
14 environmental group witnesses to get that part of the
15 proposal. So that's one option.

16 Another option is to say, we want to
17 order some briefing. Since SLO isn't an official
18 party, briefing may be just from the department and
19 the environmental groups that are all parties here
20 about whether the Arizona model is better or -- or
21 not.

22 DR. AMPOMAH: So, Counsel, thanks so
23 much for the advice.

24 Now, I use the Arizona example as what
25 I do know. But as a commissioner, I'm just sitting

1 here looking at what is in front of me. You know,
2 trying to use my technical knowledge to improve the
3 rule that is in front of me. So without even using
4 Arizona's model, if you're asking me, do we need to
5 have a pore space before, that's a different question.
6 That is not in front of me right now.

7 So I still feel like -- I still stand
8 by what I believe that I really want to hear from the
9 other witnesses to hear what they have to say. And if
10 possible, we can even go back to what we did with the
11 project where we give more time for the parties to
12 really confer and then give us something that both
13 parties can be more or less closer to.

14 And if there is any project with the
15 SLO and then NMOCD, like you said, probably they can
16 bring up another rulemaking, and we should be able to
17 support that. Thank you.

18 MR. CHANG: I think at this point, my
19 position would be the same as Dr. Ampomah's, at least
20 at this point. I think a lot of counsel have
21 prepared -- spent time here and prepared their cases.
22 And what they have to contribute at this point may
23 help. So even if we -- I'm not going to foreclose the
24 possibility that we grant the parties a time to
25 supplement, negotiate. We certainly did that recently

1 with Welk or in a different rulemaking petition by
2 Welk where, after the whole hearing, we granted
3 months, many, many months of times for the parties to
4 negotiate some issues.

5 At this point, I -- my -- my
6 inclination and my recommendations for this commission
7 would be to vote to allow at least the parties who
8 have prepared for this Commission and actually want to
9 also put their thoughts on the record so that in
10 addition to the issues that we've explored so far
11 today, there may be lots of other issues that we don't
12 know yet because we haven't heard from the other
13 parties. And I'd like to give them an opportunity to
14 make a record because I think negotiations, should
15 there be any or should there be time built in between
16 now and whenever we need to get around to
17 deliberations, I think the more all the parties have
18 had a chance to lay out what their thoughts are, the
19 more any negotiations or any additional research is
20 going to be fruitful.

21 Because the last thing I -- or it just
22 seems like if we paused it now, we could lead to a
23 situation where we resolved only the issues that have
24 been discussed so far, but then the parties end up
25 coming back and raising new issues and we just end up

1 in a big old loop. So my recommendation for -- or at
2 least my vote for now is going to be to continue.

3 DR. AMPOMAH: Mr. Chair, one last
4 question.

5 So, Commissioner, let me ask you, do
6 you believe that even if we go ahead with the current
7 rulemaking with regards to protecting the USDW, there
8 could still be other area where another rulemaking can
9 be brought before the Commission to table the, let's
10 say, with regards to the pore space? Do you believe
11 that?

12 MS. CZOSKI: Is that question for me?

13 DR. AMPOMAH: Yes.

14 MS. CZOSKI: I'm not an attorney, so
15 I'm not really sure how to answer that question.

16 MR. CHANG: Could I ask you to restate
17 that because I didn't follow the question.

18 DR. AMPOMAH: Okay. So what I'm saying
19 is, if we continue with the current rulemaking, does
20 anything that prevents, let's say, SLO, or let's say
21 NMOC, bringing up new rulemaking, just focusing on the
22 pore space?

23 MS. CZOSKI: Again, I'm sorry, since
24 I'm not an attorney, I don't really know how to answer
25 that question.

1 DR. AMPOMAH: Yeah. So as I sit here.
2 from what the Chair said, it sounds to me that it's a
3 possibility that either one can petition the
4 commission, you know, with a rule. So I believe that
5 if we still continue, then that's not necessarily
6 close the door us to represent this issue in another
7 rulemaking.

8 MR. CHANG: Did you want to respond?
9 No. Okay.

10 Yeah, and again, so I think -- so my
11 opinion is the same as Dr. Ampomah's, is that I think
12 what -- again, I haven't seen Reserve 4 because it was
13 never in front of me, and I'm sequestered from
14 obviously preparing of -- from anything that might
15 come before me as a commissioner. So it sounds to me
16 like it's -- from what you've told us, it sounds to me
17 like something that could be done in parallel with
18 this rulemaking.

19 But also I, at this point, to sort of
20 make things more limited, I'm not going to foreclose
21 the ability -- or I'm not -- I don't intend to
22 foreclose the ability of my fellow commissioners to
23 re-raise the question of whether or not there should
24 be a pause at a later time. I just think I'd rather
25 have -- allow all the parties to have at least have

1 had the chance of making a record before we hit pause
2 and freeze.

3 With that, is there any further
4 discussion, or are we ready to take a vote? And I'm
5 happy to take a roll call vote on this if we're ready?

6 DR. AMPOMAH: Mr. Chair, I'm ready to
7 take a vote.

8 MR. CHANG: Commission Clerk, could I
9 give a roll call?

10 MS. APODACA: Okay. Commissioner
11 Ampomah?

12 DR. AMPOMAH: Deny.

13 MS. APODACA: Commissioner Czoski?

14 MS. CZOSKI: Yes. I'm sorry.

15 MS. APODACA: And, Commissioner Chair
16 Chang?

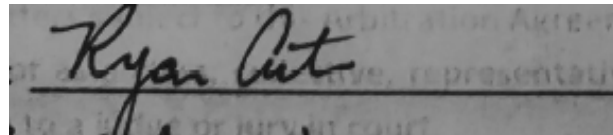
17 MR. CHANG: No. Thank you.

18 THE HEARING EXAMINER: Okay. Do I
19 understand then we'll begin with the witness from CBD
20 in the morning right after we do public comment at
21 nine? Thank you.

22 MR. CHANG: Thank you all very much.
23 (Whereupon, at 4:50 p.m., the
24 proceeding was concluded.)
25

CERTIFICATE

I, RYAN AUTEN, 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.

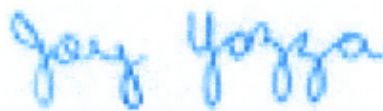
A rectangular box containing a handwritten signature in cursive script that reads "Ryan Auten". The signature is written in dark ink on a light-colored background.

RYAN AUTEN

Notary Public in and for the
State of New Mexico

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JOY YAZZA

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New Mexico Rules of Civil Procedure for the
District Courts

Article 5, Rule 1-030

(e) Review by Witness; Changes; Signing.

If requested by the deponent or a party before completion of the deposition, the deponent shall have thirty (30) days after being notified by the officer that the transcript or recording is available in which to review the transcript or recording and, if there are changes in form or substance, to sign a statement reciting such changes and the reasons given by the deponent for making them. The officer shall indicate in the certificate prescribed by Subparagraph (1) of Paragraph F of this rule whether any review was requested and, if so, shall append any changes made by the deponent during the period allowed.

DISCLAIMER: THE FOREGOING CIVIL PROCEDURE RULES
ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
THE ABOVE RULES ARE CURRENT AS OF APRIL 1,
2019. PLEASE REFER TO THE APPLICABLE STATE RULES
OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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